



# SELECTED PROCEEDINGS

## Land Use Conversion and Traffic Situation in Lagos, Nigeria: An Impact Assessment of Victoria Island

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#### **1.0 Abstract**

Human and natural phenomenon are the two broad sets of forces and processes influencing the circumstances under which land use are being shaped all over the world . Neither of these forces remains static, they are in a constant state of flux. Land conversion by developers from its originally approved plan has become a common phenomenon in most urban centres. Land use conversion is encouraged by the economic potential derivable from land use the transformation, this is not minding, the fact that such conversion are contrary to the development plan with its attendant environmental challenges with reference to transportation .

The change and conversion of land has implication on the interruption and alteration of original development plan of land utilization with its attendant implication for traffic congestion and other environmental implication. A closer consideration of CBD'S of many Nigerian Cities is a revelation of infiltration of commercial and other mixed land use where trading activities have occurred in contrast to original approval given to land use /allocation by respective owners and developers .

Nigeria has been listed by the United Nations (UN) as one of the countries that will lead the growth in urban cities in the next four decades, sparking challenges in providing jobs, housing, energy and infrastructure. Nigeria's cities are expected to add 200 million people by 2050, more than doubling the country's current population. This projection has implication for continuous conversion of land for economic and commercial benefits with its attendant implication on traffic flow and environmental challenges if unabated.

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The changes brought about by the impact of human influence on land utilization with special reference to land use conversion have been well documented through research investigation to catalogue the negative and positive impact of land utilization by man across the globe. The study has evaluated the traffic and environmental implication of land use conversion and present factors responsible for changes and the consequential impact of land use change around the central business district of Victoria Island of Lagos. The overall objective of the study is to come up with best and acceptable practice of land use management and control as a strategy to ensure free flow of traffic and environment conducive to human habitation.

The research was conducted through visual observation and focus group discussion with transport operators, property owners, civil servant, relevant government agencies and business owners to elicit information on land conversion and its impact on traffic operation. The observed situation was examined in line with known traditional models and theories on internal structure of cities.

The study calls for proper traffic management and strict control and adherence to laid down land use allocation in the original land use development plan and reduce the overall impact of the existing land conversion on traffic and safety of life's and property within the study area and Lagos State in general.

## **2.0 Introduction**

The land with its spatial attributes provides the needed support for human activities not only in terms of location and provision of materials needed for its conduct. The overall impressions created by the diversity of human utilization of land and its resources normally give rise to observable pattern of land use activities in a particular locality. The use of land and its organization varies diversely from location to location but it commonly includes provision of shelter, recreation, extraction and processing of materials among others. The use and management of land in human environment have both beneficial and detrimental impact and effects. The detrimental impact of land use activities of man is a source of concern at all location. More so, that man is the main cause of environmental problems which impinge on human wellbeing and welfare with its economic and social implication. Experience of land use around the world has shown that the impact of land use change in reaction to human influence has a long history as there have been no instances in which people use land and its resources without causing harm.

Population growth and physical expansion and growth of space for human needs are the main two set of forces influencing land use activities and associated negative tendencies. The two forces are highly dynamic and are constantly changing as change is the relatively essence of life. The changes brought about by the impact of human influence on land utilization have been well documented through scientific explanation tendered to catalogue the environmental impact of man across the globe.



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A rapid pattern of land use has evolved in most urban centers in Nigeria with great variety of intensities and uses. Land use conversion is a common phenomenon in most urban centers in Nigeria particularly, location with diversified tempo of commercial activities with high land value like Lagos, the economic capital of Nigeria. The change brought about through land conversion has implication in the interruption of original development plan with its impact on traffic congestion. A closer consideration of CBD'S of many Nigerian cities is a revelation of infiltration of commercial and other multiple land use where business and trading activities have occurred in contrast to original approval land use gazette by government .

Transportation facilities in urban environment in relation to land use activities for various purposes has resulted in massive environmental impacts as the survival of urban centers cannot be comprehend without vast and complex transport system.

The study presented the traffic and environmental implication of land use conversion with the desire to examine the factors responsible for changes and consequential impact of land use change around the central business district of Victoria Island in Lagos . Evaluation of the impact of land use change on traffic constitutes the basis for drawing overall conclusion and recommendation in this study through a descriptive approach.

### **3.0 Statement of problems**

The dependency of urban environment as observed by Rodrique (2009) has reached a point where 30 to 60% of urban areas are taken over by road transportation infrastructure in an attempt to convey a high level of accessibility to respond to mobility demand of vast areas. This is not without negative consequential impact on urban land use in relation to its transport system with its attendant environmental impacts.

An observation of land use development in relation to transport infrastructure is a reflection of competitive land use activities with land use segregation reflecting their location in areas with their optimum condition when compared to other land use. Urbanization in Nigeria is proceeding at an unprecedented rate. Already, 45 out of every 100 people are city dwellers. In 1959, the figure was only 29 (UNESCO, 1963).

Lagos as an emerging megalopolis and acclaimed economic and business capital of Nigeria hindered by unprecedented environmental problems arising from Transport infrastructure and land use problems arising from lack of a comprehensive and coherent national urban planning and effective city governance policy. Lagos is noted for its traffic congestion, shortage of shelter, unemployment, inadequate social facilities such as electricity, water supply, medical, education and sewage facilities, Lagos environment in certain quarters is noted for squatter settlement, blighted slums and environmental degradation. Lagos Island coincidentally is one of such location in Lagos where infrastructural facilities are in short supply while the few available ones are not well maintained. The area is also compounded by the mobility problems.



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It is important to note that land use and transportation are two sides of the same coin, transportation from land use and land use affects transportation and decision in one affects the other. This message has effect the coordination of transportation and land use planning decision as of paramount importance to creating a complementary role between the two rather than contradictory role as currently observed.

The peculiar problem of Victoria Island is the phenomenal impact of the indiscriminate change in land uses with its attendant negative impact on transportation infrastructure. The fact that there is no corresponding modification of transport network/route to accommodate the envisage impact of land use change with increased influence of people arising from patronage of emerging commercial activities in the area compounded by transportation problems as a result of high traffic intensity without justification for the new phase of land use arising from land use conversion. Traffic generation with its attendant problems, arising from intense traffic congestion from the surroundings zones in terms of composite use i.e. residential, institutional buildings recreation with overwhelming impact of commercial activities arising from newly imposed land use from land use conversion that are mostly commercial in nature.

#### **4.0 Methodology**

The intensity of land use activities around Victoria Island of Lagos has been getting compounded with uncontrollable growth in the wave of land use conversion of structures from their original plans thereby leading to chaotic traffic situation. The study was inspired by the resultant effect of land use development with mobility made worse by the excessive reliance on road based network that is less capable of meeting the transportation needs of the area. Heavy commercial activities are common in most streets thus leading to traffic congestion with implication for unnecessary elongation of journey time.

Survey investigation were conducted to cover notable streets with high intensity of land conversion. These include the following streets, Ajose Adeosun, Akin Adesola, Ademola Adetokunbo, Afribank Street, Ademola Adetokunbo, Afribank Street, Adeola Hopewell, Tiamiyu Savaage, Adeola Odeku, Ahmadu Bello Way, Sanusi Fafunwa, Engineering Close, Bishop Aboyade Cole , Muri Okunola, Etim Inyang and Ozumba Nbadiwe (are part of the areas with high phenomenon of land use changes through conversion). These are streets that have witnessed massive conversion from residential to commercial land uses. The emergence of new land use plan has impacted negatively on the facilities planned for the area as stipulated in the 1928 Town Planning ordinance. As a result of this, the area is characterized by high traffic congestion during the peak and off peak periods causing delays and elongation of travel time, pollution and other environmental problems associated with transport externalities.

The research was conducted through visual observation and focus group discussions with transport operators, property owners, civil servant and relevant government agencies to elicit

information on land conversion and its impact on traffic operation. The observed situation was examined in line with known traditional models and theories on internal structure of cities.



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## 5.0 LITERATURE/CONCEPTUAL FRAMEWORK

Transport is a central dimension of the national and global production systems that are reshaping the world and therefore in the words of Hoyle (2000) is a topic of universal interest and importance. The overall relevance of transport can be considered from the point of view of goods that needed to be transported and the desire of people to travel from one place to another regularly and occasionally. The overall importance of transport in the distribution of manufactured products prior to consumption is almost without restriction. Enhanced mobility is an attribute of an increased globalization of the world space economy. In all societies, environments and economies the movement of goods and people as well as capital and ideas is a necessary elements in functional and developmental terms. (Hoyle, 2000). Spatial accessibility according to Chapin (1974), Scott, (2000); has been seen as a central measure of the quality of life in terms of social and economic opportunities. Personal accessibility in any location is usually measured by counting the number of activity sites which are also referred to as opportunities available at a given distance from commuters home and usually calculated for specific types of opportunities, such as shops, employment and work places, or medical facilities. (Hanson, 2004).

Transport is an epitome of complex relationships that exist between the physical environment, Patterns of social and economic development. In advance and developing countries, investment in transport is a matter for political negotiation, economic calculation and environmental consideration (Adams, 1981). Viewpoints on relations between transport and development spectrum is a major thrust in research (Gauthier, 1968, Hilling,1996, Hoyle 1973,1988, leinbach et al 1989, Simon 1996,Ullman 1956, Wilson 1973).

Transport infrastructure has been observed as the most fundamental determinant of urban growth and morphology . Hartshorn (1972) based on the work of Adams (1970), has illustrated the significance of the historical evolution of transport for urban structures in North America. Knox (1987) has identified similar patterns in British cities. The changes in the advancement of transport technologies have made an impressive impact on the urban landscapes in various parts of the globe. The provision of transport networks, in Nigeria played a significant role in the process of spatial development of urban centres in Nigeria. The unique position of Lagos as the first capital of Nigeria and the economic nerve centre of the country place it in a strategic position to benefit from transport infrastructural provision by the government coupled with its natural position as a seaport.

Most previous studies on the linkage between transportation investment and economic performance involved estimation of aggregate production or cost function as a means of understanding the impact of transportation infrastructure on economic productivity. NCHRP report (1997) evaluated the productivity implications of existing transportation capital on private output and input. Investment in transport infrastructure has been known to impact positively on the nation economic performance. The World Bank in (1994) emphasizes the importance of developing adequate transport infrastructure to attain long term growth and increased productivity as it constitute a vital input for almost every commodity in the economy

## 6.0 Conceptual frame work

It is a known fact that several human activities have derived effect on natural environment particularly with regards to external physical surrounding conditions that has implication on the growth and behavior of living or non-living organism. The impact of human environmental influence can be understood through a close evaluation of human needs in the area of land use and transportation infrastructure.

From the planning perspective, land use represents a mosaic that ought to be regulated to ensure conformity and balance of the built environment (Bailey, 1975; Ratcliff, 1976). However, the general inefficiency associated with majority of the developing countries' land policies, and the absence of secure tenure, adequate land use management capacity among others, have been cited by Bernstein (1994), Hardoy and Sattlewaite (1989), as serious problems precipitating existing land use crisis and traffic problems in countries like Lagos, Nigeria. Inappropriate instruments and weak institutional structures are among the cavalcade of problems plaguing the community.

The significance of transport within urban areas may be explored in several ways. Several of the growth models devised by urban geographers emphasize the significance of transport facilities. Burgess (1925) cites the importance of the advent of cheap public transport in his model of concentric urban zones with inner low-status housing belt and other upper-class residential areas and the peripheral commuter zone. Burgess first suggested the concentric theory after a study he made in the structure of Chicago city in the 1920's outward evenly from an original core so that each core going by gradual colonization into the next zone. This theory best describes transit oriented Cities, even though the practice is that concentric zones are practice along the transportation corridors.

Sector city models and multi-nucleated city models attempt to explain the spatial pattern of the modern automobile oriented city. Concentric land use zones can still be seen, however, if only at a lesser scale. Freeway interchanges, for example, attract high rent-paying commercial uses which require high accessibility, while lower land rent-paying uses tend to locate slightly further away.

Although the sectors in Hoyts (1939) model were defined mainly on the basis of housing types, in locating his high-class residential area within the urban framework he acknowledged the significance of the areas provided by major route ways. Similar links between the alignment of road and rail transport route and housing areas can also be seen in Harris and Ullman's (1945)

multi-nuclei model. Invariably as this technology developed, so did the built up area of the city, reflecting the changing accessibility of various locations. The foot-city's compact circular form evolved into a more extensive and star-shaped urban areas, reflecting the greater accessibility along the lines of railways and trams (or street cars). These two new forms of transport were critical in separating home and work place and encouraged functional specialization within the city, as well as promoting the penetration of the surrounding countryside by fingers and beads of development.

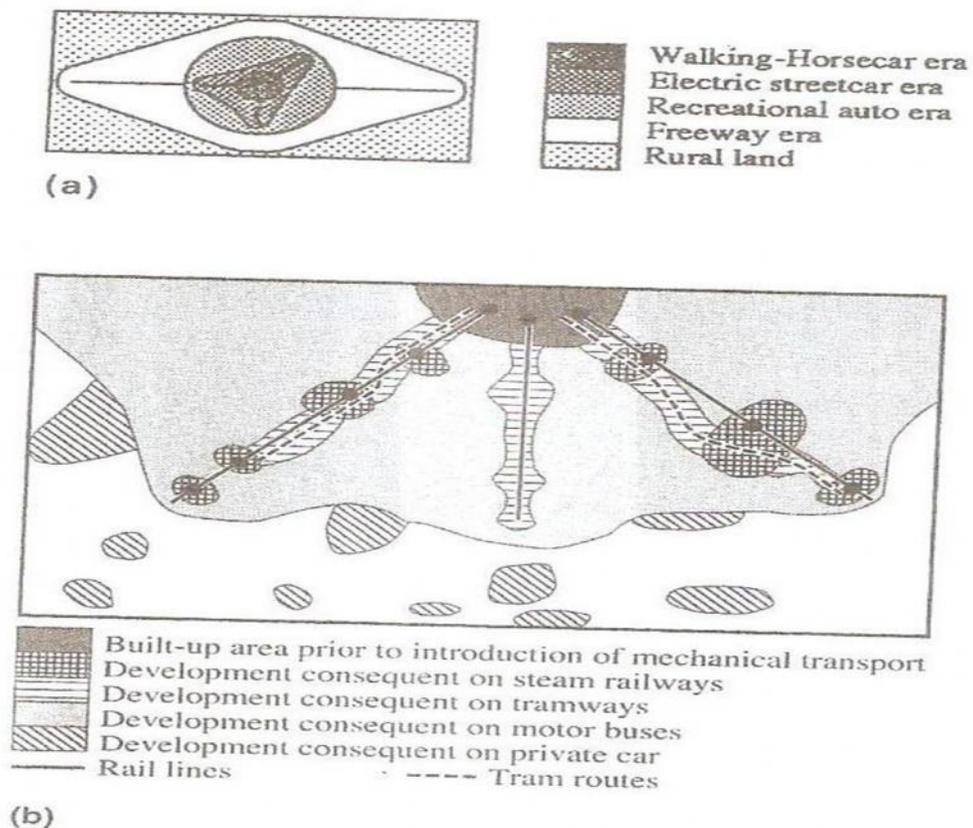
Herbert and Thomas (1982) examination of the development of urban systems underlines the particular importance of improvements in the technology of public transport. The complex issues of urban transport demand are examined by Daniels and Warnes (1980), who considered that although public transport directly assisted urban growth, and especially the process of suburbanization, the position of these services did not in itself initiate this growth in most cases. In the United Kingdom and USA, Railway and tramway construction was often closely linked with the efforts of property developers to attract wealthier city workers to the benefits of life in the rural areas beyond major cities. Towns and cities in the postindustrial stage display the effects of the decline of public transport and the dominance of the car as a means of obtaining a level of intra urban mobility which the bus and train had never been able to match.

**Fig 1** provide a background to the significance of transport in the growth and expansion of urban centers in North America and Western Europe during the nineteenth and early twenty centuries as observed by Tolley and Turton (1995).

Mass use of the automobile since 1945 had changed the distance equation. However, new congestion makes the central areas less accessible and the fringe areas more. This has led to a dispersed city from consisting largely of a centralized and 'a spatial' land use patterns, of which Kitchener is typical example (Fillion and Button 1996). Since the automobile has fragmented the traditional Burgess land – use model, more recent land use theories tend to focus on the micro-scale. Traditional land use theory revolved around distance. The Burgess mode of concentric urban – land uses is based on the premise that every land use functions optimally with minimized time each land use has an inherently different maximum rent paying capability.

**Fig: 1**

- (a) The sequence of urban growth in a United States mid- West city in relation to the development of transport technology
- (b) Urban development and changing transport modes in the European city



Source :

(a) Muller (1989), Tolley et al (1995)

(b) White , Personal Communication

From all indication transport has played an indispensable part in the growth of modern industrial systems and urban societies in both developed and developing economy from time immemorial. The impact of transport development has seen around the world has been felt in Nigeria since the



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2. To provide a template for easy administration of the colony through effective spatial interaction by colonial masters within the regions and
3. To provide avenue for the transfer of industrial produce originating from overseas through the port to hinterlands.

The Railway network and road serving as feeder played a unique and prominent role in the above circumstances and they both provided the template for the growth of transport infrastructure after independence in Nigeria.

## 7.0 Study area - Lagos

Lagos with the largest concentration of industries and commercial centers in Nigeria, having also the largest Sea and Airports with a network of Highways, accounts for more than half of the total production in the Country's manufacturing sector and over 80 per cent of all the total value of imports into the Country. It is highly referred to as the socio-economic hub of the Country.

The economy of Metropolitan Lagos is dualistic and contributes 31.98% of Nigeria GDP in 2004; it comprises of the formal and the informal Sectors. The Metropolitan economy has thus been analyzed in terms of the Modern (formal) productive Sector and the informal Productive Sector. In 1975, the formal (Modern) Sector contributed 86.3 per cent to total value Added whereas it accounted for only 42.8 per cent of total employment. In terms of value added, the strongest economic activity group is manufacturing and crafts with 33 per cent. Here the Modern Sector accounts for 95% of the total output of Lagos.

As expected, the industrial and commercial activities have brought a large urban population explosion which has continually put pressure on degradation of the urban environment though the activities of both public and private individuals and corporate bodies host 70% of the total country's investment.

Most Lagos residents are economically active and industrious, but majority of them are migrants with little skills and that make them unsuitable to be engaged in the Modern Sector, a larger segment of the employed population are self-employed with a considerable number being only marginal earners. Actual employment in the formal Sector is relatively low at present due mainly to the economic down turn and also due to lack of skills and training in the work force. The resultant effect is that many Lagos residents who engage in retailing activities (i.e. buying



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Lagos now, street-trading is a popular phenomenon and the result is a city of noisy market places with youthful traders selling all forms of article ranging from imported wrist watches, electronic articles and local fruits and food items. In this category of unskilled workers are thousands of Cart pushers and Scavengers who cart refuses from houses on a daily basis.

Another aspect of daily economic life of Lagos residents is the proliferation of Fast Food centers, Petrol Stations and Places of Worship particularly churches . Their sporadic development in every nook and crannies of Lagos Metropolis has changed the urban setting of the city and has also created problems for the city's orderly physical development. The fast food centers have become problematic to the residents as well as the Government agency charged with the Environment and Physical Planning. The indiscriminate location of the food centers, which are sited in prominent road corridors, has increased traffic bottlenecks, especially vehicular and human traffic in particular areas of the city. This apart, the disposal of wastes from their kitchen, the drains from such wastes block drainage and the foul odor emanating from them has resulted in some level of environmental degradation.

The nuisance created by proliferation of Petrol Filling Stations is hardly justifiable. Their littering of the urban environment has worsened the traffic situation and created other environmental nuisances, apart from their contravention of Town and Country Planning Laws of the State.

In the recent past also, Lagos has witnessed an upsurge in the development of places of worship, especially churches and mosques. The proliferation has necessitated the conversion of residential and some industrial/commercial buildings especially warehouses into churches. Most of the conversions are carried out without government's approval of the church plans and their environmental impact analysis reports. Many residents have therefore complained of the heavy noise pollution and extra human and vehicular traffic they have generated.

In the long run however, and as Lagos transforms into a Mega City it will be a challenging task to maintain a balanced land use system in the city, halt every sign of environmental degradation and bring order into the disorderly and unplanned built environment.

To plan and manage the redevelopment of these fast growing activity centers, there is the need for the government to have an efficient management system in land use planning and transportation so as to avoid the problem being faced in most urban centers in Nigeria and Victoria Island in particular.

## **8.0 FACTORS INFLUENCING LANDUSE CONVERSION AND ITS IMPLICATION ON TRAFFIC flow**

The emerging role of Victoria Island as the new Central Business District, coupled with the fast developing residential and Free Trade Zone scheme along Lekki corridor have, resulted in an increased volume of traffic network flow on many roads in the study area. Traffic in the study area is largely uni-modal. Traffic bound for employment and business location move into the city 5:00am and 10.00am, out from 4:00pm 7:00pm. These lead to a very heavy crawling and, sometimes-static traffic flow on the major arterial during these peak periods. Night traffic is usually deserted look into the city. The unregulated nature of the private owned/operated bus vehicles and Okada and the largely inefficient traffic management has contributed to chaotic traffic situation. Inadequate bus stops and lay-bys, which encourage the stoppage of traffic to pick, and drop-off passengers at will has further compounded the situation. Very critical is the absence of an integrated public transport system (including, rail, and water), which the study area is in dire need of. Arising from the upsurge of residential densities and increased commercialization of Victoria Island, parking has become a problem and these have compounded traffic in the neighborhoods. It's common to find both organized the unauthorized street parking on road shoulders, property setbacks/frontages and on sidewalks in the city in the area. The maneuvering of vehicles diagonally or at tangentially in and out of the roadside parks into the road truncates free-flow of traffic.

As a follow up to the above situation several factors have been identified through focus group discussion with residents and non-resident/visitors within and around Victoria Island and this have been presented in relation to factor influencing the choice of site/forces of attraction to the study area.

- i. Esthetically physical pleasing environment.
- ii. An environment with high propensity for commercial transaction for businessmen and women.
- iii. Availability of modern infrastructural facilities and amenities
- iv. Name of the streets is popular and easy assessibility
- v. Secured environment with reliable security outfit and network.

From the above, various responses to the reason of choice of site, one can reasonably deduced that factors' influencing the choice of site is mostly tending towards commercial orientation and

viability of potential of the site can be related to such potential like being centrally located with good infrastructure, availability of modern facilities to support any attending developers or so on. It is also possible that water supply, electricity and wireless telecommunication that makes the world a Global Village. Apart from all these are good and tight security outfit which make it relatively difficult for criminal/hoodlums to escape and can easily be tracked down

considering the effective linkages of all streets through Kingsway Road, Bonny Camp, Dordan Barak (Obalende), and Lekki Police Post. The above have been categorized into the following cogent factors to provide explanation for residents’ likeness for the area.

Table 1: Provide a summary of the environmental impact of land use conversion on traffic in Victoria Island area and Lagos area in particular .

**Table 1 : Impact of Traffic operation and Implication**

S/No	Traffic Operation Impact	Remark on Implication
1	Wasting time of motorists and passengers (“opportunity cost”).	As a non-productive activity for most people, congestion reduces regional economic health
2	Delays	late arrival for employment, meetings, and education, resulting in loss of business opportunities , disciplinary action or other personal losses
3	Inability to forecast travel time accurately,	Drivers allocating more time to travel “just in case”, and less time on productive activities.
4	Wasteful fuel increases air pollution and carbon dioxide	Global warming owing to increased idling, acceleration and braking. Increased fuel use may also in theory cause a rise in fuel costs.
5	Wear and tear on vehicles as a result of idling in traffic	Frequent acceleration and braking, leading to more frequent repairs and replacements.
6	Stressed and frustrated motorists,	encouraging road rage and reduced health of motorists
7	Emergencies.	blocked traffic may interfere with the passage of emergency vehicles traveling to their destinations where they are urgently needed
8	Spillover effect from congested main arteries to secondary roads and side streets as alternative routes	Attempted (‘rat running’), which may affect neighborhood amenity and real estate prices.

Source: Authors Field Survey, 2009.

## 9.0 Strategies for Ameliorating Environmental Challenges of Land Use Conversion

The environmental impact of land use conversion is multi-dimensional. However Traffic congestion has been established as the most predominant impact of land use conversion due to change in the capacity of land use. There is an urgent need for the government to embark on congestion reduction strategies so as to free our roads from the evil of traffic jam arising from land use conversion. Some of these strategies are:

i. **Enhancement Transport Coordination**



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new instances of public transport including intermediate public transport have to work in tandem. They should complement rather than involve themselves in cutthroat competition. Therefore there is an urgent need for a transportation system that is seamlessly integrated across all modes in Lagos State. Since the ultimate objective is to provide an adequate and efficient transport system, there is a need to have a coordinating authority with the assigned role of coordinating the operations of various modes (Sanjay, 2005). This coordinating authority may be appointed by the state or federal government and may have representatives from various stakeholders such as private taxi operators, bus operators, railways and the government. The key objective should be to attain the integration of different modes of transport to improve the efficiency of service delivery and comfort for commuters, which in turn can dissuade the private car owners from using their vehicles and thereby reducing the number of cars on the roads which can eventually lead to congestion reduction.

ii. **Road Capacity Expansion**

Road widening is often advocated as ways to reduce traffic congestion. However, it tends to be expensive and may provide only modest congestion reduction benefits over the long run, since a significant portion of added capacity is often filled with induced peak period vehicle traffic . A large amount of additional capacity would be needed to reduce urban traffic congestion. Some research indicates that roadway capacity expansion provides only slight reductions in urban traffic congestion (TTI, 2009). Improved road infrastructure: this include,

- Junction improvement
- Grade separation using bridges (or, less often tunnels) freeing movements from having to stop for other crossing movement.
- Reversible lanes, where certain sections of highway operate in the opposite direction on different times of the day or days of the week, to match asymmetric demand. This may be controlled by variable message signs or by movable physical separation.
- Bus lanes e.g Bus Rapid Transit (BRT)
- Separate lanes for specific user groups (usually with the goal of higher people throughput with fewer vehicles).

iii. **Supply and demand**

Congestion can be reduced by either increasing road capacity (supply) or by reducing traffic (demand). Capacity can be increased in a number of ways, but needs to take account of latent demand otherwise it may be used more strongly than anticipated (Hermann, 2006). Increased supply can include, adding more capacity over the whole of a route or at bottlenecks, creating new routes, and traffic management improvements. Reduction of demand can include, parking restriction, park and ride, reduction of road capacity, congestion pricing, road space rationing, and incentives to use public transport, telecommuting’’ and online shopping.

iv. **Intelligent transportation system**



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Intelligent transportation systems include the application of a wide range of new technologies, including traffic reporting via radio or possibly mobile phones, parking guidance and information, automated highway systems, traffic counters, navigation systems, transit improvement and electronic charging. These can provide great reduction in congestion as well as variety of transportation improvements

v. **Encouraging Green Modes**

Any traffic congestion reduction strategy in Lagos should encourage development of “green modes” such as bicycles, cycles rickshaws and pedestrians (Sanjay, 2003). First of all, the safety concerns of cyclists and pedestrians have to be addressed adequately. For this purpose, there has to be a segregated right-of-way for bicycles and pedestrians. Apart from reducing congestion, it will also help improve safety, increase the average speed of traffic and reduce emissions resulting from slow speeds. To enable longer trip lengths on bicycles, bicycle technology should be improved.

vi. **Drivers’ Enlighten**

There should be proper and adequate enlightenment for the drivers on the dangers inherent in congestion and also persuading them from certain congestion-causing habit such as wrong overtaking one way driving, disobey of traffic signals and traffic wardens.

**Towards a Sustainable Traffic System Management**

The following points are noteworthy:

- Efficient Traffic Information System – Road User/Traffic Education – to propagate and stimulate consciousness of traffic culture.
- Adequate and better law enforcement and compliance philosophies, discipline positive perception to traffic should be sought.

**10. 0 Conclusion**

This research examined land use conversion in Lagos as an emerging megalopolis. The impact of the socio economic activities that emerged as a result of the land conversion have significant implication on traffic and transport operation generally in the area.

The environmental and social consequences of the traffic bottlenecks arising from the land use complication as a result of heavy commercialization and business activities in the area . It should be noted that effective solution to traffic problems in the area cannot be found in a strait jacket application of a particular solution but a combination of efforts.

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