Relationship Between Historic Evolution, Urbanization and Mobility in Ibadan, Nigeria

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ABSTRACT

Ibadan is said to be the biggest indigenous city in Nigeria with a population of about 4.04 million, making it the third largest city in the country after Lagos and Kano. Since its founding in 1829, Ibadan has experienced urban evolution that is mostly unguided. With its high fertility rate, population growth and rural-to-urban migration, Ibadan has experienced significant urban sprawl that has resulted in challenges in urban mobility especially to the lower-income earners. This study looks at the relationship between urban planning, urbanization and mobility in the city of Ibadan. The study found that lack of integrated land use planning that includes transport networks including a masterplan is one of the major issues facing mobility in the city. Moreover, unregulated sprawl mostly made of slums and informal settlements has ecological, economic and social effects. Upgrading of slums coupled with integrated urban planning and enforcement is proposed as part of the solution for an effective urban mobility in the city. Policies that encourage compact urban development, mixed land use, and the provision of efficient public transportation systems to reduce the dependence on private transportation and create more walkable, bikeable, and transit-friendly communities are recommended.

INTRODUCTION

Ibadan is the capital of Oyo state in Nigeria, with its main population from the Yoruba ethnic tribe. It is said to be the biggest indigenous city in Nigeria with a population of about 4.04 million (United Nations, 2018), and the third-largest city by population after Lagos and Kano (National Bureau of Statistics, 2007) with a population growth rate of about 3.15%. The city has a population increase of more than 100,000 inhabitants yearly. Urban growth is associated with urbanization of peri-urban areas that resulted in informal

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settlements and urban sprawl (Adelekan, 2016).

As an old city founded in the early 19th century by indigenous tribes (Falola, 1991), it has undergone British colonial administration, post-independence and contemporary planning policies and regulations to become the bustling and complex city of today. With these transformations, however, Ibadan faces many challenges including urban sprawl and inequality in urban mobility.

Therefore, this article aims to analyse the historic evolution of the city of Ibadan and how sustainable urbanization theories and tools can be used to improve urban mobility and sustainability of the city.

MATERIALS AND METHODS

This article presents the analysis of literature review on the subject of urban sustainability in relation to Ibadan's evolution through urban planning. It is of importance to note that a broad literature review was conducted albeit with a limitation on available published data.
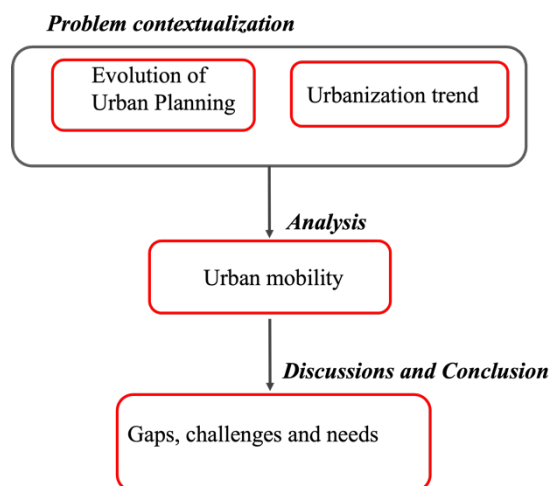

Figure 1: Conceptual framework.

This article bases on the hypothesis that the evolution of urban planning through different administrative periods have an effect to the overall sustainability of the

city. The conceptual framework of this article is given in Figure 1.

Evolution of Urban Planning

Pre-colonial period

Ibadan town was founded in the nineteenth century around 1829 (Falola, 1991). However, sources from oral tradition state that Ibadan as a state was founded on three different times by three different communities, and survived after all three communities were merged. The three original communities of Egbe/Egbe Atipa, IIe/Ille Olagunsoye and Olode were founded between the 16th century and the 18th century.

The first founder of Ibadan is said to be a prince of Ile-Ife[1] called Lagelu (also known as Oroo Apatamaja). It was destroyed soon after its foundation as a result of the insolence and irreverence with which the inhabitants treated the Egungun ancestral cult. By then, Ibadan comprised of sixteen gates and seventy blacksmiths' shops (Mabogunje, 1962). The Egba Gbagura and some migrants from other regions of Yorubaland, such as Iseri, Owu, and Ile-Ife, lived in the "second" Ibadan community (Falola, 1991).

There were some changes that began in the Ancient Oyo Empire that led to the founding of the "third" Ibadan in 1829 (Oladele et al., 2011). Fulani[2] assaults of Old-Oyo and other northern Yoruba towns from Ilorin devastated the empire and forced many people to move south. During the Owu War from 1821-1828, refugees from Northern Oyo fought alongside the Ijebu and Ife. Due to the Fulani's increasing pressure, more northern refugees joined this unified force, and in 1829, when Owu was destroyed, they camped at Ibadan (Falola, 1984). These three communities existed separately for some time, each with its own leadership and inhabitants. They eventually came together to form the

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[1] Ile-Ife is an ancient city in south-western Nigeria that has been the holy city of the Yoruba

[2] Fulani (or Fula, Fulbe people): ethnic group in West Africa

nucleus of what we now know as the city of Ibadan.

Ibadan was founded with a cosmopolitan culture. Its members are from Yorubaland's other regions as well as Oyo, Egba, Ijebu, and Ife. By the time a permanent administration was established, the Oyo elements were already the majority in the colony. In contrast to older Yoruba towns, Ibadan provided many prospects for individual accomplishment and distinction, which attracted a lot of people to the city. Another contributing aspect to Ibadan's cosmopolitan atmosphere was its location in the zone between grassland and trees (Splansky, 1966). As a result, it grew into a commercial hub that imported commodities from the coast, the Yoruba heartland, and other parts of northern Yorubaland. Ibadan became the meeting place for traders from Ijebuland, Egbaland, Oyo, Ogbomosho, Ijaye, Hausaland, and Nupeland to exchange goods (Awe, 1973)

A few Brazilians who had crossed the Atlantic to escape enslavement and had since lived in Sierra Leone made their way to Ibadan later in the century. Ibadan had about 100,000 residents by 1831, and the city continued to grow by incorporating some of the nearby abandoned Egba settlements (Onibokun & Kumuyi,1999). Due to the martial attitude that dominated Yorubaland in the nineteenth century, it featured town walls that were probably constructed for security reasons. Ibadan's inhabitants were farmers, artisans, and warriors. In actuality, the elite of the society was made up of trained warriors, whose military might, promoted Ibadan as a strong force in Yoruba politics during the nineteenth century. As a result, Ibadan developed from a camp for fighting to a large city that served as the centre of an empire that included Yoruba tribes such as the Ekiti and Ijesha. The imperial capital's population increased as a result of conquest wars, and the city itself became more international.

During this pre-colonial period, physical planning of the city was done through local chiefs and heads of families who administratively reported back to the King. The location of important structures such as that of markets, shrines, play grounds and the chiefs' residences were guided by divination with the Kings residence generally located near the market (Arimah and Adeagbo, 2000). Land use and ownership was also guided by the same structure during this period.

Colonial period

Ibadan had already become a heavily urbanized community with a population of about 120,000 by 1893, which marked peace among the various warring factions initiated by British championed treaties to eliminate hostilities (Vaughan, 2000). At the same time, a new era of international trade was ushered in. The building of the railway from Lagos in 1901 and its extension northward to Kano in 1912 ensured Ibadan's commercial importance and further aided in its development into a significant trading hub.

In the process, the British took over the administration of Ibadan. New rings of residential and commercial districts developed around the traditional city of pre-colonial period creating a major transformation in terms of the spatial and morphological structure of the city (Figure 2). New housing zones for Europeans and supporting infrastructures including government office buildings, hospitals, courts, schools, recreational grounds/golf course and churches, separated from the traditional city by 'green belts' were developed. These developments, in a sense, marked the beginning of an unstated policy of 'twin city' development, whereby parallel and separate physical development existed between the indigenous traditional core and the modern city founded on European values and institutions (Mabogunje, 1962; Chokor, 1986, 1993).

Later on, city development was guided by the Town and Country Planning Law of 1946 that was designed after the British Town and Country Act of 1932, the Lands

Development (Roads) Law of 1948 and the Building Lines Regulation of 1948 (Arimah and Adeagbo, 2000).
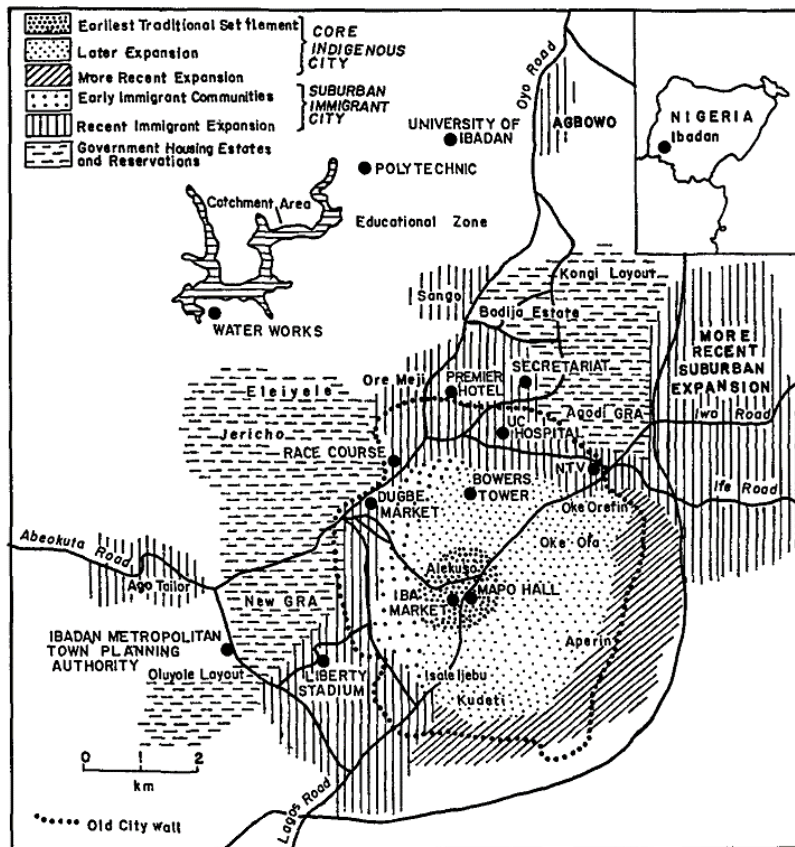
Figure 2: The Town of Ibadan in 1817, (Edwards, 2023).

Post-colonialism

After independence in 1960, Nigeria adopted and continued to use the colonial established planning laws and regulations. Urban planning in Oyo state follows the laws of Western Nigeria under the Urban Planning Cap 125 that deals with Urban and Country Planning (Adeboye, 2003).

Urban planning in Ibadan is mostly conducted by Local Government with its own modified regulations. The tradition of local regulations and laws follows Ibadan's history of decentralized political arrangements (Arimah & Adeagbo, 2000). While urban planning works under contemporary regulations, land tenure system in Ibadan State and in most of Nigeria is predominantly based on customary laws and practices. Under this system, land is communally owned by the community or clan, rather than by individuals. The traditional rulers or chiefs of the community are the custodians of the land, and they allocate land to individuals or families for use (Oluseyi, 2006).

Since urban planning is greatly influenced by the land tenure system, the government of Oyo State has taken steps to modernize the land tenure system in Ibadan, by introducing new laws and regulations. For example, the state has established a Land Use and Allocation Committee, which is responsible for allocating land to individuals and companies for various purposes, including residential, commercial, and industrial development (Obayelu, 2013).

However, challenges related to the coexistence of land ownership laws guided by chieftaincy and land development

guided by state, still persists. Bablola (2022) found that land tenure system increases residents' loyalty to their environment, could strengthen the community and help to secure tenure processes. It is essential to strengthen land tenure system in order to regularize urban planning in the city. Alabi et al. (2021) extended this research to wealth, well-being and insecurity in peri-urban areas of Ibadan and found that the need of governmental support for secured land tenure systems and eased bureaucracy is needed to enable strategic housing development. As a result of urban planning strategies through the three different periods, Ibadan has an inner core that has deteriorated to form slums that lack formal basic services including mobility and an outer core that is informally developed with low urban density.

Urbanization of Ibadan

Population increase
The population of Ibadan increased from a war camp consisting of a dispersed group of troops in 1829, to a pulsating metropolis today. With a population of 100,000 in 1851, 175,000 in 1911, and 745,448 in 1952, Ibadan has had a rapidly rising population (National Bureau of Statistics, 2007). By 1973, the population had increased to 1,141,677, or 3.95% annually (Ojuolape & Afon, 2016). The population growth, since then, is illustrated in Figure 3, showing rapid population growth post 1975. The current growth rate is at 3.15%, with an expected population of about 6 million inhabitants by 2035 (United Nations, 2018).

With population growth, the developed land also increased from only 1 km^2 in 1830 to 12 km^2 in 1931, 23 km^2 in 1963, 112 km^2 in 1973, 136 km^2 in 1981 and 214 km^2 in 1988 (NISER, 1988 cit. from Olusenyi, 2006).

With population increase, the city of Ibadan has seen numerous transformations. The conventional city of the 19th century has been forced to reform and modify some of its institutions in order to meet the demands of the contemporary age and the demands of the metropolis. The changes are still happening, yet like a spiral, the city is also growing and spreading.
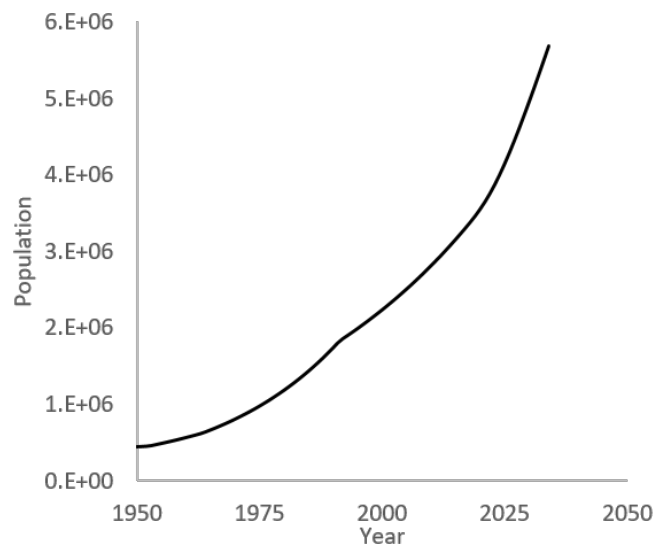
Figure 3: Population growth, (National Bureau of Statistics, 2007).

Today, a broad variety of educational institutions can be found in Ibadan since 1948 when it had only one higher educational institution (Udegbe & Ekhaguere, 2017). Currently, Ibadan serves as the home to a State Polytechnic, a Federal University, and a privately-owned university. Several nursing schools, more

than 500 secondary schools, a few teachers' colleges, and hundreds of primary schools are also present (Obar et al., 2017) as well as research institutions and organizations.

Whilst some of the old markets in Ibadan have historically been overshadowed by the newer ones (Olaniyi, 2015), traditional markets, such as Oje market that specializes in Aso-Oke (hand-woven cloth), which is imported from Iseyin, Saki, and other towns in the Upper Ogun region is still particularly significant. However, with a lack of defined spatial use plan and strategies for the city, Ibadan has been haphazardly urbanizing leading to among others urban sprawl.

Urban sprawl

Ibadan has experienced significant urban sprawl in recent years. The phenomenon of urban sprawl refers to the expansion of urban areas into surrounding rural or undeveloped land, often characterized by low-density residential and commercial development as well as the spatial expansion of city to rural areas (Fulton, 2001; Pumain, 2003).

An analysis on urban sprawl for the city of Ibadan between 1984 and 2013 shows that urban sprawl mainly occurred at the main transport routes connecting Ibadan with other cities; and to a lesser extent in other peripheries (Olalekan, 2022).

Following the 1976 opening of the Eleyele-Sango expressway in the west of the city, which was later extended to Dugbe and Onireke Area, known as the busiest roadway in Nigeria, considerable urbanization occurred in the eastern and northern areas of the city resulting in development of new residential areas, shopping centres, and other commercial establishments on the outskirts of the city, as well as the conversion of agricultural land into urban use. The metropolitan area has since expanded into every section of the surrounding local government areas. The once-rural areas of Lalupon, Alakia, Olodo, Odo-Ona, Bode-Igbo, and Moniya, for an instance, which are on the edge of the city, have been merged into the modern metropolis of Ibadan.

These informal developments as a result of urban sprawl have led to urban areas that lack sufficient infrastructure, health and education facilities (Fourchard, 2003). Urban sprawl leads to the expansion of cities in a way that increases distances between residential areas, commercial centres, and workplaces. This leads to longer commuting distances and increased dependence on private vehicles, which in turn contributes to traffic congestion and air pollution.

Interplay Between Urban Planning and Mobility

The city of Ibadan is extensively connected to other cities within and outside the country (Figure 4). For an instance, Ibadan is part of a development pathway called the *West African Urban Corridor* that connects major cities in five West African nations - Lagos and Ibadan in Nigeria, and Cotonou, Lome, Abidjan, and Accra in Benin, Togo, and Ghana respectively. Moreover, Ibadan is also served by the *Ibadan-Kano railway* line and has a contemporary airport at Alakia.

The *Lagos-Ojoo Expressway* and the *Lagos-Nguru Rail Line* traverse the city; both are a part of the Trans African highway system. Several inter-urban bus lines also serve the city.

The Northern Regions of Nigeria and Lagos are accessible by major roads from Ibadan. The *Ibadan-Lagos Expressway* caused the most urban sprawl in the 1980s (to the east and north of the city). Along the *Lagos-Ibadan* and *Lagos-Abeokuta corridors*, several manufacturing and commercial businesses are emerging in addition to religious institutions, creating major employment prospects.

With its monocentric plan, the transport system within the city has been found to be inadequate. Currently, public transportation including buses operated by private companies and the state

government are the most common mode of transport within the city. The state government also operates a Bus Rapid Transit (BRT) system, which has been introduced in some parts of the city to help ease congestion and provide faster transportation. Other modes of transport that are widely used include taxis, motorcycles (popularly known as "okada"), and tricycles (known as "keke").
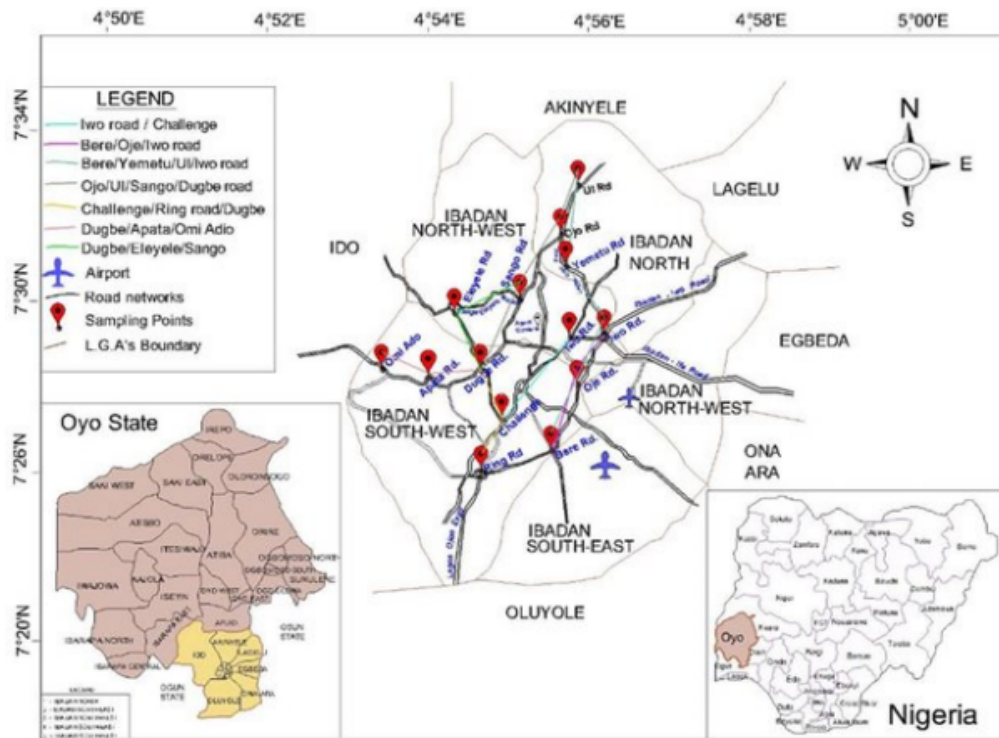
**Figure 4: Infrastructure and traffic routes in Ibadan within its position in Nigeria.
Source: (Salisu et al., 2020)**

However, Akanmu et al. (2020) found that most infrastructure facilities possess insufficient quality. A large portion of the road network in the city is narrow, winding, and lack pedestrian sidewalks. Traffic congestion is a significant issue as well, particularly during peak hours, and many of the roads in the city are poorly maintained. Additionally, safety concerns have been raised about motorcycle taxis, which are often involved in accidents. There is also inadequate parking and, and where space exists, it is occupied by vendors (Solanke, 2013; Omirin & Akogun, 2021).

Moreover, the quality of service in both public and private transport systems in the city is low with cramped and non-ergonomic interiors; as a result, the level of customer satisfaction with transport service is currently very low (Akanmu et al., 2020).

As a result of these challenges, from an *ecological perspective*, the reliance on private vehicles due to urban sprawl contributes to increased air and noise pollution, leading to environmental degradation and potential health risks for the city's residents. Additionally, the longer commuting distances resulting from urban sprawl leads to increased fuel consumption and carbon emissions, further exacerbating the city's ecological footprint.

Economically, the lack of proper spatial planning and fragmented development in the outskirts of Ibadan result in inadequate public transportation infrastructure, making it costly for the city to provide efficient and accessible transportation options. As a result, the economic burden falls on the citizens who must bear the cost of private transportation. This disproportionately affects low-income

residents who may struggle to afford private vehicles and face limited access to affordable and efficient transport options. The economic consequences of urban sprawl also extend to the inefficient use of land resources, leading to increased infrastructure costs and reduced investment in sustainable urban development.

Socially, the ramifications of urban sprawl on the transport system in Ibadan are apparent in the form of inequal access to transportation services.

Overall, the disconnection between urban sprawl and the transport system in Ibadan is evident in the form of increased traffic congestion, longer commuting distances, and inadequate public transportation infrastructure.

RESULTS AND DISCUSSIONS

One of the main attributors to urban sprawl in Ibadan is the non-compliance of private residential development with urban planning laws, and hence impeding the effective implementation of urban planning regulations (Mbee & Joseph, 2022). Institutional context of urban development and planning regulations, lack of interagency coordination, poverty among the general populace, and the public's disregard for formal planning institutions also contribute to non-compliance with urban planning laws in Ibadan (Arimah & Adeagbo, 2000). Furthermore, the growth and expansion of urban communities have been poorly managed with a lack of proper spatial planning and absence of good corporate governance (Oladokun & Proverbs, 2016).

The lack of proper spatial planning and poor land use management in cities such as Ibadan has also contributed to urban sprawl, which in turn has had a negative impact on the transport system (Oladokun & Proverbs, 2016).

Major expenditures are currently being made in transportation to increase their competitiveness in Ibadan, and throughout Nigeria. The federal and state governments have been actively involved in offering transportation services. The National Union of Road Transport Workers (NURTW), the Road Transport Employers Association, labor unions, and cooperative societies, among others, are just a few of the union organizations that have helped achieve this.

To reduce traffic congestions, there has been significant dualization of highways in recent years, with the installation of flyovers in key locations such as Mokola, Bashorun-Akobo, and Iwo Road. Electronic traffic signals that were found to be the most effective factor to reduce traffic congestion in Ibadan need to be applied more and regulations and laws need to be enforced (Salisu et al., 2020). With these initiatives however, the level of congestion in the city is still high, hindered also by informal settlements that do not support access roads including in slums found in the inner core of the city.

In terms of official transportation planning by the government in Ibadan, there are efforts to address these challenges. The government has recognized the need for integrated land use and transportation planning to mitigate the impacts of urban sprawl on the city's transport system as proposed by various studies (Dargahi et al., 2021). However, the implementation of these plans is often hindered by factors such as inadequate funding, political interests, and a lack of coordination between different agencies involved.

One of the most important tools for integrated planning is a masterplan. The Ibadan City Masterplan was launched in 2016 by the Oyo State Government and financially supported by the World Bank, to provide solutions for Ibadan's urban structure and periphery up to 2035 (Figure 5). The masterplan proposes ring roads combined with other arterial roads that can provide better mobility to the city. However, this masterplan has not been approved and therefore not implemented. As a consequence, unregulated construction of settlements and other land

uses is still impeding effective urban mobility to the residents.
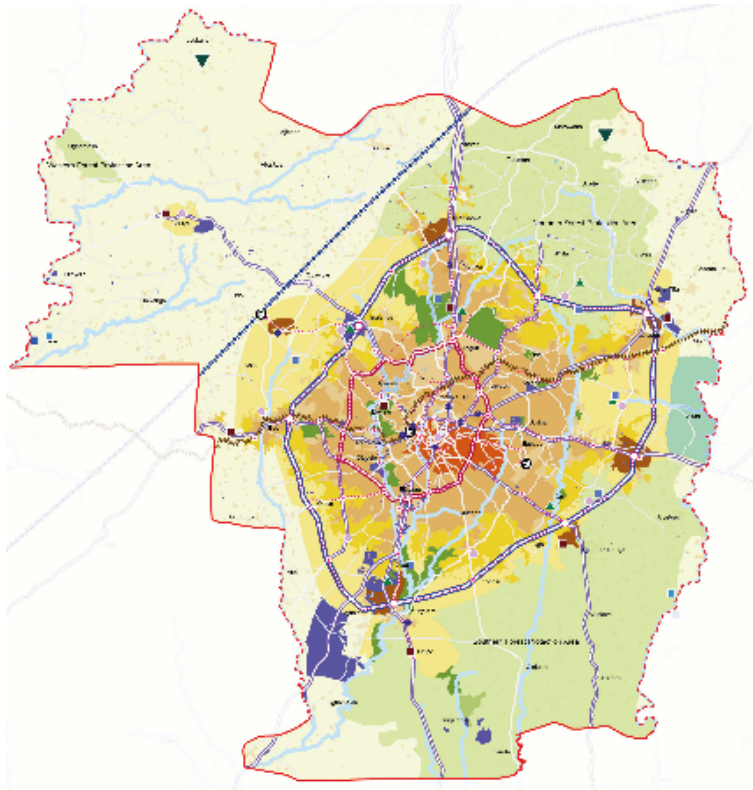
Figure 5: Ibadan City Master Plan, Copyright: Dar Group.

CONCLUSIONS

In order to increase the sustainability of transportation and meet the needs due to urbanization in Ibadan, several measures can be recommended. Firstly, the government should prioritize integrated land use and transportation planning to address the challenges posed by urban sprawl. This includes developing policies that encourage compact urban development (Dieleman & Wegener, 2004), mixed land use, and the provision of efficient public transportation systems to reduce the dependence on private transportation and create more walkable, bikeable, and transit-friendly communities (Arbury, 2005). Additionally, upgrading of slums and informal settlements to provide transport access and connectivity is also essential in bringing urban mobility equality and economic opportunities (Jones, 2012). Furthermore, investment in public transit infrastructure is crucial to provide accessible and affordable transportation options for all residents. This includes expanding the coverage and frequency of bus routes, improving the quality and reliability of public transportation services, and integrating different modes of transportation such as buses, trams, and light rail systems (Cooper, 2012; Bhatta & Drennan, 2003).

The government should identify, prioritize, and start developing sustainable infrastructure while simultaneously utilizing private partnerships and participation. Approval and enforcement of land use plans proposed in masterplans should be given a priority, and the town planning authorities should be proactive in granting approvals and follow-up implementation plans.

Overall, the connection between urban planning, urban sprawl, and the transport system in Ibadan highlights the need for integrated land use and transportation

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planning in order to create sustainable and efficient transportation systems that can accommodate the growing urban population while minimizing the negative impacts of urban sprawl (Masoumi, 2021). By integrating land use and transport planning, Ibadan can address the challenges of urban sprawl and create a more sustainable living environment for its population.

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