# LAND AND HOUSING MARKET ASSESSMENTS AS A TOOL FOR LAND MANAGEMENT AND PROPERTY TAX DEVELOPMENT

***By:***

**ESV. LOLA TOMORI** ***anivs, rsv, mnim, arvs***

Published by: **MACOS URBAN MANAGEMENT CONSULTANTS**

No. 6, Off Olubadan Road, Agala Estate
Oke-Aremo Ibadan. P.O. Box 7051
Oyo State Nigeria.



ISBN: 978-978-31064-9-0

Printed by:

***Typesetting By:*** Olanrewaju Computer, Adegbayi, Ibadan

08139200898, 09074927248

# PREFACE

The rate at which urbanization is proceeding and pushing up the demand for residential, industrial, commercial and community land in Nigeria cities has no precedent even in the history of developing countries. Indeed, land is essential ingredient in the process of all urban growth. The problem of Nigeria cities is not a shortage of developable land, but the ineffective and often outdated mechanisms they use to ensure an adequate supply of suitable land for urban growth.

However, it is not easy to develop land policies that would address these problems, particularly because of the complex role that land plays in the society, not only as an avenue of development, but also as commercial good and a natural birthright. Consequently every land decision is surrounded by an array of institutional, industrial, administrative, technical, financial, cultural, environment, and political issues.

Federal and State governments in Nigeria pursue urban land policy objectives, and they rely on a vast range of policy tools and institutions to achieve them such as master plans, zoning, subdivision regulation, building codes, and other policies to shape development. These regulations are normally adopted to help protect the urban and natural environment, gear infrastructure investments with development, and maintain and enhance property values. Other objectives are: providing the poor with access to land, controlling land speculation, and land inflation.

In the minds of many government policymakers achieving these goals requires stronger medicine such as: nationalization of land, public land development, and highly centralized property registration systems to control land ownership.

In fact, without government intervention critical public facilities such as parks, open spaces, and major infrastructure and urban services, which the private sector cannot profitably produce and sell, will not be provided

Taxes on land and buildings can also serve important economic, political, and legal objectives in developing countries such as Nigeria fiscal policies and new approaches to property rights. Each country of the world describes the context within which policy decisions for the property tax system were made and objectives determined how these have evolved as part of the transitional reforms still in process, especially in Lagos and Oyo States where Land Use Charge has been introduced and Abuja where property tax is replacing Tenement Rates for Local Governments is a reflection of the economic situation.

A number of considerations led to the designation of property taxes as local revenue services. An immovable tax base offer possibility of independent local revenue, even at times of fiscal stringency at national government levels dramatize the importance of some measure of fiscal autonomy.

Two primary difficulties have confronted efforts to implement land and building taxes. First, the absence of developed property markets requires a choice among:

- formula based property capital values (e.g. Land Use Charge);
- price approximations of land or building; and
- non-value base of allocating the tax burden

A lack of reliable land market prices, together with a legacy of officially determined price levels, has often encouraged the assignment of specific, sometimes arbitrary property values for tax purposes.

Second, periods of financial hardship present special problems in imposing taxes on assets that do not produce income with which to pay the taxes. This dilemma has left many properties at nominal levels. Given these difficulties, it is particularly significant that many of these states in Nigeria either adopting or seriously considering some form of value-based taxation of immovable property as a source of local government finance.

However, the case studies in this compendium are not intended to identify any single path to the development of a successful system of property taxation but rather to broaden our understanding of the available alternatives to overcome their constraints of specific political, technical, institutional and economy of the states and local governments with respect to constitutional provisions. Whichever property tax model adopted, it would require a tool that has been developed to provide such information as Land and housing market assessment.

The Land market on land prices, the supply of serviced up-to-date data on land prices, the supply of serviced land, and present projected land project. In other words it provides a concrete foundation for defining appropriate strategies for improving land market performance.

Detailed information about the price and characteristics of new housing units offered in the market is then obtained to establish the current supply of housing on the market, the affordability of the current supply of housing relative to current household incomes in the metropolitan area, and the types and locations of units selling most quickly. Households can be surveyed to obtain even more refined details.

Land market assessment information (LMAI) is also used in **property taxation** and fiscal planning, any central governments including regions and states, hard-pressed to fund the construction of infrastructure to support **land development**, are beginning to levy taxes, fees, and user charges on property owners. But to efficiently impose these charges, it is necessary to measure the cost benefits of infrastructure projects, particularly changes in land values.

In conclusion, the land and housing market assessment is an essential first towards making local land and housing more efficient. The information base generated by the assessment can be used to gauge market performance, identify future needs for infrastructure, assess housing affordability and assess the impacts of public policies and actions.

# TABLE CONTENTS

# CHAPTER ONE

# THE IMPERATIVES OF CONDUCTING LAND AND HOUSING MARKET ASSESSMENTS

## 1.1 Introduction

The rate at which urbanization is proceeding and pushing up the demand for residential, industrial, commercial, and community land has no precedent even in the history of developed countries. Indeed, land is the essential ingredient in this process, as in all urban growth. The problem for most developing countries is not a shortage of developable land, but the ineffective and often outdated mechanisms they use to ensure an adequate supply of suitable land for urban growth.

But it is no easy matter to develop land policies that would address this problem, particularly because of the complex role that land plays in society-not only as an avenue of development, but also as a commercial good and a natural birthright. Consequently, every land decision is surrounded by an array of institutional, administrative, technical, financial, cultural, environmental, and political issues.

Despite the complexities or land development, its potential benefits are enormous. These may be measured by the lower cost of industrial and commercial development, higher standards of living for residents, and the more efficient provision of urban services, not to mention the more intangible benefits, such as individual peace of mind, cultural satisfaction, and social stability. Therefore, it is important for developing countries to understand their land issues and learn how to deal with them so that these complexities can be overcome.

Under the monitoring pressures of urban development, cities of the developing world are in vital need of accurate and systematic information about their land markets. Such information is essential to a host of rational economic decisions in both public and private programs. Without it, cities are unable to plan and develop housing and residential plots or the urban infrastructure needed to cope with their fast-growing

populations. A too that has been developed to provide such information is the land market assessment (LMA).

## 1.2 Not Enough Land in the Right Location at the Right Price

The urban land market operates to allocate land to buyers. It does so through adjustment to prices, the quantities supplied, and the quantities demanded. In many countries, policymakers are concerned that the urban land markets are not operating efficiently and that land is in short supply land prices are high, or combinations of both.

One obstacle to the development of sound urban land policies is the fact that land markets are poorly understood, which is due in part to their complexity and in part to the lack of sufficient performance data. This lack of information often stands in the way of rational economic behavior and leads to inappropriate government policies and investment programs (see for example: Mayo, Malpezzi, and Gross, 1986).

Unlike other markets, where supply and demand determine the dynamics of market operation, land markets are not driven by perfectly competitive forces. Land is not homogenous each parcel is unique, having a particular set of locational, physical, and neighbourhood characteristics. Actors in the land market are diverse and have divergent objectives, expectations, and strategies. In some cases, only a few buyers and sellers may participate in particular land markets, and an individual land seller or buyer can greatly influence market outcomes. When there are barriers entries-as, for example, when all land is owned by the state or by a tribe - less than normal profit and rents can be earned. In addition, land market attributes, such as ease of entry and exit, are clos controlled by local and national government policies and by public decisions about infrastructure investment, which is not the case in other markets.

A fundamental difference between land and other commodities is that land is use exclusively for producing some other product. The demand for land is therefore derived from the demand for the product or service produced on the land. The demand for residential land is derived from the demand for housing; the demand for housing, in turn,

is determined by demographic a economic factors such as the rate and level of household formation, household income, savings, a interest rates. The demand for land is also affected by the number of people wanting to hold land an investment. These factors, also apply to the demand for commercial and industrial land.

On the supply side, the quantity and price of land depends on the spatial pattern infrastructure, the physical develop ability of land, the willingness of current landowners to sell, a government-imposed limitations on how land may be used. The level of infrastructure - such roads, municipal water, and sewage treatment trunk lines - by all large determines whether land to be developed (although this is not the case in informal settlements, to what extent, and in what physical direction. In rapidly growing cities, the infrastructure capacity it's frequently inadequate a therefore impedes land development and helps inflate land prices.

Land markets, according to Nweke Umezurike, 2003, there is a difference between **market overt** (open market) and land market. However, the special mention of open market is very important because term **"open market value"** has quite a lot to do with the **land market**. He said, the authors of Jowitt's Dictionary of English Law were quite lucid in their description of the market overt (open market) as follows:

Market overt in ordinary market town is only held on the special day provided for the particular town, by character of prescription…….

"This doctrine of **market overt** is that all sales of goods made then are binding not only on the parties, but also on all other persons: so that if stolen goods are sold in the **market overt**, the purchaser if acting in good faith, acquires a valid title to them against the true owners……..

For two reasons, this doctrine could not apply to sale of land. The first is that land is incapable of being stolen; and the second is that land is incapable of being carried to the market overt for sale. However in author sense the open market value of a piece of real estate is quite paramount.

What then is land market? The land market is an arrangement whereby rights in land or real estate are traded. It is not even like the stock exchange which is usually centralized and all dealers gather in the location. It consists of small markets, small both by location and sectorally. In the same city, small property market may be neigbourhoods. In the same way, a boom or a lull in one sector may not necessarily extend to other sectors of the property market.

## 1.3 LMA Objectives and Procedures

The land market assessment provides accurate and up-to-date data on land prices, the supply of serviced land, and present and projected land projects. In other words, it provides a concrete foundation for defining appropriate strategies for improving land market performance. LMAs can be used to support four broad activities: (a) governmental planning and decision making (b) the evaluation of government policies and actions, (c) private sector investment and development decisions, and (d) the structuring of land-based taxation systems.

Land management assessments are carried out by a team of professionals that usually includes a land economist familiar with market survey techniques; a land planner experienced in interpreting aerial photographic and satellite images; a statistician with experience in computing and data base management; data analysts for coding, data entry, and fieldwork; a draftsperson; and a group of surveyors. A computer system is used to develop the data bade and conduct statistical analyses.

The time required to prepare a land market assessment depends on the size of the city the level of detail of analysis, and the number of professional staff assigned to the project. If the city is starting from scratch, it will take approximately one to two years to complete a land market assessment, although most of the basic data would have been collected somewhat earlier.

The first step in a land and housing market assessment is to review available reports and data sources that have been compiled by public and private agencies on land

and housing conditions in the metropolitan area. In addition, meetings will be held with government officials and private real estate developers, brokers, and bankers. These preliminary efforts will yield the information needed to define the size and shape of the study area, the types of data to be collected and analyzed, and the specific policy questions to addressed.

Next, changes in housing stock or land use are tabulated from aerial photographs and satellite images. Housing types, including both informal and formal housing, are then tabulated in detail, differentiating slums and squatter settlements, land subdivisions, formal private housing projects. Nonresidential uses, including industrial areas, commercial districts, and institutional uses are also recorded.

Detailed information about the price and characteristics of new housing units offered in the market is then obtained to establish the current supply of housing on the market, the affordability of the current supply of housing relative to current household incomes in the metropolitan area, and the types and locations of units selling most quickly. Households can be surveyed to obtain even more refined details.

The next step is to disseminate the information obtained from the assessment. This can be accomplished through seminars, reports, and briefings to public and private sector professionals. The information will be of particular concern to officials in local, regional, and national governments who are responsible for urban land development and planning, programming and development of housing and residential plots, and the development and financing of urban infrastructure. It will also be of interest to housing and commercial developers, bankers lending on urban development projects, professional planners and advisers working for international donor agencies, and researches working on land and shelter issues in developing countries.

## 1.4 Application of LMAs

The land price data base developed by the LMA can be used to gauge the impact of government policies, investments, and actions. Such assessments fall into two types: ex post measurements of the effect of local public actions. The ex post method in turn can be divided into measurements that employ econometric models and those that use case study comparisons to assess the effects of public investments. The econometrics approach relies on regression models to isolate the net impact of a project on land values. Methods for estimating the effects are based on wither time-series or cross-sectional data. The time-series method begins be defining the area from which historical land values data is collected. Usually, the analyst identifies some area in which and parcels are assumed to have benefited or been affected by a project. In the case study comparisons, two areas are selected for analysis. One is located adjacent to the project and the other is a “control” case distant from the project, but similar in most other respects.

It is considerably more difficult to predict the likely impacts of pubic actions on land values. Two approaches are suggested, both of which require substantial information about land markets. The first method applies the estimates of past impact assessments to future projects or regulations. Although crude, this approach provides planners and finance specialists with some estimates. The second approach, which applies only to land and development regulations, estimates the potential impact of a change in zooming or building controls on land values.

LMA information is also used in taxation and fiscal planning, many central governments, hard-pressed to fund the construction of infrastructure to support land development, are beginning to levy taxes, fees, and user charges on property owners. But to efficiently impose these charges it is necessary to measure the costs and benefits of infrastructure projects - particularly changes in land values.

LMA information also has many applications in private sector development. In the case of residential development, most developers attempt to estimate the demand for housing units and compare it with supply. The land market assessment of the location and characteristics of projects can be used by developers to gauge the current level of the supply of projects by geographic area. Private developers as well as public developers can the compare then current level of supply with demand to determine whether additional projects are warranted.

In conclusion, the land and housing market assessment is an essential first step towards making local land and housing markets more efficient. The information base generated by the assessment can be used to gauge market performance, identify future needs for infrastructure, assess housing affordability and assess the impacts of public policies and actions.

# CHAPTER TWO

# A FRAMEWORK FOR REFORMING LAND POLICIES AS A TOOL FOR URBAN MANAGEMENT IN NIGERIA

## 2.1 Introduction

Land is something more than a strictly physical factor of production. From a cultural, economic, legal and social point of view, it is "an element of nature inextricably interwoven with men's covets and wants for his personal use and satisfaction and for which he has devised institutions that permit people to acquire, own, possess and utilized to the exclusion of other (Barlowe, 1978).

Land is actually real property or real estate divorced from any building or improvements upon it. Real property is the sum of the rights in land, or rights arising out of building/improvements to the land and its appurtenant. By its nature, land serves as a factor of production, a store of value or wealth, a status symbol, and sources of social and political influence. Ownership of land may carry with it social and political advantages in addition to the income advantage.

Resources are products natural environment, therefore, degradation of the resources will have the following damaging effects. It harms human health, reduces economic productivity and leads to the less of "Amenities" a term that describes many other ways in which people benefit from the existence of unspoiled environment. Some of the environmental resources are vital to human life and the economic well-being of the urban centres in all the states of the federation. These are Water Resource System; forest Parks and "Open" Spaces; Agricultural land; Urban land; Fisheries, Mineral resources; Tourism and Recreation; Historic Sites and Cultural Heritages.

## 2.1 Land Policy Changes In Nigeria

The purpose of this paper is not to go into the history of Land Tenure System in Nigeria but what led to land policy changes and my own perception of framework for reforming land policy as a result of recent development in which economic, social and other objectives of our people should be fruitfully mobilized.

According to R.W. James (1987), the Anti-Inflation Task Force highlighted the need to avoid the injustices of private appropriation of socially created wealth, and to remove the bottle-neck that land constituted to development and, in particular, to the expansion of the housing programmes. It put forward the following guidelines:

(i) all future transactions should require the approval of the respective state government according to the rules nationally determined;
(ii) future transactions of land should be on a leasehold basis; and
(iii) government should reserve the power to acquire for its own use, at reasonable costs, all land needed for national, state and local projects.

Subsequently in 1977 the military government set up the Land Use Decree Panel headed by a Supreme Court judge with terms of reference. According to R.W. James, the report of the panel was never made public. The land policy adopted was one of the trusteeship which embraced many of the essential principles of the Northern Nigeria land tenure law . These principles are as following;

(a) The maximum interest the citizen is allowed in land is the right of occupancy; but the developers own his improvements on the land.
(b) Dispositions are subject to control without reference to ethnic origin of the transferee;
(c) Security of tenure is dependent on land use.

The policy is intended to achieve a number of overall objectives:

- the availability of land for both the federal and state governments in order for them to realize their commitments on public sector housing, infrastructural development and the implementation of conservation schemes;
- to avoid land speculation;
- to secure for every Nigerian a piece of land for his use within his financial means;
- to achieve a reduction in the incidence of disputes; and finally
- to achieve substantial reduction in "transaction costs" of securing land to those in need of land.

Despite the Land Use Act, perceptions of the various communities about the prevailing land tenure system, both in the urban as well as rural sector, are as wide apart and diverse as the ethnic diversity of the country. In the major urban areas land belongs to the state. In the rural areas, land is owned by the peasants farmers, the indigenous community and the clan.

In addition to the diversity in tenure perceptions, the majority of the land holdings are not formally registered. Besides, the transaction costs of securing land from government agencies are extraordinarily cumbersome and inhibitive to any kind of entry in to land-related investments.

As a result, two parallel markets formal and informal markets have emerged. For that reason, land and landed-property market values are becoming distorted due to the preponderance of market segmentation. The altitude and greedy behaviours among civil servants working in the land administration and land delivery bureaucracy have also become wide spread and pervasive.

Taxes on land and buildings can also serve important economic, political and legal objectives in developing new fiscal policies and new approaches to property rights in a democratic society and developing economies.

As Nigeria continues to sustain its economic growth and invest wisely, it will be able to finance better services and raise its standard of living. Land is a major resource, and real estate investment and development play important roles in the reallocation of assets to sustain and nurture growth.

Transforming Nigeria economy through effective land management and property taxation is imperative in the sense that land is life and a platform for economic activities. The existence of bundle of interest in land market is a vital basis of all wealth. Therefore, raising revenue in form of taxation for sustainable infrastructural provisions and urban services would definitely impact positively on the economy of Nigeria.

## 2.2 The Need For Reforming Urban Land Policies

Land resources are being lost due to soil erosion, landslides, salivation, overgrazing and many other causes. On the other hand, there is no denying that in some areas, underutilization and insufficient use of land resources exists. While new agricultural land is being developed, existing alienated land becomes idle. There are vast wastelands. In many cases land his held for security, speculation, or as status symbol, but not for productive purposes. Prime agricultural lands are converted to other uses (Peter Sun, 1989).

In some countries, wood is a major fuel. Because of heavy deforestation and inadequate afforestation, forests are being destroyed. in particular, unauthorized exploitation by individuals accelerates the deforestation process. Therefore, the function of land tenure is to create a framework within which economic, social and other objectives of a people may be most fruitfully mobilized.

Nigeria, like many other developing countries is confronted with land market problems such as: land security, land speculation (runaway inflation), insecurity of land titling system, out-moded planning standards, environmental problems and economic crisis resulting from inappropriate land development and management.

Governments around the world pursue urban land policy objectives by relying on a vast range of policy tools such as institutional, administrative, technical, financial, cultural, environmental and political issues. Many city governments use metropolitan, zoning, sub-division regulations, building codes, and other public policies to shaep developments.

The government intervention by way of urban planning and land use regulation are designed to achieve the following:

- better coordination in land management;
- better protection of the environment;
- gear infrastructure investment with development;
- maintain and enhance properly values;
- provide the poor with access to land; and
- controlling land speculation in urban and rural areas.

Many policymakers in achieving these goals embark on nationalization of land, public land development and highly centralized property registration system to control and monitor land ownership

However, the lack of management information system in Nigeria urban centres has been responsible for the state of affairs. There is hardly any management information system on which decisions for planning the scope, the rate of growth and the revenue receivable for any services or infrastructural facilities can be based.

In a lead paper presented by Professor Akin L. Mabogunje on 17$^{th}$ of July, 2002 titled “Land Management in Nigeria: Issues, Opportunities and Threats” he said: “there is no attempt anywhere to have a detailed cadastration or mapping of land ownership whether in urban or rural areas. Individual survey their properties and take it to the Lands office of State or Federal Government to be charted unto a master map. He went further, but there is no compulsion about this or any attempt to ensure accuracy or appropriateness of boundaries”

The basic information required for effective management of urban centres is the coordinate address of individual plot of land on it. It is the agglomeration of these plots that defines the extent not only of municipal jurisdiction but also of responsibility for the provision and delivery of particular services and amenities. These property units, according to Professor Akin L. Mabogunje (2002), represent the basic economic assets from which the city can expect to generate much of the revenue needed to pay for the services and amenities.

## 2.3 The Urban Land Policy Problems

Urban land policy problems are too complex and wide ranging to classify, but they may be divided into the following broad-base categories:

(i) Urban land market;
(i) Housing conditions and access to Land
(ii) Land registration and tenure security
(iii) Ineffective government programmes and actions in the area of urban development
(iv) Private sector resistance to government land regulations; and

### (a) Urban Land Markets

Urban land markets, with their relatively fixed supply and the often defective and imperfect nature of both the commodity and the market, distribute the scarce land supply among competing users. They assign land to its most competing users. They assign land to its most profitable use according to the preferences of consumers and society. Competition among land users sets prices and determines the pattern of land-use activities in urban area.

As the pressure for urban development increases, rural and agricultural land on the edges of cities is developed. The process of converting farmland to urban uses is triggered when the demand for peripheral land pushes the price bids beyond the value of agricultural land.

This is why governmental interventions, booth directly and indirectly, often take place and are critical to broadening access to land beyond those who can afford the open market prices. The nature of such interventions closely reflects the governmental ideology as often expressed in the national land policy. Land policy, therefore, is an important tool for modifying market-driven land tenure in the interest of national development objectives, as an instrument for responding to urban societies' needs and for achieving greater equity and social justice.

Public sector interventions are geared towards moderating land market allocation mechanism, to minimize land market imperfections, and to assist in ensuring allocation of land to preferential areas, particular to those who cannot secure well-situated land on their own.

**(b) Housing Conditions and Access to Land**

Housing is a critical basic need of man. It is a unit of the environment, defined as "residential environment, which includes, in addition to the physical structure that humans use for shelter, all necessary services, facilities, equipment and devices needed or desired for the physical and mental health, as well as, social well being of the family and individuals (Salau, 1990, citing World Health Organization). Thus, improvement in physical and psychological fitness, as well as social and economic well being in turn, enables households and society to provide increasingly better housing

However, in spite of importance of housing, it has been an intractable problem in both the urban and rural areas. For instance, Metha (2006) noted that one of the identified concerns about the present urban context is the worsening state of access to shelter and security of tenure resulting in severe overcrowding, homelessness and environmental health problem.

Indeed, challenges of housing, in terms of quality, appear to be the same all over the world. The needy have access to housing while the less needy have greater chances of accessing housing. In Nigeria, housing is generally inadequate in the rural areas in terms

of quality, while the major problem in urban areas has been identified to be more of quantity, although quantity is also an issue.

The shortage of housing, according to experts, is one of the factors responsible for the poor environmental quality across Nigeria, including the spread of sprawls and slums.

The UN-Habitat (2008) identified two types of slum exist in its publication on African cities:

**(a)** the traditional city centre slums of decayed and dilapidated structures built with semi-durable material (adobe) and lacking physical planning standards; and

**(b)** spontaneous and often illegal informal settlement developments at the urban periphery on squattered land.

Both are defined as ‘Slum” because their inhabitants suffer one or more shelter deprivations. These two generic slum types generally result from a combination of poverty, failing urban governance and inflexible formal urban land and housing markets that do not cater for the urban poor. Slum proliferation in urban centres in Nigeria is aggravated by the cumulative effects of economic stagnation, increasing inequality and the sheer rapidity of urban population growth.

The unprecedented expansion of urban population causes rapid increases in the demand for urban land leading to conversion of rural land at the urban periphery. Tenure systems largely determine the ease or difficulty of land acquisition and assembly. In Nigeria, they make expansion of urban areas difficult and raise transfer cost to level that are not attainable by the poor.

The Nigeria Land Use Act of March 1978 are intended to make land available to competing users. This public sector intervention are geared towards moderating land market allocation mechanism, to minimize land market imperfections, and to assist in ensuring allocation of land to preferential areas, particularly to those who cannot secure well-suited land on their own.

Local governments, within their ideological and political confines, can also moderate the land market to achieve specific planning and spatial aims or improve accessibility to urban land for residential and commercial purposes for a broad range of stakeholders, including low-income households and slum dwellers.

However, the urban Land Use Act in Nigeria, Urban Land Ceiling Act of 1976 in India, and the 2003 Ghana Land Administrative Project (LAP) have not produced the desired results. These land control policies have caused substantial problems: significant reductions in the supply of land for residential development, creation of a vast black market for real estate, and an overall worsening of housing affordability in all the major urban areas of these countries.

One of the most alarming results of these polices is the rapid growth of the slum population while majority of urban growth in developing countries is now taking place outside the planning control systems of the government. In addition, urbanization is influenced by large numbers of relatively low-income migrants. Thus, their limited financial capacities force them to solve their shelter and livelihood problems informally and on their own terms. They rely on self-help techniques ranging from the illegal tapping of urban services by low-income households to the provision of their own electricity. Water and sewerage supply by high-income developers.

**(c) Poor Land Registration and Tenure Security**

Land registration is an equally critical aspect of land management. This is not only to record who lays claims to particular parcel of land but also, especially in many areas of the states, to establish an un equivocal title to the land. The lack of good cadastral, registration and tenure records is a constraint one efficient city growth.

Obtaining proper title for projects in Oyo State can take considerable time, depending on the legal status of land; its intended use and the desire of the owners to sell it. One of the major impacts of poor titling and land registration systems is the inability of

land owners to gain access to formal credit sources. Formal sector lenders require that borrowers collateralize loans by pledging their property as security.

The insistence of always securing the consent of the State Governor either to assigned or to mortgage a property has been the greatest impediment to the development of land market in Nigeria. Apart from the delays in granting such consent, some State Governments use the requirements to extract unwarranted fees from owners of certificate of occupancies. This development forces many people to engage in informal land transactions which make it more difficult to manage the land resources and the land market in the States.

**(d) Ineffective Government Urban Land Policies & Planning Regulation**

At the same time, urban land policies are too centralized. The creation of the Ministry of Physical Planning and Urban Development in many states while former Local Planning Authorities became zonal planning offices creates bottlenecks in planning and approval

The goal and objectives of urban planning is to ensure that it becomes a basic tool for making Nigeria cities more livable and achieving other political, economic, social and cultural goals of all tiers of government. It will also promote the implementation of the Nigerian Urban and Regional Law Decree 88 of 1992. Therefore, all tiers of Government are supposed to produce physical development plans as provided by the Law.

The major issue in land administration has to do with allocation, utilization and management. These are some of the issues the Urban and Regional Planning Laws tried to cater for. This Law specifically provides for utilization and management of land at the three tiers of government:

(i) National Urban and Regional Planning Commission at the Federal Level.
(ii) State Urban and Regional Planning Board at the State Government Level
(iii) Local Planning Authority at the Local Government Level

However, in some states, the law works only where there is no conflict with the States Physical Planning and Urban Development Laws

Despite the promulgation of this Law, the planning and development controls in urban centres remain week due to the following reasons;

(i) poor enforcement of planning regulations as they exist;
(ii) uncoordinated activities of various government agencies which have significant land holdings

Nigeria is experiencing severe problems associated with unbalanced population distribution and increasingly rapid urbanization in the absence of well-articulated and comprehensive physical planning, development control and urban social policy.

According to UN-Habitat (2008), Lagos is the classic example of a developing country mega-city, combining haphazard, uncontrolled and unrestrained population and spatial growth with little corresponding expansion, infrastructures, services and livelihood opportunities.

Urban fragmentation caused by Colonial Administration, typically creates two cities within the city, as clearly illustrated with the satellite image of Lagos, Ibadan and many pre-colonial cities would show. The urban poor live in high urban densities, with unplanned urban spatial layout and mostly deprived of access to adequate housing, residential land, municipal services and other urban benefits. The better off tend to reside in the ordered, formally planned and structured higher-income areas that enjoy municipal services. To correct this precarious situation faced by cities in Nigeria and Africa as a whole, there is need for politicians and city managers to look inward, towards improving affordable and adequate housing and basic facilities and services delivery.

The urban planning process also involves the determination of land suitability for housing development and other facilities. This will discourage uncoordinated individual encroachment on the land, and consequently minimize the cost of rehabilitating misused land by the Government for future development.

**(e) Private Sector Resistance to Government Land Regulations**

Although governments shape urban land polices and provide investments in infrastructure, it is likely private sector (both formal and informal) that build cities. Without the full cooperation and compliance of private land and housing developers, most government programmes would fail. Numerous examples include failure of developers to provide required parking, encroachment on setback areas, and not providing required open space.

Some people also develop and acquire land within acquisition area without obtaining approved plan in both urban and rural areas either due to delayed compensation or non-payment of compensation. The limited financial capacities of these people force them to solve their shelter and livelihood problems informally and on their own terms. Given their vast numbers, poor urban dwellers are the dominating market sectors for urban land demand. This may be in conflict with the laws and urban development plans for state government.

In response, many states and local governments reverted to forced eviction and demolition of buildings, citing non-compliance with planning standards and development plan and lack of documentation as proof of illegal tenure status. Bu the resultant eviction are always counter-productive as it happened in Ibadan, the state capital of Oyo State recently, because these poor dwellers simply shifted to another urban locations or even returned soonest.

Urban relocation wither voluntary or compulsory raises critical issues such as land availability, job loses and job creation, reconstruction of housing stocks and of viable new neighbourhoods, adequate equipments for environmental management, as well as major financial and political issues.

In order to avoid or minimize involuntary population dislocation, each state must enact domestic policies that will explicitly regulate displacement and relocations. To reduce economic loses, social trauma and psychological pain inflicted on displaced

people, urban investments and growth programmes of governments must address relocation with no less attention than is given to other components of the urban growth.

In the case of Ajoda New Town Land acquired in 1978 by the Military Governor of Oyo State without paying compensation to the Land owners or some of them amounting to about ₦33million, the government found it difficult to take full occupation and even use the land for DRY PORT project initiated by Federal Government for South Western States. The Erunmu people within the same acquisition had to release land for the project extending a little into the Ajoda Land while the villages within the acquisition continue to sell land for residential buildings without approved building plans due to population pressure and scarcity of land in Ibadan Metropolis

## 2.4 Analyzing The Problems of Loss or Destruction of Natural Resources

Land and water resources are key components of the natural resource system of any country, these national resources are fundamental to sustainable economic development in most countries. This particularly true in Ibadan and other cities in Nigeria where there are large subsistence sectors that depend on their land and water resources. However, these resources are increasingly being subjected to intense pressures brought about by rapid population growth, widespread poverty and growing industrialization and urbanization. This was the case of the four forest resources and water bodies in Ibadan presented in a lecture organized by Ibadan Foundation in honour of Late Alhaji (Hon.) Adegoke Adelabu by professor Samuel Babatunde Agbola (2013). These forests are Alalubosa Forest Reserve, Ogunpa Forest Reserve, Oke-Aremo Forest Reserve, and Eleiyele Forest Reserve, all in Ibadan Metropolis. Others outside the city are Ijaiye Forest Reserve; and Gambari Forest Reserve.

There are critical environmental problems associated with the destruction of resources, basic environmental infrastructure and service and exposure of urban population to man-made hazards and pollutions. The problems associated with destruction or mis-management of these resources are highlighted as follows:

(i) Lack of the most basic solid waste services in crowded, low income neighbourhoods is a major contribution to high morbidity and mortality among the urban poor;

(ii) Swage and Silage from domestic, commercial and industrial sources is flushed into inadequate drainage system with many hazardous health effects associated with unsafe sanitation, landslides or collapsing houses.

(iii) Lack of or inefficient transport services and infrastructure is a major impediment to economic growth and urban productivity. This informed the Oyo State government from the days Governor Jembewon to intensify governments' efforts in the dualization and upgrading of several urban and rural roads in Oyo State.

(iv) Pollution of surface water (i.e. lakes, river and coastal and marine waters) can result in health problems from eating shellfish or from direct contact with water and loss of revenue as a result of depleted fisheries and a drop off in tourism

(v) Every is a key input for urban development, but the supply and demand of virtually every type of fuel generates varying degrees of environmental externalities. On the supply side, the extraction and conversion of every resource for urban use can harm the environment in many ways, some of which occur outside the city. For example, deforestation from fuel wood harvesting or disruption of watersheds and evictions of communities to make way for hydropower projects.

(vi) Land and ecosystem degradation: is as a result of inappropriate land development which exerts direct pressure on land as well as on environment. Particularly susceptible to inappropriate development are hill sides, flood plains, wetlands, coastal areas and forest. The development of Mokola hillsides and the floodplains of Ogunpa river caused the flooding of the river in 1978 and 1980 with the resultant heavy loss of lives and

property. This prompted the State Government to relocate and construct New Gbagi market.

(vii) Important historic structures or religious monuments and natural wonders including open spaces may be destroyed in the process of developing or redeveloping cities for residential, commercial or industrial estates. In other instances, historic properties may be left to deteriorate while their municipal or commercial function is moved to newly developed areas of city. Such action may have damaging effect on ethnic pride and national identity and it may hurt tourism

A primary reason for the decline in the quality of many resources was the adoption of faulty development strategies. Many countries were not careful in conserving their resources, and pursued resource-intensive technologies. The long-term goal of sustainability was sacrificed for short-term, quick results.

Finally, ***according to the discussants on Land and Water Resource Management in Asia (An EDI Policy Seminar Report. No. 20,)*** institutions have a critical role to play in improved resource use. Land is a resource and ownership of, and access to, land are institutional relationships that determine the utilization and distribution of benefits. In many Asian countries, tenants do not have security of tenure on land, so they end to explicit lad without much regard for the future. They do not carry out land improvement activities that are expected to yield results beyond their short-term planning horizon. The institution of tenancy, therefore, is another arrangement that can result in the misuse, depletion, and destruction of resources.

**Oke-Aremo Forest Reserve** covers the top and steep slopes of Aremo Hill. The hill is also an element of the central ridge of Ibadan. The spatial extent of the forest reserve is 58.4hectares. Lying within the reserve is the Bower Memorial Tower.

**Eleiyele Forest Reserve** in the northwest outskirt of Ibadan, surrounds Eleiyele Lake which was established in 1941. The reserve covers 360.9hectares while the lake initially covered 165.1hectares. The reserve was established to protect the lake from

intense evaporation, soil erosion from the abutting slopes of Eleiyele Hill and its sedimentation from there and upstream. River Ona was damned at the eastern foot of the hill to produce the lake which initially had a length of 4,146 meters. Its width varied from 46 metres to 924 metres along its longest western tributary.

## 2.5 Utilization of Urban Management Information Tool

The development of urban management information system will facilitate the efforts of urban Local Governments in identifying the boundaries of the wards and the neighbourhoods, naming of streets, lanes and house numbering. This will enhance properly identification process and public services delivery including mails to individual houses and service of electricity and water bills.

For urban management to be effective, city will be divided into geographical zones depending on the political boundaries of local governments, the population, location of employment centers, land use pattern and communication patterns in the metropolis.

In 1987, the PIE ASSOCIATE developed a geographical information system for Ibadan Municipal Government under the professional guidance of Professor Akin Mabogunje, Late Professor Ojetunji Aboyade and Late Papa Tokun, the first Chief Town Planning Officer of Western State. There were about 110 geocode zones which were used for World Bank financed property rating project (see the map of Ibadan North Local Government and the Selected Data). The geocode system has given way to Post Code System developed by the Nigerian Postal Services.

This Urban Management tool provided a near accurate and up-to-date data base on the operation of the urban land market; provided information for local governmental planning and decision-making; evaluation of Ibadan Municipal Government (IMG) policies and actions; served as a mechanism for structuring land-based taxation systems (property rating); providing information for private-sector investment and development decisions concerning available public local estates in Ibadan Metropolis service delivery.

## BASE MAP OF IBADAN NORTH LGA.

## Table 1: Selected Data of Wards in Ibadan North Local Government identified for managing the Council

| Postcode District | Ward 10 & Code Number | Communities | Land Area in $km^2$ | Population 1991 | No. of property 1996 | Land-Use Pattern |
|---|---|---|---|---|---|---|
| **200211** | N2 (Ward 1) | Oke-Are Odoye Adeoyo Isale Afa | 0.25 | 8,843 | 1,355 | Core Area |
| | N3 (Ward 2) | Oniyarin, Agbadagbudu Ode-Olo | 1.04 | 29,794 | 1,841 | Core Area |
| | N4 (Ward 3) | Oke-Aremo Yemetu Total Garden | 1.28 | 34,542 | 2,630 | High Density |
| | N5A (Ward 4) | Gbenla, Igosun Nta, Atenda, Idi-Omo | 0.62 | 20,0235 | 1,469 | Core Area |
| **200221** | N5B (Ward 5) | Agodi GRA, Kongi Ikolaba, Basorun New Bodija, Ashi Oluwo, Idi-Ape | 8.90 | 22,435 | 7,960 | Medium and Low Densities |
| **200282** | N6A (Ward 6) | Sabo, Alafia Hospital Sabo Housing Estate, St. Gabriel | 0.59 | 7,483 | 800 | High Density |
| | N6A (Ward 7) | Oke Itunu Ore-Meji, Cemetery, CAC | 0.68 | 17,741 | 1,664 | High Density |
| | N6A (Ward 8) | Sango, Okoro Village, Ijokodo, Akere, Agbaje | 3.32 | 40,689 | 2,303 | High Density |
| **200212** | N6B (Ward 9) | Mokola Layout, Premier Hotel | 0.74 | 13,014 | 1,847 | High Density |
| | N6B (Ward 10) | Coca-Cola, Old Bodija Estate, Secretariat Complex UCH | 4.33 | | 1,755 | Medium Density |
| **200284** | NW8A (Ward II) | Ibadan Poly, University of Ibadan, Sango Police Station, Emmanuel College Trans Amusement Park, Samonda | 11.43 | 8,083 | 984 | Education Zone |
| **200213** | NW8C (Ward 12) | Bodija Market, Agbowo, Ojoo-Express | 3.64 | 60,174 | 3,213 | High Density |

***Sources:*** *Oyo State Valuation Office, ministry of Local Government and Chieftaincy Matters (1998). National Population Commission (NPC) - 1991.*

Whereas, the urban management land information system (UMLIS) project in Ghana cities such as Accra, is a system of combining geographic and alphanumeric dat. An up-dated digital base map facilities, information on owners, values of properties and rates to be paid. Once the platform is set other infrastructural faculties can be registered and demographic attributes and socio-economic statistics can be analyzed and presented for a common coordinated management of the urban area. In this way all urban development and management endeavours are effectively consolidate for good results.

Because local governments in Ghana (called assemblies) have various processes and activities that require land information and produce land related information. It is therefore of importance to have up-dated and easily accessible information on land. The following table was put together by the consultations in Ghana who carried out the feasibility study of process that UMLIS project can serve.

**Table 2: Beneficiaries of UMLIS in Ghana**

| Purpose of UMLIS | Process | Valuable Information | Beneficiaries |
|---|---|---|---|
| Planning | • Tracking recipients of land<br>• Providing advice on land-use<br>• Development control<br>• Land acquisition | • Topography information on owners of land<br>• Type of ownership/tenure<br>• Extent of land boundaries<br>• Location of land and lease period | • The general public<br>• Public institutions<br>• Private entities<br>• Research institutions |
| Revenue Mobilization | • Billing and collection of property rates<br>• Building permits<br>• Collection of ground rents etc | • Location of property sites and value, owner, size, use | • Local Govts<br>• State Govts.<br>• Development Agencies and Departments |
| Easy location of properties and people | • Response to fire, burglary<br>• Collection of utility charges<br>• Delivery of services | • Location of tourist sites and other important facilities<br>• Street names<br>• House numbers<br>• Owners | • General public<br>• Security services<br>• Utility providers<br>• Refuse collectors |
| Development control | • Development control | • Approved layouts of the area<br>• Certifies site plans<br>• Street names and house numbers | • General public<br>• Security services<br>• Land owners<br>• Local & state governments |
| Co-ordination of utility services provision | • Coordination | • Overall development plans | • Assemblies (LGs)<br>• Service providers |

## 2.6 Conclusion and Recommendations

In concluding this chapter, for any land reform to be meaningful, the Land Use Act should be amended as follows:

(i) The Land Use Act of 1978 should be removed from the 1999 constitution for further amendments.
(ii) The Land Use and Allocation Committee appointed by the Governor should be confirmed by the House of Assembly.
(iii) The demarcation or declaration of Urban and Non-Urban Area should be based on the recommendation of the Land-Use and Allocation Committee and confirmed by the House of Assembly of the State.
(iv) The Revocation of land overriding public interest must be transport and subject to public scrutiny.
(v) Section 49(1) and 49(2) should be amended to include Local Government landed property whether developed or not.
(vi) Registration of title or any interest affecting land must be made mandatory and compulsory to replace issuance of right of occupancy
(vii) Compensation must not be limited to unexhausted improvement. The value of the land and Market value of the improvement should be taken into consideration while arriving at the compensation payable

Secondly, governments must have good cadastral, registration, and tenure records to enhance city growth ad land transactions. Moreover, the cost of registration and related procedures, transfer taxes, stamp duties, and in some cases unofficial payments has been breeding a cynical attitude in the community. About, 80 percent of the populace occupy land and dwellings without any formal security of tenure as in squatter settlements. The situation is complicated with many areas still controlled by indigenous systems of land tenure making it difficult for state and local governments to have control over planning, land allocation and administration in the absence of effective and efficient urban management information system.

In summary, there is need for governments to develop policies on mapping priorities, map and information maintenance, flexible land information definitions and standards, institutional responsibilities for land information management, and cooperation between institutions. Such policies will minimize costs from duplication of efforts by several government agencies and will promote optimization of land information flows and maximization of data use. Aerial photo maps and satellite image maps are means of quickly obtaining land information, but ground control, field completion, and verification are still necessary.

# CHAPTER THREE

# REAL ESTATE AND INFRASTRUCTURE DEVELOPMENT AS DRIVERS OF ECONOMIC GROWTH

## 3.1 Introduction

Generally there exist a relationship between a nation's stock of infrastructure and her level of economic development. The more robust and sustainable the basic infrastructure available the better the development of the nation.

Infrastructural facilities can generally be grouped into two categories; physical or social; according to ESV. Emmanuel O. Wike (FNISV), 2018 in a lead paper delivered at the 48th Annual Conference at Ibadan.

(i) **Social Infrastructures** are those facilities and amenities that are provided to increase the quality and standard of living of the people of the society, which will indirectly or directly have effects on the general economy of the country. Some of these infrastructures includes: education, healthcare centres (hospitals and clinics), recreation, housing, security, firefighting service, **socio-cultural**; sporting, banks and financial institutions.

(ii) **Physical infrastructure** include: transportation, power, telecommunication, water supply, drainage etc. these facilities are provided in order to boost public and private economic activities. These infrastructures are meant to cause direct economic growth and development in the country.

There are two major ways which physical infrastructure contribute to the growth of a country's economy through **direct contribution** to the GDP from revenues received which can also be channeled to the other sectors of the economy or indirect contribution, through the reduced cost of production as a result of using a more efficient and less costly production input.

## 3.2 Breakdown of Infrastructure and Services

Nigeria experienced strong infrastructural development during the early years of the post-independence era which brought about the construction of rail lines in major parts of the country, long well-paved-roads, and prestigious bridges connecting different regions of the country. Huge capital was also invested in electricity generation. Other social infrastructures like hospital, healthcare centres, airports and schools (at all levels) were provided to meet the needs of the citizens.

The physical condition of Nigeria's urban infrastructure such as: water supply, sewerage, sanitation, urban roads, electricity, drainage, waste disposal, is generally poor. For instance, 60% of the population lives without electricity, according to US Energy Information Administration (EIA) reports. All types of infrastructure suffer from a massive backlog of neglected rehabilitation and maintenance, not to speak of the investments needed to serve future growth (see table 1).

**Capital Expenditure of Federal, State and Local Governments**

**in Nigeria (in Billion) - 2011-2015.**

| S/No. | Capital Expenditure | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|
| 1. | Federal Government | 918.55 | 874.83 | 1.108.39 | 783.12 | 818.37 |
| 2. | State Government | 1.375.20 | 1.965.30 | 1.890.41 | 1.862.52 | 1.201.82 |
| 3. | Local Government | 352.15 | 299.39 | 392.95 | 181.23 | 95.90 |
| | **TOTAL** | **2.645.90** | **3.139.52** | **3.391.75** | **2.826.87** | **2.116.09** |

***Source:*** *Central Bank of Nigeria Statistical Bulleting Table 3*

Periodic and routine maintenance, by far the most cost-effective types of infrastructure expenditures, are almost nil. Instead, the norm is to wait for an infusion of capital for rehabilitation. In effect it has become more convenient to replace them to maintain. But declining financial resources is making this less and less feasible. As a result, deterioration is accelerating.

## 3.3 Infrastructure and National Economic Development

The importance of infrastructure for standard economic development is well recognized. High transaction costs arising from inadequate and inefficient infrastructure can prevent the economy from realizing its full growth potential regardless of the progress on their fronts (Calderon & Serven, 2010). Physical infrastructure covering transportation, power and communication through its backward and forward linkages facilitates growth. **Social infrastructure** including water supply, sanitation, sewerage disposal, education and wealth, which are in the nature of primary services and has a direct impact on the quality of life. The performance of infrastructure largely a reflection of the performance of the economy (Kessides, 1993).

The process of urbanization has gathered considerable momentum in recent times and this has put urban infrastructure and services under severe strain. Smaller cities, because of inadequate financial resources have found it particularly difficult to cope with the increasing demands on services. Rural infrastructure comprises of rural roads, rural housing and rural electrification. Rural road connectivity is an extremely important aspect of rural development. Also, in ability of government to inadequately provide rural infrastructure has led to rural urban migration thereby putting more pressure on the already saturated urban centres.

The provision of infrastructure and its related services, according to Mr. Remi Babalola, the former Hon. Minister of State for Finance in 2009, are absolutely critical to the operation and efficiency of any modern economy. They are essential inputs in the provision of goods and services and significantly affect the productivity, cost, and competitiveness of the economy.

The adequacy of infrastructure helps to determine one country’s success and another’s failure in diversifying production, expanding trade coping with population growth, reducing poverty or improving environmental conditions. In this regard, policy decisions regarding its provision and deployment impact on national growth and development.

However, there is great need to address the challenges of infrastructural development in healthcare system, housing, transportation, communication, waste management and electricity. Nigeria is in dire need of massive infrastructural development in all critical areas. Undoubtedly, infrastructure remains one of the constraints to business, and absolutely necessary for the transformation of our economy. Unfortunately, this is most pervasive at the state and local government levels across the entire Federation.

### 3.4 Real Estate Contribution to Economic Development

Real estate in generally is defined as: landed property, land and building rights above the land and underground rights below the land. Real estate is often considered synonymous with real property, or realty in contrast with personal property or chattels or personality.

In British usage, “real property” often shortened to “property” generally refers to land and fixtures while the term “real estate” is mostly used in the context of probate law, and it means all in land held by a deceased person at death, excluding, interest in money arising under a trust for a sale or charged on land

Government can generate income (revenue) from the real estate sector by imposing taxes, levies, and fees on its products. Land-based taxes, levies and fees are good sources of income for governments. When government embarks on construction of real estate either directly or through private partnership, it creates employment opportunities and becomes employers of labour and this contributes immensely to the Gross Domestic Product (GDP).

Real Estate can also be used as collateral security for loans. Government can create wealth by acquiring land and developing them into industrial, residential and commercial estates or tourist gardens and parks. Government can also make laws that will ensure economic, effective and efficient investment in building construction and

planning regulations of building standards. Maintaining the existing infrastructure s is a way of creating value and ensuring value for money in real estate sector.

The world economy has been witnessing global financial sector upheavals and economics meltdown of immense proportion and Nigeria is feeling the consequential impacts. The provisions of infrastructure require further increase in government spending especially in these mother times.

There is need for the States and Local Governments to generate sustainable resources, in view of the dwindling Federal allocations, to meet the minimum requirements and needs of their economies, besides the regular allocations from the Federation Accounts.

Currently, all tiers of government spend far more than they earn. Unfortunately, the chunk of the earnings goes for overhead and personal costs with very little left for capital projects, especially infrastructural development. The negative impact of 'boom-burst cycle' of oil process can only be addressed by enhancing the internally Generated Revenue (IGR) profile of all tiers of governments in order to sustain and deepen our development process.

### 3.5 Real Estate Concentration Determines Fiscal Capacity of Nigeria Cities

Large Cities and metropolitan areas in a country are different from smaller urban or rural municipalities, because of the size of their population, the high degree of concentration of population, and the presence of a heterogeneous population in terms of social and economic circumstances. In many countries, large cities also serve as regional hub for people from neighbouring communities, who come to shop or use public services that are not available in their own communities.

However, to be competitive, cities need to provide services such as parks, recreational facilities, and cultural institutions in addition to transportation, water supply, sewerage, garbage collection and disposal, police and fire protection. The high

concentration of special needs within large cities and metropolitan areas also requires higher expenditures on social services, social housing, and public health.

Government also levies user charges for services such as water supply, public transit, the benefits of which are confined largely to users. Where user charges cannot be used because the benefits of a particular service are not confined to individual consumers, taxes that are borne by local residents are appropriate means of finance when the benefits area of the service is largely continuous with the municipal boundary.

Large cities and metropolitan areas are better able to levy property taxes than smaller cities and rural areas. The former rely on property tax revenues, for example, larger more densely populated cites have a large **per capital tax base** than smaller cities or rural areas, where property values are generally tower.

Whereas, **land-based taxes** are the fees, dues, charges, levies, rates and rents paid on land, either developed or underdeveloped to governments for wealth redistribution and as a form of government control over land. It is the responsibility of land-owners to pay taxes on them.

**Sales taxes** generate significant revenue for large cities that attract people from neighbouring municipalities who come to shop or work there. Indeed, sales taxes are one way to capture the benefits that commuters and visitors enjoy from using services in the municipality.

### 3.6 Planning and the Urban Land Market

Americans traditionally have great faith in the concept of the free enterprises market, according to William Paterson Theodore. The ideal market presumably would result in the most equitable distribution of the goods being traded, at least from economic pint of view. Similarly it is reasoned that a free and unrestrained urban land market should result in each parcel being put to its optimum "**highest and best**" use. Unfortunately the land market is one of the least perfect markets. Almost none of the requirements for an ideal market are met in dealing with urban land.

Benson and North describe some of the characteristics of urban land market as follows:

The market for urban real estate is localized because of thee characteristics of real estate. For example, if there is no demand for a particular kind of real estate where it is located, it cannot be transported to where there is demand.

The market for real estate tends to be **thin**, **sluggish**, and **erratic**. It is thin because a large investment is usually involved, and therefore at times buyers are hard to find for particular purposes.

- It is **sluggish** because there are technical difficulties involved in passing title and in giving possession investigation of the particular property in order to decide what price shall be paid.
- It appears to be erratic because the market tends to be very active or very inactive; this condition is due to the fact that real estate does not respond quickly to changing economic conditions.

In addition, the ability to finance purchases may vary sharply with **property size and location**. Demand effectiveness is therefore heavily dependent on credit availability. In the built-up area of the cities, it is often assumed that according to the succession theory land use undergo a process of growth decline and rebuilding automatically. And in some other parts of cities it is clear that private market conditions make it feasible for obsolete uses and/or structures to be replaced by those more appropriate in current market conditions.

Governments cannot avoid affecting the land market through their tax policies and investments in public facilities such as streets, schools, parks and recreational facilities, hospitals, clinics and other utilities.

**Real Estate Price Pattern:**

Farmlands near towns often has a potential **development value**, described by the Uthwatt Committee Report (1952) as "floating value" which increase as the likelihood of development becomes more certain. However, successful planning should seek to understand the economic and social forces which shape our environment and assist in the allocation of land uses to meet those needs in a manner beneficial to the whole community. This involves an adequate supply of land to meet various anticipated demand.

It should be noted that commercial and similar use are located in city centres, as they are able to pay the high land prices and secure the benefits of maximum accessibility and convince. Hence **rents** serve to act as sorters and arrangers of land use patterns and **planning control alone does not decide land use.**

Development in transport system may also lead to changes in real estate (land and building) values such as expansion and extension of road network or major road improvements or even construction of new railway passing through new areas. The same thing when a ring road or circular road is constructed, new developments tend to spring up along the routes with new values while farmland disappears gradually.

Environmental quality in terms of its physical and social attributes appeared a significant factor in judging the desirability of a residential neighbourhood. For example, a flood plain or rocky areas including where high tension were passes is not good for either residential or commercial buildings should be erected.

It should also be noted that the neighbourhood and wards organization of local government areas constitute the very framework on which their information system is based because of the knowledge of number of buildings, street network, ownership, population concentration, and value and use of property. The information constitutes an essential factor in the effective governance of the local government area and for developing a clear assessment of a metropolitan area's land and housing market.

**The concept of Equilibrium of Property Market**

All markets tend towards on equilibrium price, including the housing market, construction market, the market for rented commercial property, the market for student accommodation; the market for paving stabs, or whatever. All markets have an inherent balancing mechanism. When there is excess demand, price rises; and when there is excess supply, prices fall. Eventually a price is found at which there is no tendency for change, consumers are able to get all they want ay that price, and suppliers are able to sell the amount that they want at that price. This special market concept of equilibrium is important in economics, according to Danny Myers, 2006 in Economics & property, Second Edition.

In other words equilibrium prevails when opposing forces are in balance. If the price drifts away from the equilibrium point, for whatever reason, forces come into play to find a new equilibrium price. If these forces tend to re-establish prices at original equilibrium point, we say the situation is one of the STABLE EQUILIBRIUM. An unstable equilibrium is one in which if there is a movement away from the equilibrium, there are forces that push price and/or quantity even further away from this equilibrium (or at least do not push price and quantity back towards the original equilibrium level).

In these terms property markets can be characterized as unstable, equally as once they move away from a period of equilibrium they tem to take of demand and supply.

**The Price Mechanism**

For a market economy to function effectively, it is important that every individual is free to pursue "**self-interest**". Consumers express their choice of goods or service through the price they are prepared to pay for them, in their attempts to maximize satisfaction procedures and owners of resources, seek to obtain as a rewards as possible in an attempt to maximize profit.

In simple terms, the **price system** indicates the wishes of consumers and allocates the productive resources accordingly. Where construction industry where people are

engaged that in the manufacturing industry, this would make markets for construction relatively competitive and very distinct from manufacturing.

Markets generally also reduce the costs of trading. These costs are called **transaction costs** because they are part of the process of making a sale or purchase. They include the cost of being informed about the qualities of a particular product, such as its availability, its durability record, its servicing facilities it degree of safety and so on.

**Transaction in the property market**

Buyers of property have to search the market for information about prices and availability. Indeed, both buyers and sellers of real estate employ agents to negotiate and/ or search on their behalf. The agent is relied upon to know about comparable price and rents, and the availability of certain types of property. For their expertise regarding sales values and advertising a commission has to be paid. The commission costs cover: arrangements to view the property, to provide information about the local market, to explain contractual requirements and features relating to the property and last, but by no means least important to advice n price and value. Ultimately the agent negotiates a sale or purchase on behalf of the client paying the commission.

# CHAPTER FOUR

# GIS-BASED PLANNING DEVELOPMENT OF PROPERTY TAX AND URBAN LAND MANAGEMENT INFORMATION SYSTEM

## 4.1 Land Use Planning

Land is unique in that each parcel or plot has a specific location with its own particular geography. The changing pattern of urban growth is generally characterized by the broad pattern of growth, decay, rebuilding, central business and shopping core, industrial estate, and outer residential suburbs.

Land development is however, the consequence of many decisions and implementing actions of both a public and private nature. **Priming actions** often trigger **secondary actions** which taken together produce the total pattern of land development.

Hence, the broad objective of planning is to ensure that land is put to the best use from the point of view of the community, and to secure as proper balance between competing demands for land. Furthermore, the regulation and control of the use, in urban areas of land resources within proprietary land units is necessary, in order to prevent the repetition of undesirable mixture of land use which has emerged over time towns and cities.

Planning our towns, on the other hand is fundamentally concerned iwht the development land resources with buildings, roads and other urban services, to accommodate changing demands.

Successful planning should seek to understand the economic and social forces which shape our environment and assist in the allocation of land uses to meet those needs in a manners beneficial to the whole community.

## 4.2 Pattern of Land and Property Values

Commercial and similar uses are located in city centres, as they are able to pay the **high land prices** and secure the benefits of maximum accessibility and convenience. **Hence rents serve to act as sorters and arrangers of land use patterns**; ad planning control alone does not decide land use.

It has been suggested that the outgrowth of this market process of competitive bidding for sites among the potential users of land is an orderly pattern of land use functions that characterize urban life.

Generally commercial and industrial uses can attract land away from residential uses, competition between firms to be in the desired positions will force the land values above those of the surrounding land used for residential purposes. If all the land in a given part of the city or town is used for **complementary purposes** this is likely to enhance the land values, whereas if they are **incompatible**, this may lower the land values. For example, if there is a residential district well served by schools, open spaces and transport, people will wish to live there and **both property and land values will be higher than the area that lacked these facilities**.

Moreover, since commercial and industrial properties are almost always taxed at a higher rate than residential properties, larger cities with a high proportion of commercial and industrial properties have greater ability to levy property taxes. These large cities and metropolitan areas rely on property tax revenues because they are more densely populated. Hence, they have **higher per capital tax base** than smaller cities and rural areas, where property values are generally lower.

### Economy of Building Development

This section is concerned with the characteristics of property and the basic criteria for development under taken in both the public and private sectors such as probed of land acquisition financial considerations and sources of finance.

## 4.3 Definition of Development

The term “Development” has been defined variously by many professionals and statutes. In Estate Management Parlance, development portrays the act of bringing to existence buildings and other structures on land, or the act of improving on the already existing structure through rehabilitation, renovation, refurbishment, remodeling, renewal etc. using human and material resources for the purpose of earning a return of benefits (Litchfield 1956).

In Cap 155 of the Law of the Federation of Nigeria (1948) the term development is regarded as any building or rebuilding operations, and the use of land or any building there on for a purpose which is different from the purpose for which the land or building was last being used.

As enunciated in the Urban and regional Planning Law of Nigeria (1992), section 91, development is referred to as: “The carrying out of any building, engineering, mining, or any other operations in, on, over or under any land, or the making” of any environmentally significant change in the use of land. In a more generic form, development is taken to mean the process of bringing out any new physical structure, as well as the change in use or intensity of use of any existing real property either by a private individual or a body corporate, by **incurring material cost on it for a return** or generate benefits.

Every development whether it be for a public authority, industrialist or private investor has a “**market value,**” that is, a potential worth or earning power. Even civic buildings, hospitals, churches and universities have an assessable value to the community, a cost above which it is most reasonable or feasible to build. **Within certain limits of aesthetics, function and performance, the most economic development is that which shows the greatest return to the community for the minimum capital invested**. This does not imply that the cheapest is the best; often the opposite is the case.

The private developer or industrialist will require a financial appraisal or feasibility study to determine the likely capital expenditure and probable revenue in order to arrive at the anticipated return on the money invested. Whether the project is to be financed by public or private funds, it is important to know the cost implication at the outset in order to be able to appraise the inability of the project. It is necessary for the proposed development, its cost and the time required to complete it. The time between capital expenditure and completion of a project should be kept to a minimum.

## 4.4 Concept of GIS

GIS is coming together of an array of diverse interests, and the fact that each can find some usefulness in common technology. It is clear that an enormous variety of human activities are organized spatially and that spatial access to data is particularly important.

**(a) WHAT IS GIS**?

- **GIS** is a particular form of information system applied to geographical data.
- A **system** is a group of connected entities and activities which interact for a common purpose, for example, a car is a system in which all the components operate together to provide transportation.
- An **information system** is a set of process which executed a raw data, to produce information which will be useful in decision making. An information system must have a full range of functions to achieve its purpose, including observation, for casting, decision making.
- A **geographical information system (GIS)** uses geographical data as well as non-spatial data and includes operations which support spatial analysis.

In GIS, the common purpose is decision-making for managing the use of land, resources, transportation, retailing, oceans or any specially distributed entities.

The connection between the elements of the system is geography, e.g. location, proximity, spatial distribution.

In this context GIS can be seen as system of hardware, software and procedures designed to support the capture, management, manipulation, analysis, modeling and display of spatially- referenced data for solving complex planning and management problems.

The GIS has the potential to merge a person's process and field knowledge with a powerful computer system that documents activity and builds a base further streamlining. It can remove some of the tedious task of day-to-day operations, thereby easing the burden on the worker, resulting in the potential for productivity increase. At the same time new data documentation, requirements are added that form the foundation for future GIS analysis.

**(b) Why do we need GIS?**

Many businesses have adopted GIS because they provide increased efficiency in the delivery of goods and services. Retail businesses locate store based on a number of spatially-related factors.

- Where are the potential customers?
- What is the spatial distribution of competing businesses?
- Where are potential new store locations?
- What is traffic flow near current stores, and how easy is to park near and access these stores?

Spatial analyses are used every day to answer these questions. GIS are also used in hundreds of their business applications; such as to route delivery vehicles, guide advertising, design buildings, plan construction, sell real estate and in property enumeration and assessment for land management and property taxation.

GIS provide spatial solutions to many fields of civil engineering such as transportation, water resources, facilities management, urban planning, construction and E-business. GIS is an effective tool to visualize the topographical conditions of

construction site. The modeling of construction site facilitates in construction controlling and planning process.

It was also possible to provide access to GIS database directly from the field, using wireless links and mobile services.

## 4.5 Application of GIS

In modern times, the geographic information system (GIS) and Land information system(LIS) have come to stay and predominate as valuable tools for aiding the proper taxation process (or Land Use Charge). Complimented with property enumeration and identification, GIS and LIS will assist in establishing the true position of each property within a neighbourhood or the entire locality of a town or city.

The operational procedures such as assignment and maintenance of unique property identification number (PIN), tax mapping, field data collections, valuation, bill delivery and monitoring, enforcement and tax payer service must be integrated with data processing components, such as data entry, verification and validation, valuation and assessment, tax billing, collection monitoring, system control and information retrieval.

In large cities a computer system will be needed to metropolitan areas like Ibadan, Abuja and Kano, to develop the data base to conduct statistical analyses. The software for running the computers and the data base and map files are available. SPOT satellite images can also be used to develop land-use typologies for assessing land-use and urban development patterns.

A Geographic Information System (GIS) uses geographically referenced data as well as non-spatial data and includes operations which support spatial analysis. GIS application areas are:

- Resources management applications
- Urban Planning and Management
- Cadastral records and Land Information System (LIS)

- Facilities management
- Demographic and network applications

In the context, GIS can be seen as a system of hardware, software and procedures designed to support the capture, management, manipulation, analysis, modeling and display of spatially referenced data for solving complex planning and management problems.

## MAJOR AREAS OF PRACTICAL APPLICATION

### (a) Street Network-Based

- Address matching i.e. finding locations of given street addresses.
- Vehicle routing and scheduling
- Location analysis and site selection
- Development of evacuation plans

### (b) Natural Resource-Based

- Management of wild and scenic rivers, recreation resources, floodplains, wetlands, agricultural lands, aquifers, forests, wildlife.
- Environmental impact analysis (EIA)
- View-shed analysis
- Hazardous or toxic facility siting
- Groundwater modeling and contamination tracking
- Wildlife habitat analysis, migration routes planning

### (c) Land Parcel-Based

- Zoning, subdivision plan review
- Land acquisition
- Environmental impact statements (EIS)
- Water quality management
- Maintenance of ownership

**(d) Facilities Management**

- Locating underground pipes, cables
- Balancing loads in electrical networks
- Planning facility maintenance
- Tracking energy use.

## GIS AS A SET OF INTERRELATED SUBSYSTEMS

**(i) Data Processing Subsystem**

- Data acquisition from maps, images of field surveys
- Data input from material to the digital database
- Data storage

**(ii) Data analysis Subsystem**

- Retrieval and analysis and display of results as a maps or tables

**(iii) Information Use Subsystem**

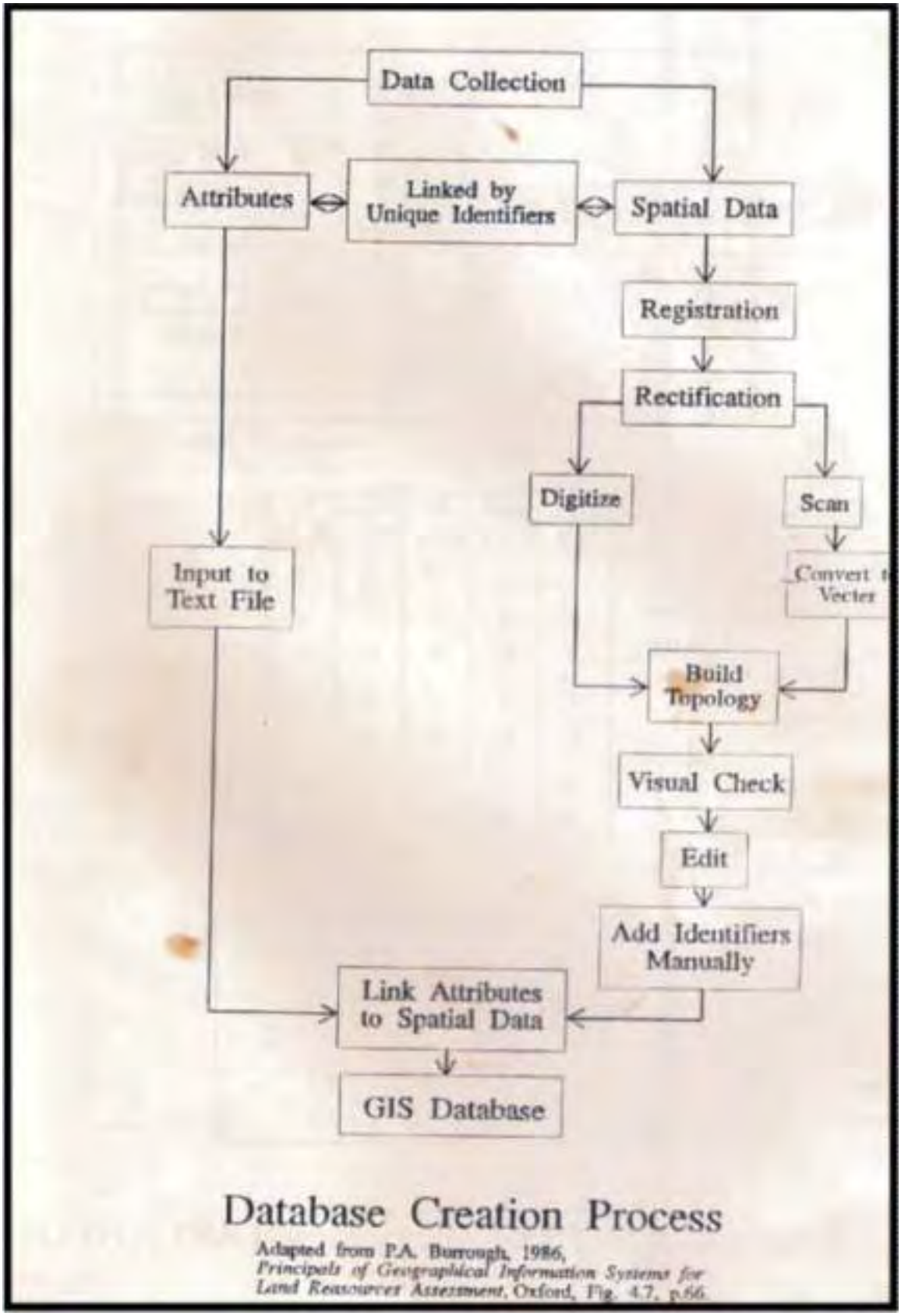
- Users may be researchers, Planners or managers.
- Interaction is needed between GIS group and users to plan analytical procedures and data structures.

**(iv) Management Subsystem**

(a) **Organizational Role**: GIS section is often organized as a separate unit within a resource management agency (cf: the Computer Center at many Universities & I.I.T.A) offering spatial database and analysis services.

(b) **Staff:** This includes System Manager, Database Manager, System Operator, System Analysis, Digitizer Operators. A typical resource management agency GIS center might have a staff of 5-7

(c) **Procedures:** Extensive interaction is needed between the GIS group and the rest of the organization if the system is to function effectively.




Database Creation Process

Adapted from P.A. Burrough, 1986, *Principals of Geographical Information Systems for Land Resources Assessment*, Oxford, Fig. 4.7, p.66

## SITING A WASTE DISPOSAL INCINERATOR USING MLMIS

**(Minnesota Land Management Information System)**

Criteria which might be used to assess sites for suitability:

1. **Highway orientation**
   - Site should be near a heavy duty highway
   - Set a limit of 1/2 mile from such a road
2. **Climate**
   - Site should not be upwind of major residential areas much of the time
   - Might use the least common wind flow direction, and locate the facility downwind
3. **Ownership**
   - Will probably be less expensive and produce less litigation if we build on publicly owned land
4. **Land use**
   - Can avoid residential areas and minimize distance from major producers of waste material based on land-use
5. **Soils**
   - Used to eliminate areas that would be expensive to build on, or to maintain
6. **Water orientation**
   - Many statewide zoning laws regulate construction activities near water bodies
7. **Geology**
   - Material stored on the site may leach into groundwater
   - Should consider depth to groundwater, and permeability of surficial materials
8. **Topography**
   - Avoid excessively steep areas
   - Might use this information to select a site that is not readily visible to the community, using a view-shed algorithm
9. **Vegetation**
   - Use vegetation for screening

- As a filtering buffer for the duct, aerosols, and noise caused by the activities
- May be considered a low priority piece of information that could be used if the other data leave an abundance of sites on the regional map - to break ties

## 4.6 The Scope of urban Land Management Information System

Urbanization is becoming more and more complex for cities in Nigeria and developing countries in general. It needed an undeniable fact that the trend of urbanization cannot be reversed. Urbanization also brings with it unbudgeted financial commitments towards waste generation which becomes challenging for many cities. It is therefore important that proper urban management measures and strategies are put in place to deal with this complex situation. The experiment in Ghana showed that Urban Land Management Information System (ULMIS) is a tool for efficient collection of property rates in that country.

**Definition**

Urban management is defined as a set of instrument, activities, tasks and functions, which are intended to ensure that a city can function properly; that one gets drinking water at home, that roads, adequately transport goods and people that serviced land is made available for activities essential to people's livelihoods; that repairs are carried out on infrastructure networks to avert any service break-down; and more generally, the public interest is safeguarded while addressing individual and firm's needs.

There is hardly any management information system (MIS) on which decisions for planning the scope, the rate of growth and the revenue receivable for any service or infrastructure facilities can be based in many of the states and local government areas in Nigeria.

Over the years since independence, Nigeria has experienced continued uncontrolled pattern of growth, the persistent shortages of provision of services and infrastructural facilities; and the in liability of governments at various levels to raise adequate internal revenue.

The neighbourhoods and wards organization of local government areas constitute the very framework on which their information system is based because of the knowledge of number of building, street network, ownership, and value and use of the property. The information constitutes an essential factor in the effective governance of the local government area.

The goal and objectives Management Information System (MIS), is to ensure that the State and each urban Local Government develop an adequate management information system to enhance their capacities for effective management of their affairs.

The system will also promote the effective computerization of information gathering collection and analysis within the State and Local Government Areas. The state governments however, should procure satellite images for each urban local government area for the delineation of geographic zones for data collection in each local government area with the aid of Geographic Information System (GIS) equipment

Effective operation of the local authorities depends on land information processed by the land sector agencies. The current land administration process in Nigeria, according to the Land Use Act of 1978, is centralized at National and State levels and therefore the information generated is difficult for the local authorities to obtain. All land processes manifest at local level within the jurisdiction of the local government where actual action (planning, implementation and management) takes place but collaboration between local authorities and land sector agencies is weak and information that is needed about land is not always available at local level.

Urban land Management Information System (ULMIS) can serve as a platform for various municipal activities. Almost all municipal processes and activities require land information; increasingly the same process and activities also generate land related information system. UMLIS is a system combining geographic and alphanumeric data. An **up-dated digital base map** facilitates identification of parcels, buildings, information on owners, values of properties and rates to be paid.

**Table: Utilization of ULMIS for Various Uses**

| Purposes of ULMIS | Processes | Valuable Information | Beneficiaries |
|---|---|---|---|
| Planning | Providing advice on land use/rezoning Development control.<br>• Land Acquisition | Topography, Information on owners of land<br>• Type of ownership and tenure<br>• Location of land | • The general public<br>• Lands commission<br>• Private entities<br>• Research Institutions |
| Revenue Mobilization | Collection of<br>• Property rates<br>• Building permits<br>• Fees for parking lots etc. | • Location of property, value, owner, size, | • Local Govts.<br>• Treasury<br>• Property rate Development<br>• Budget Devp. |
| Easy location of properties and people | Response to Fire, burglary etc.<br>• Collection of utility charges<br>• Delivery of mails | • Location of tourist sites and other important facilities<br>• House numbers<br>• Owners of Property | • General public<br>• Security Services<br>• Utility Providers<br>• Postal Services |
| Development Control | Development Control | • Approved layout, certified site, plans, street names | • General public<br>• Security Services<br>• Utility Providers<br>• Postal Services |
| Coordination of utility services provision | Coordination | • Overall development plans | • Government departments service providers |

## 4.7 Postcode As a Supporting Tool For Urban Management

Postcode is a **zone identification number** or a system of numbers assigned to some areas or communities and settlements within Local Governments Area (LGA) which do not add value to them but represent a message or information linking a community or property to record and tax bills.

The Postcode system divides Nigeria into nine **Postcode Zones.** Each of which is identified by a Postcode with figures one to nine in the **first digit**. A Postcode zone is further divided into Postcode District each of which is identified by the last 3 digits representing Postcode District, delineated purely for postal service delivery.

## NIGERIAN POSTCODE SYSTEM

| | |
|---|---|
| **ZONE 1**<br>• Lagos State<br>• Ogun State | **ZONE 6**<br>• Borno State<br>• Yobe State<br>• Adamawa State<br>• Taraba State |
| **ZONE 2**<br>• Oyo State<br>• Osun State<br>• Kwara State<br>• Kogi State | **ZONE 7**<br>• Kano State<br>• Jigawa State<br>• Bauchi State<br>• Gombe State |
| **ZONE 3**<br>• Edo State<br>• Delta State<br>• Ondo State<br>• Ekiti State | **ZONE 8**<br>• Kaduna State<br>• Katsina State<br>• Sokoto State<br>• Kebbi State<br>• Zamfara State |
| **ZONE 4**<br>• Enugu State<br>• Anambra State<br>• Abia State<br>• Imo State<br>• Ebonyi State | **ZONE 9**<br>• FCT<br>• Niger State<br>• Plateau State<br>• Nasarawa State<br>• Benue State |
| **ZONE 5**<br>• River State<br>• Akwa Ibom State<br>• Cross River State<br>• Bayelsa State | |

***Source: Nigerian Postcode Directory***

Each Postcode area consists of settlements, communities and Local Government Areas within a state. The Postcode system provides the basis for property identification, land-use analysis, tax design, Street naming, project planning and monitoring.

It provides basis for developing baseline information on settlement patterns, household survey, infrastructural service delivery and refuse collection. Generally, it is a tool for urban management.

Urban management activities in cites involve housing delivery, access to infrastructure, physical planning, urban administration, and social services provision at the federal, state and local government levels. A postcode can therefore be used as a

supporting tool to perform these management activities with the aid of satellite images that can upgrade existing information on management activities

## 4.8 UTILIZATION OF ULMIS/GIS FOR PROPERTY TAX ADMINISTRATION

Urban land management information system (ULMIS) is an effective tool for collection of property tax (or rates) and for urban management in general. Information about buildings, parcel, use, value, owners and rates to be paid is stored in digital form and **the information can easily be illustrated and identified in a digital map.**

The possibility of storing data from various sources in a common platform is a starting point for exchange of information and collaboration between departments and different organizations. Inconsistencies in land information have been identified as one of the main reasons for low collection of property rates, and ULMIS can facilitate exchange of information and be a tool for improving its quality.

The property units in each **postcode delineated districts** within a Local Government Area represent the basic economic assets from which the city can expect to generate much of the revenue needed to pay for the provision and delivery of particular services and amenities. Knowledge of the number, size, location, ownership, value, use and occupancy characteristics of these buildings or property units thus constitutes an essential factor not only in the effective land management but also the efficient governance of the city.

**Table 2: Property Tax Administration Procedure**

| S/No. | Property Tax System | Objective of Activities | Implementation Strategy | Outcome of Activities |
|---|---|---|---|---|
| 1. | Tax Base Identification | To determine what will be Taxed | Inventory of Taxable Properties | Amt of taxable properties discovered |
| 2. | Tax Base Valuation | Distribution of Tax Burden | Calculation of Relative Value | Percentage of Total Market Value |
| 3. | Tax Base Assessment | To determine tax liability | Calculate amount of Tax liability | Total Tax Liability |

| | | | | |
|---|---|---|---|---|
| 4. | Billing and Collection of Tax | To determine total tax level | Inform Tax-payers of liability | Percentage of Total Tax Collection |
| 5. | Tax Enforcement | To determine level of compliance | Legal action to recover Tax arrears | Enhanced Tax Collection |
| 6. | Tax Appeals Resolution | To ensure Tax is equitably administered | Resolves disputes | Increase Tax compliance |

***Source**: Macos Urban Management Consultants 2014*

The purpose of property tax information management system (PTIMS) must to be support the administration of property taxation with the aid of satellite images and GIS equipment for delineating and identification of property and to support valuation, assessment, billing and collection. Each geographic zone is assigned a postcode identification number.

Each delineated postcode district is a geographic zone for capturing data used for the implementation of UMLIS as a tool for efficient collection of property tax and in the billing system and its geographic component would show the property owners how much their community or neighbourhood is paying in contrast to the services they can require from the local government authorities. Individual can also track property rate transactions and real estate information more easily

**Manual Procedures and Few Controls**

Manual Procedures are common in the urban administration in Nigeria at different levels. For example, the property payments that are made to local government offices are manually recorded, and later transferred and registered in the billing and payment system at the head office. There are furthermore no links between billing and payment system, and the accounting system. It is difficult to track a payment and also the person who received it; this gives rise to easy misappropriation of funds.

The controls functions in ULMIS lead to efficient land information management with accurate, easily accessible and up-to-date land information which will lead to a more efficient revenue collection and a reduction in corruption. It is also possible for the zonal

offices and the head office to use the same system, and data can be shared through the Internet.

**Table 3: Basic Land-Use and Population Data of Selected Communities in Ibadan North Local Government Area**

| Zone Identification Number | Communities or Neighbourhood | Population 1996 | No. of Property 1996 | Land-Use Characteristics |
|---|---|---|---|---|
| 200212 | Mokola Layout | 19,638 | 1,847 | Comm/Resd. Uses |
| 200212 | Coca-Cola | 4,515 | 183 | Comm/Resd. Uses |
| 200212 | Old Bodija Estate | 27,447 | 2,498 | Residential public use |
| 200212 | U.C.H | 2,450 | 233 | Health care |
| 200284 | University of Ib./Poly | 7,550 | 1,571 | Educational Uses |
| 200282 | Sango/Okoro Village | 46,965 | 2,303 | Sango Mkt./Resd |
| 200282 | Oremeji/Oke-Itunu | 19,315 | 1,664 | Residential Uses |
| 200282 | Sabo/Adamasingba | 8,637 | 800 | Comm/Resd. Slum |
| 200211 | Igosun/Idiomo | 16,171 | 1,469 | Core Res. Area |
| 200211 | Yemetu/Oke-Aremo | 28,491 | 2,630 | Mixed Land Use |
| 200211 | Adeoyo/Isale Alfa | 9,736 | 1,355 | Hosp/Residential |

***Source**: * Oyo State Valuation Office (2997-2000) * Ibadan Postcode Information System*

** National Population Commission (1991/1996)*

Baseline data on land-use changes, infrastructure availability, and population by postcode zones over time can be used to arrive at detailed assessment of the spatial patterns of urban development in a metropolitan area. The data can be tabulated from land-use surveys, aerial photographs, or satellite images. The above property tax information management system (PTIMS) is an integral part of **Land Information System (LIS)** which have various processes and activities that require land information. However, the assembled property tax administrative procedure in the above table was put together in the feasibility study carried out by the Macos Urban Management Consultant which presents some of the processes that such a system can serve.

## 4.9 Land Market Assessment Procedure Using GIS

The Land Use Charge Project contracted out to the Nigerian Institution of Estate Surveyors and Valuers (NIESV), Oyo State Branch in 2017 involving **property enumeration and assessment** necessitated the engagement of the services of a GIS consultant. The ultimate goal was the purposeful utilization of locational/spatial information for planning development and management of the land use projects in all the towns, cities and urban centers of Oyo State.

The GIS consultant is to among other things;

a. Develop detailed maps of towns and cities showing the road networks of identified urban settlements such as Ibadan, Oyo, Ogbomoso, Iseyin, Saki etc.
b. Assist the NIESV in the delineation of Neighbourhoods and assignments of POSTCODES, for each neighbourhood in a manner that promotes intelligent/ informed decisions that would be essential for;

i. Efficient identification, enumeration and recording.
ii. Effective data collection of the city/urban areas by filed staff.
iii. Quality Control and Assessment
iv. Preparation of valuation Roll; and
v. It was also possible to provide access to GIS database directly from the Field, sing wireless links and mobile services

The pre-Land Use Charge tax was property (tenement rates) which constituted a substantial part of the total revenue for Local Governments, but the collection of property rates was not efficient. This is a common problem not only in Nigeria but also in Ghana and other developing countries.

The Land market assessment procedure is an effective strategy to develop Urban Land Management Information System (ULMIS) with the aid of Geographic Information System (GIS).

The ULMIS project is an efficient tool for collection of **property tax** (or Land Use Charge) and for **urban management** in general. Information about buildings, parcels, use, value, owners and rates to be paid is stored in digital form and the **information can easily be illustrated and identified in a digital map**.

The possibility of storing data from various sources in a common platform (GIS technology), is a starting point for exchange of information and collaboration between departments and different organizations. GIS uses location as the cornerstone of data management for organizing project information used for careful monitoring, coordination, and management.

**Geographic Area Demarcation (GAD) for Data Collection**

GIS will allow Estate Surveyors and Valuers and different people involved in ‘’property Enumeration and Assessment for land-based taxation project’’ with different backgrounds to get the information about the progress of the project and support and support decision making. **A GIS will provide basis of undertaking and communication among these people.**

**A GIS does in fact, as a tool, create high quality maps that communicate considerable amounts of information in an efficient and attention getting manner**. GIS can be integrated with project management for either construction progress visualization or property taxation process and an integrated information system.

The demarcation of geographic areas for property enumeration and assessment is a major technical aspect of property taxation of property process for property identification, assessment valuation and preparation of valuation roll before billing and collection exercise. This exercise involves the employment of available suitable maps, such as Cadastral maps, Topographic Maps, and even Satellite Imageries in Delaminating the existing administrative boundaries of the local government area into small geographic units based on a threshold of between 600 and 750 or a maximum range of (750-1000) housing units for 5 gangs of 3 fields officers each and a coordinator who is a Registered

Estate Surveyor and Valuer. That is, the size of the geographic area for property enumeration of 600-750 houses (or 750-1,000).

A geographic unit for property enumeration must be compact, clear in boundaries and not omitting any portion of the land area. To achieve this, one must contend with the issue of high quality maps produced by the office of the Surveyor General or Satellite Imageries produced by GIS experts or Google Maps.

In carrying out property enumeration exercise, property tax consultants, who should be Registered Estate Surveyors and Valuers, must be guided by the following principles;

(a) That each geographic unit created for property enumeration and data collection must be compact, with clearly defined boundaries of existing neighborhoods, determined by the distance of existing neighborhood/ communities/localities, accessibility, nature of terrain and physical features
(b) Non-overlap and contiguous;
(c) Features as roads, streets, footpaths, lanes stream, creeks, building number (PIN), power lines, railway lines etc. should be used as boundaries
(d) The size of each geographic area should not be less than 40 hectares and 50 hectares with between 600 and 750 housing units or 1,800 households and 2,250 households.
(e) Enumeration/geographic boundaries should not cross administrative boundaries of local government areas or political wards.
(f) Large and special institutes such as universities, polytechnics, police/army barracks research institutes should be treated as special enumeration areas.
(g) Finally, when a single geographic area contains many localities, the EA. Zone should bear the name of the largest or prominent features e.g. AGBOWO, OLD BODIJA ESTATE, OKE-ADO, MOKOLA etc.

And their wards but also that, they have base maps. They also need to have a cadastral map that comprising both the surveyed map showing location and actual

addresses of each property in a town or rural community and a register indicating the details of the property, the date a house was developed on it, its market value, and especially the name or names of its owner lowers.

**Digital Mappings**

This entails the digitization of the outline of every property in town taken from a map or an aerial photography.

Digitalization could also be produced through the use of the global. Positioning system (GPS) for tracing the boundaries of every property in a town or rural community.

Once the resulting map is produced on an acceptable scale, it is no great taste ensuring that all the roads, street and lanes, however significant are named and the properties numbered. The ownership of each property is then ascertained and entered in the register often, the purpose of all this is to be able not to have detailed management information but also enhanced capacity for collecting revenue from all taxable properties within each neighborhood or wards.

Digital mapping is however, only a part of a geographical information system (GIS). The later can help a local government have, apart from a cadastral map, a more comprehensive database about different aspects of its environment and socio economic circumstances (Mat, 1993). It can also provide facilities for the analysis of these data to answer vital management and policy questions.


Google Earth
Moxola Hill
Sabo Market Road
Joop Berkhout Cres

**Tax Base Identification Process**

The first step in property tax administration is to assemble and maintain information on the tax base. This compilation of property-related information is called the "**federal cadastre**" which can include information on **land** and **improvements**, **or land**, **improvements together with machinery/ equipment** depending on the policy choice of the government regarding tax base definition (both what will and will not be taxed). The challenge is to ensure that this basic information is to up-to-date and accurate, that is, to maintain the **coverage ratio** as close to 100 percent as possible of the city or the taxing authority area.

In practice, the coverage area is delineated into geographical areas (neighbourhodd) for data collection. A Postcode is assigned to each neighbourhood. Estate Surveyors & Valuers are assigned of taxable properties and ensure all taxable properties and ensure all taxable properties are captures and listed, while the length and breadth of each property is measured.

Various property-related information sources should be used to ensure that those captured and listed properties have complete and accurate information necessary for taxation purposes. It is then imperative that this various information be systematically maintained in the light of changes in physical size (through amalgamation of divisions), tenure (i.e. ownership), and land use.

**Dynamics of Property market Values Changes**

The problems with the tenement rate (property rate) administration in Nigeria, particularly Oyo State, included lack of political on the part of Local Government chairman outside the State capital to implement tenement rate collection in their areas because enumeration and assessment wee centralized including other rating related policies. For those who were collecting, there was poor accountability and transparency, corruption, inadequate administrative infrastructure and incentive for staff. The Local Government Authorities also were not using the Tenement Rates proceeds to provide amenities and improve the physical and social infrastructure in their area of jurisdiction.

**ZONAL ANALYSIS OF TENAMENT RATE COLLECTION IN OYO STATE (2005-2009)**

| S/NO | ZONES | No of LGAS | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|
| 1 | Ibadan Zone | 5 | 9,568,474.53 | 28,496,738.58 | 18,030,603.88 | 20,501,542.90 | 39,140,832.03 |
| 2 | Ibadan less city Zone | 6 | 40,488,919.74 | 36,387,966.30 | 28,525,108.00 | 28,559,015.28 | 36,862,430.00 |
| 3 | Oyo Zone | 4 | 53,300.00 | 920,973.00 | 495,240.00 | 1,725,057.00 | 3,089,550.00 |
| 4 | Ogbomosho Zone | 5 | 292,980.00 | 406,466.20 | 265,124/00 | 326,075.00 | 2,877,957.00 |
| 5 | Saki zone | 6 | 787,593.00 | 303,173.20 | 417,250.00 | 80,800.00 | 4,059,900.00 |
| 6 | Iseyin Zone | 4 | 314,317.00 | 496,363.00 | 656,320.00 | 1,497,884.59 | 1,842,353,52 |
| 7 | Ibarapa Zone | 3 | 742,000.00 | 414,000.00 | 254,640.00 | 675,600.00 | 1,970,600.00 |
| | **GRAND TOTAL** | **33** | **52,247,584.27** | **67,425,680.28** | **48,644,285.88** | **54,093,974.77** | **89,843,621.55** |

**Source:** *Oyo state Rating Valuation Offices, ministry of local Government and chieftaincy matters, Ibadan, 2009*

The rapid urbanization rate in Oyo State over the past 27 years (1991-2018) would have exacerbated further the relative's shifts in market value between sectors and locations if these relative shifts were captures in the valuation rolls, there would be a major reallocation of tax burden among ratepayers.

Between 1996-2000, Regions or Geo-Political zones in Oyo State with rapidly increasing land values would be required to pay a higher proportion of the tax burden like Ibadan, Oyo and Ogbomosho situated along the same urban corridor of Lagos-Ilorin, while regions with less rapid growth (e.g. Ibarapa, Iseyin, Saki and towns) would reduce their lative contribution (see the table (2005-2009).

The current approach as at 2010 of relying on Tenement Rate did not pick up these relative changes in values under the Land-Use Charge and the resulting shifts in tac burden, unless these relative property value changes can be captured during the current property enumeration exercise 2017/2018 and through frequent revaluations, taxpayer equity cannot be maintained.

In addition to the equity implications, infrequent revaluations typically cause massive political outcry as newly values and thus relative tax burdens. More frequent revaluations, accompanied by an effective public relations campaign would increase equity and considerably reduce possible political costs.

The only way to improve the accuracy and level of the valuation ratio is to systematically update the valuation rolls to reflect changes in the relatives and absolute changes in property market values. This can be done through a combination of simplifying the valuation system (shifting it to mass valuation), computerizing the maintenance of the fiscal cadastral and the valuation process, and increasing the amount of manpower and financial resources allocated to rating roll maintenance (Roy Kelly, June 199).

# CHAPTER FIVE

# LAND MARKET ASSESSMENT AND SUSTAINABLE DEVELOPMENT OF NIGERIA CITIES

## 5.1 Urbanization Process of Ibadan City

Until the early nineteenth century, before the Yoruba civil wars, Ibadan was a relatively small town. With the influx of refugees from various parts of Yoruba towns; it gradually grew up into a city-state. Ibadan grew very rapidly under a series of war-lords and by 1893, when the British rule was imposed, the city had extended over an area of about 40 square kilometers (Milson, 1891) The 29-kilometre city wall enclosed a sizeable proportion of farmlands forestlands and river flood plains.

The unique pattern of settlement and development of the city creates a situation where every family in Ibadan village has a correspondent name in the city. Thus, every true indigene of Ibadan belongs to at least, two local governments, one in the city and the other in the village.

It is an accepted fact that development of cities is closely tied to the rural economy through exchanges of goods, labour, services, capital, social transactions, information and technology that benefits residents in both locations. In China and Vietnam, for example, policymakers are realizing that the interdependencies between urban areas and their hinterlands provide positive synergies that can be further developed to promote national poverty reduction and growth by making cities and town's efficient marketplaces for the country.

Ibadan has a number of locational advantages to its credit due to which it has attracted significant industrial and commercial investments, leading to the large-scale employment opportunities which exist today. As a result of this development, its population swelled dramatically, ushering in the modern-age Ibadan, a new airport at Alakia, more tertiary educational and research institutions, dominant commercial and light industrial centres as well as housing estates.

The scale of this urbanization in Nigeria is unprecedented and poses daunting requirements for cities in the country to meet the needs of their people at relatively low levels of national income. The urban transition offers significant opportunities for countries to improve the quality of life for all of their citizens. But whether this potential is realized depends critically on the quality of urban management and on the national and local policies affecting it.

The most rapid growth in recent decades has occurred in large cities of 1-5million residents; and in small ones (fewer than 500,000), according to World Bank (2,000). But the proliferation of mega cities (more than 10 million) is the most dramatic trend, particularly in Asia and Latin America. Between 1995 and 2012, the world's megacities would more than double in number to 26. Of these, 22 will be in developing countries, most of them in Asia. These cities are much larger than the largest ones known in recent past, underscoring the daunting management challenge they pose to local governments.

Migration between rural and urban areas is a vital source of alternative employment for agricultural cultivation and transferring innovation as well as remittances. Synergy between the rural and urban economies is a particularly important channel through which growing urban areas contribute to national development. "Urban" and "rural" are interdependent markets linked by exchanges of people, goods, services, capital, social transaction and information and technology that benefit residents in both locations. Ensuring the food security of urban populations may require deliberate policy attention, since urban consumers depend more heavily on a marketed food surplus than do rural areas.

The synergy between Ibadan City and the rural area was as a result of its economic, cultural and traditional history. The city depends on the surrounding district villages for the supply of food and fuel. In addition, while neighbouring villages provide the city with materials and labour used in its commercial and industrial activities, the city in turn is not only an economic centre serving its outlying districts but the cultural and social centre of the entire Ibadan region.

As Akintola (1963) observed, 3,000 villages were established within a radius of about 40 kilometers within 130 years or so of building the city. Settlements listed for Ibadan division in 1963 census numbered 1,184. The increasing population of the city and its suburbs and the outward residential mobility of people from the city to the suburbs are forces that are at work in the merge of the city with its former villages. These forces are important in the planning of the city. These villages should be grouped in view of the possible increase in population and urban expansion that is taking place. The physical planning of these groups of human settlements should be undertaken together by the local planning authorities with the technical cooperation of the State Ministry of Physical Planning and Development.

It is advantageous to encourage growth of small and medium size towns in Ibadan land as these towns possess the potentials to depolarize large cities and metropolitan areas. Small and medium towns can serve the hinterland of Ibadan better than the city centre and the management of these towns will be easier. The objectives of balanced development and decentralized growth can be achieved by this policy. Small-scale industries can thrive better in such towns and diversification of industrial base is necessary so as to make it cater for agricultural development and thus strengthen the whole system of markets.

In order to stabilize the rural population and attract people to take up agricultural and allied occupations in future, it is necessary to develop rural settlements in a planned manner. In addition to employment, basic amenities such as health, education and welfare services have to be provided within easy reach of rural population. This can be achieved by selecting important villages, preferably of larger population with easy access to people, as centres where small scale industries and community facilities can be economically operated (world Ban and Oyo State Physical Planning Report, 1989).

## 5.2 Land And Housing Market Assessment As a Tool

Under the mounting pressures of urban development, cities and metropolitan areas of states in Nigeria are in vital need of accurate and systemic information about their land markets. Such information is essential to a host of national economic decisions in both

public and private programmes. Without this information, cities and metropolitan areas generally unable to plan and develop housing and residential plots or the fast-growing populations

The land and housing market assessments require access to accurate and continually updates information concerning the changing conditions of urban areas, changing property characteristics and the nieghbourhood where they are located. The use of satellite images is very important as a tool for capturing most urban features of concern; such as streets, buildings, and plot layout boundaries.

Enumeration Area Demarcation (CAD)

After obtaining digital satellite images maps of the area for conduction property enumeration and assessment is made available, the size and number of niegbouhoods (or geographical areas) for data collection depends on the political boundaries of urban centre, or the urban Local Government Area of the States in Nigeria. Data collection on property characteristics will be written the neighbourhood creates in the defined area of the urban local government area. A postcode number is then assigned to each neighbourhood.

According to Professor Akin Mabogunje - the property units represent the basic economic assets from which city can expect to generate much of the revenue needed to pay for the services and amenities. “Knowledge of the number, size, location, ownership, value use and occupancy characteristics of these buildings or property units thus constitutes an essential factor not only in the effective land management but also the efficient governance of the city”.

On a conceptual level, these geographical zones (or enumeration areas) should be defined such that each provides a homogenous patter of land and Housing Market characteristics. The boundary should be defined in such a way that there is no overlap, there should be geographic features making the boundary such as stream, street and feasible landmark. Each building is supposed to a PIN (Property Identification Number) and street address.

Baseline data collected on land-use changes, infrastructure availability, and population by geographic zone overtime can be used to arrive at a detailed assessment of the spatial patterns of urban development in a metropolitan area. The next step is also the collection of data on property or land values and property prices information generated zone by zone and year by year compiled from land values assessments. However, in cases where private land value information is available, it can be used to verify the public land value assessment.

**PROPERTY ENUMERATION AND ASSESSMENT WITHIN IBADAN METROPOLIS**

**PHASE 1**

| S/No. | Local Government | Total No. of Neighbourhood Covered | Total Area in Hectares | Estimated Building Units | Total no of Building Enumerated |
|---|---|---|---|---|---|
| 1. | Ibadan North Local Government | 50 | 3,104 | 18,240 | 17,438 |
| 2. | Ibadan North East Local Government | 5 | 488 | 9,591 | 3,984 |
| 3. | Ibadan North West Local Government | 10 | 1,784 | 9,661 | 4,662 |
| 4. | Ibadan South East Local Government | 6 | 813 | 13,721 | 3,601 |
| 5. | Ibadan South West Local Government | 13 | 2,727 | 21,155 | 11,551 |
| | **TOTAL** | **84** | **8,916** | **72,368** | **41,236** |

**PROPERTY ENUMERATION AND ASSESSMENT WITHIN OUTER CITY**

**PHASE 2**

| S/No. | Local Government | Total No. of Neighbourhood Covered | Total Area in Hectares | Estimated Building Units | Total no of Building Enumerated |
|---|---|---|---|---|---|
| 6. | Akinyele Local Government | 6 | 18,434 | 25,482 | 12,346 |
| 7. | Egbeda Local Government | 5 | 10,294 | 56,360 | 16,829 |
| 8. | Ido Local Government | 6 | 20,808 | 26,465 | 13,096 |
| 9. | Oluyole Local Government | 7 | 20,694 | 29,078 | 9,115 |
| 10. | Lagelu Local Government | 4 | 10,368 | 1,521 | 9,061 |
| 11. | Ona-Ara Local Government | 3 | 6,314 | 31,652 | 6,011 |
| | **TOTAL** | **31** | **86,912** | **170,558** | **66,458** |
| | **GRAND** | **115** | **95,828** | **242,926** | **107,694** |

| | | | | | |
|---|---|---|---|---|---|
| | **TOTAL** | | | | |

***Source:*** *NIESV/OYSG Property Enumeration and Assessment Project*

**Typology of Properties Characteristics**

The tool for obtaining systematic information about land market in cities has been confirmed to be land markets assessment (LMA) which could not however be successful with the aid of Satellite Images. Effective urban planning requires access to accurate and continually updated information concerning the changing conditions of urban areas satellite images of high resolution is generally adequate for urban planning applications as it roughly captures most urban features of concern, such as streets, buildings, and plot layout boundaries and shows the clusters of buildings in a meighbourhood. The typology of properties captures in the enumeration exercise are defined as follows.

**Residential Property Characteristics**

Residential property as a form of real property represents the class that provides living accommodation. It does not only accommodate the living but non-living as well (human properties). Residential property takes different forms. Housing can be classified by four distinct criteria: design (bungalow, duplex, flat and the likes); density (low, medium and high density); in terms of settlement (rural sub-urban and urban housing); and in terms of ownership (public and private housing).

The nature of residential neighbouhood affects the sustainability and value of the properties within. The study conducted by (Aluko, 2011; Adegokr, 2014; Selun, 2009) concentrated on accessibility and neighbourhood characteristics as determinants of residential property value.

As housing markets serve as arena the arena in which the impact of crime first manifest itself, these markets can potentially serve as early indicators of neighbourhood decline. Therefore, a more complete examination of how crime affects local housing prices will ultimately lead to a better understanding of the larger issue pertaining to small crime impacts on residential stability (Schwartz et.al,. 2003; Ihlanfeudt and Mayock, 2010)

**Commercial Property Development**

The Nigerian Urban and Regional Planning Law, Section 91, (1992) describe commercial property development statutorily as any development or use of land, or any building on the land for any of the following purposes: shops, offices, hotels, guest houses,, night clubs, restaurants and wayside stall; a warehouse and other similar storage facilities, a cinema theatre, sports stadium and a building providing indoor recreational and leisure facilities for a charge, a market and any development or use of land or building on land for any purpose incidental to any of these activities.

**Environmental Resources Systems**

Environmental resource systems, both in their natural state and when managed for production, provide vital products and services to urban areas. There is a complex pattern of interaction between the environmental resources which support life in a city and the use of those resources for urban development. These resources, moreover, often support the city in ways which are not readily apparent. As a result, some of these crucial functions may be damages or destroyed unintentionally, without a real understanding until it is perhaps too late, of their performance. Some of these are: water, resources, urban land, minerals, forests, tourism areas etc.

In conclusion, the land and housing market assessment is an essential first step toward making local land and housing markets more efficient. The information base generated by the assessment. It can be used to gauge performance, identifying future needs for infrastructure, access housing affordability and assess the impact of public policies and actions.

## 5.3 Problems of Unplanned City Growth

Ibadan is one major Nigerian city that was for a long time allowed to grow without a master plan. Consequently, there is a great mix of activities, such as commercial and residential, and sometimes residential and industrial, as in the case of small to medium sized industrial establishment.

The metropolitan area of Ibadan has one of the highest population densities in Nigeria and the most densely settled areas remain the central and indigenous core of the

city. This, coupled with ineffective planning in recent years, has given rise to a number of problems, especially housing, traffic congestion and deterioration.

The extent to which cities are planned largely determines their levels of functional and aesthetic efficiency and productivity, Better planned cities function more efficiently and are, therefore, more economically productive than less planned or unplanned areas. There is hardly any management information system on which decisions for planning the scope, rate of growth and revenue receivable for many services or infrastructural facilities can be based.

**a) Housing Problem in Cities**

Lack of physical planning in many parts of Ibadan city also contributes to the problem of transportation. It gives rise to the almost disorganized arrangements of buildings which in turn negate and continue to prevent the development of better roads connectivity, most especially in the indigenous and most populous sections of the city. The urban poor live in crowded slums within the residential areas of cities such as Ayeye, Mapo, Agbeni, Foko, Yeosa, Isala- Ijebu, e.t.c. with limited basic infrastructure and without land and personal security. Within the city core residential areas, there is lack of comprehensive water and sewage system, inadequate garbage collection and disposition and unstable urban environments, all of which increase vulnerability to natural disasters and jeopardized public health.

**b) Transportation Problem in Ibadan**

For more than one hundred and fifty years, development of Ibadan city has proceeded with very little control and resulted in the creation of a fantastic street system of formless roads and winding parks. In fact, in many cases, the streets are nothing but more than the spaces left over after house building has taken place.

In many areas that appear to be better planned such as Oke-Ado, Mokola, Agbowo, Bashorun and Aromolaran areas, there is no adequate provision of sidewalks to facilitate pedestrian movements. Where sidewalks exist, they are usually taken over by roadside traders, forcing pedestrians to walk on road pavements. This means constant conflict between pedestrians and motorists.

Many inter-related factors, political and socio-economic in character and scope, are responsible for the transportation problems in Ibadan. The political factors relate to the fact that the responsibilities for construction and maintenance of the city roads are shared by the three tiers of Government; the federal 8%, the state 22% and the local government 70% (M.O FILANI, 1994).

Traffic problems in Ibadan have also been aggravated by the city's rapid economic and industrial development. Most of the existing roads were constructed in the late 1940s and early 1950s when the city's economic base and territorial extent were very limited. Unfortunately, the road capacity has not grown at the same pace with the urban activities which had been increasing with rapid urbanization.

**c) Sanitation and Sewage**

In the core area of the city, where the indigenous people live is overcrowded and unplanned, and is characterized by lack of access to basic environmental infrastructure and services such as water supply, sanitation, solid wastes disporsal sites, good drainage and good roads. Children under the age of five die each year from diarrheal diseases, largely as a result of poor sanitation, contaminated drinking water and associated problems of food hygiene. Infections and parasitic diseases linked to water are the third leading cause of productive years lost to morbidity and mortality in the developing world (World Bank 1993) Diarrheal death rates are typically about 60 per cent lower among children living in households without such facilities. According to the National Population Commission (2006), only 18.47% of households in Oyo State have water closes, 32.73% use pit latrines and 37.13% use nearby bush.

**d) Land policies and physical planning**

Urban land decisions are critical determinants of environmental quality. Distorting urban land markets and ineffective land management policies and practices have resulted in:

- Lack of enough land at the right price and in the right location.
- High cost and low affordability of land and housing.
- Ineffective government programmes and actions in the area of urban development.

- Private sector resistance to government land regulations, and
- Environment resource constraint to land development.

The most common forms of physical planning (i.e. master plan) have failed for a number of reasons; they are too static and, considering the city's real economic potential, usually take too long and cost too much to prepare.

Maintaining and increasing urban economic productivity will require a set of urban land policies which will ensure that adequate supplies of serviced land are available for productive enterprises, as well as residential and social uses. The critical policy objective should be to concentrate on the provision of infrastructure to support and facilitate economic activities. This means erecting modern infrastructure systems to provide electricity, water, road network systems and railway to enable manufacturing facilities maintain low operation costs.

Master plans are translated into zoning ordinances and other controls. Where controls have been enforced vigorously, land availability for low income housing shrinks and housing cost increase. The cost burden placed on low income households is rarely considered by the master planners. Opportunities to prepare master plans in accordance with city needs and household affordability are missed when community leaders and officials of implementing agencies are seldom involved in the master planning process.

Therefore, master plans should concentrate on shaping and accommodating, not suppressing, future urban development. The plans should work to minimize adverse environment impacts and encourage efficient land infrastructure utilization.

The urban Land Use Act of 1978 has also caused substantial problems such as significant reduction in the supply of land for residential development, creation of a vast black market for real estate and an overall worsening of housing affordability in Nigeria's major urban centres, including Ibadan. One of the most alarming results of these policies is the rapid growth of slum population.

The net effect of such inadequacies is that the majority of urban growth is now taking place outside the town planning control systems. Thus, informal residential and business developments increasingly dominate new urban areas, relying on self-help

techniques ranging from illegal squatting and tapping of urban services by low income households to the provision of their own electricity, water and sewerage supply by high income developers. Increasingly, therefore, traditional planning activities are restricted to trying to control unplanned growth and where possible to bring some development coordination and services to these settlements. In which case, public participation in the planning process does not arise. It is the public that does the planning and the development while the planner is left out.

**e) Municipal solid waste**

Another persistent problem for an urban area is inadequate collection and disposal of household garbage. Although most municipal governments spend 20 – 50 percent of their available operational budgets on solid waste services, typically, half of the urban household benefit from collection services. Most wastes that are collected end up in open dumps or drainage systems, threatening both surface water and ground water quality and causing flooding, which provides an ideal breeding ground for disease-carrying pests. Open-air burning of wastes, spontaneous combustion in land-fills and incineration of plants that lacks effective treatment for gas emissions can cause air pollution. Lack of the most basic solid waste services in overcrowded low income neighbourhoods is a major contributor to the high morbidity and mortality among the urban poor.

**f) Flooding Phenomenon in Ibadan**

Due to the ever-increasing population of Ibadan, inadequate drainage system and the various land use practices over the unbuilt areas of the city as well as disposal of wastes on various parts of the landscape, almost all the major rivers draining the city had overflown their banks causing flood disasters of various magnitudes. In 1902, Ibadan witnessed its first flooding when the Oranyan swamp was flooded. Other flooding incidents occurred in 1924, 1956, 1963, 1978, 1980 and 2011.

The major rivers that have been causing flood in the city are the Ona River, Ogunpa Stream, Kudeti Stream, Ogbere Stream and many tributaries to these major rivers and streams. Another river on the eastern end of the city is the Omi River which runs through Egbeda, Ona-Ara and Oluyole Local Government Areas.

Experts have revealed that flood can occur through various causes but it is apparent that there are four main factors that are significant in the case of Ibadan as follow:

1. The characteristics of rainfall storms which exhibits various flood intensifying characteristics as measured by various metrological stations at Moor Plantation, Apata, I.I.T.A. and the University of Ibadan.
2. Ineffective use of land resources and low infiltration rates of rainstorms in many locations such as roads, sport fields, foot-paths etc.
3. Deforestation of hills in Ibadan located at Sapati, Oke-Aremo, Mokola and the Forest Reserve of Alesinloye, Alalubosa, for reasons of market and housing development respectively, thus increasing human activities and reducing infiltration rate of rain storms.
4. The clogging of the river channels with solid wastes.

Data storage constraint and inadequate or lack of interagency coordination in planning control and management of environmental resources in Ibadan city could be a remote cause of flooding. Moreover, rainfall storms characterized as flood causing factors are necessary but not sufficient conditions for flooding in urban area. It is the land use factors which significantly intensify flooding. The flooding of 2011 and those of 1978 and 1980 have shown that, if a river overflows its banks but there are no investments as buildings to be inundated, such overflow is not regarded as floods. The causes of past floods in Ibadan show that some of the devastating floods are not all the time caused by heavy rain but by relatively low rainfall. Low rainfalls are aided by land use factors to cause flood such as deforestation and development of flood plains and clogging of low breeds in the city.

The major causes of the 1980 devastating floods were the heavy rainfall and the expanse of water body caused by the bridges which suddenly became temporary dams due to blockage with solid wastes dumped into the river channels. The flood, for instance, came downstream to Molete with such massive force that swept away buildings, stationary vehicles and buses loades with full passengers such that dead bodies were

found along Ibadan Grammar School and the confluence of the Kudeti and Ogunpa Rivers at Molete.

The most devastating of all flooding was that of 26th August, 2011 which occurred thirty one years after the last one. This time around, it was the turn the of Ona River that really brought the most devastating disaster along its course. The Ona River with its tributaries (e.g. Sasa and Orogun streams) has been found to be large enough to be dammed at two sites within the International Institute for Tropical Agriculture (IITA) and at Eleyele.

As a result of the heavy rainfall and the flooding of the Ona River, the Eleyele dam was broken, the Apete Bridge was swept away, the walled fence of the University of Ibadan and the fish pond with the content were swept away. The Apete community was entirely cut off from the city and The Polytechnic, Ibadan students living there could not cross over to attend lectures. The Ogbere bridge in Oluyole Local Government area was washed away by the Ogbere River which passes through Iwo Road and Lagos-Ibadan Expressway to Ona-Ara from where it enters the Oluyole Local Government area.

At Oke-Ayo area of Odo-Ona, the flood wreaked massive havoc that led to the death of six children of the same family while 98 residents affected had to be provided temporary accommodation at a relief camp organized by the Ibadan South West Local Government. The Orogun Stream around Agbowo did not spare the residents as one Mr. Adisa lost his father and four children to the flood. At Ijokodo, the stream, a tributary of the Ona River, wreaked havoc and killed a UCH Medical Doctor with his children. The wife was lucky to escape.

### 5.4 Pursuing a Vision of Sustainable City

Sustainable cities fulfill the promises of development for their inhabitants, in particular, by facilitating upward mobility for the poor, while also contributing to national progress. Sustainable development, by definition, means “development that meets the needs of the present without compromising the ability of the future generations to meet their own needs.”

Urbanization is more than a demographic phenomenon. There is a fundamental change in the physical concentration of population; in the nature and scale of economic production, in land use and in social structures and patterns of interaction. Changes in all these dimensions affect the lives of individuals and the requirements for resources and governance.

As industry and services become more important to production, they demand more infrastructure, generate technology and information exchange and provide diverse employment options. Densification of settlement directs land and wealth into housing and related infrastructure and increases the need for complex systems to provide water, energy, market food, transport goods and people, reduce waste and protect public health and safety.

Land becomes more intensively developed and the resulting spatial layout affects accessibility, physical contacts among communities, interaction with the surrounding natural environment (encompassing agricultural land at the urban periphery) and the costs of fixed infrastructure networks.

***Public and Private Roles in Urban Development***

Municipalities bear the basic responsibilities of government at its lowest tier for allocating resources and promoting social equity, within constraints set by higher levels of government (which assign functions and fiscal authority), and for ensuring the provision of local public goods and services through partnership with the private sector and civil society.

In Nigeria, weak local governments' structures have been responsible for inability to perform even minimal constitutional functions. Consequently, the households and informal institutions have become the main providers of infrastructure, housing and social services. In most of Nigerian cities, the poorest often pay most dearly for low-quality services; poorly integrated land, transport, and housing markets impose high costs on users; and congestion and haphazard waste disposal degrade the environment. Some neighbourhoods enjoy services and amenities while others are vast zones of physical exclusion, depreviation and high risk.

Local governments, or designated agencies such as public utilities, have vital roles to play or perform in ensuring that the poor have essential services by providing urban public goods (e.g. streets, storm drainage, public green spaces), facilitating efficient use of and equitable access to urban land, undertaking coordination, planning and policy corrections, as needed, to account for positive and negative spillover effects of private activities (such as pollution), and protecting public safety. These vital functions require local government to support markets and official process of political representation where feasible and to promote the capacity of residents to express public choice and have their demands satisfied by other less informal arrangements where necessary.

The role that state and local governments assume in land use, for example, is absolutely critical to the physical, social and economic character of urban settlements. Although cities largely are built by private investment, they are shaped substantially by public action through government local zoning regulations, building codes, Property taxation, and the nature and location of direct public investment such as transport networks. Governments need to define policy interventions (especially Federal and State Governments) that facilitate land markets by correcting constraints to effective demand and supply response (such as physical planning and land-use regulations).

***Good Governance and Efficient Urban Management***

Urban governance encompasses the direct and indirect roles of formal institutions of local governments, states and federal as well as the roles of informal norms, networks of community organizations and neighbourhood associations in pursuing collective action by defining the framework for collective decision making and delivery of local public services.

The qualities we expect of a model or ideal ***good urban governance, among*** others include, the promotion of local democracy, equal access, inclusiveness, decentralization, transparency, and accountability, participation, gender sensitivity, effectiveness, efficiency, openness, safety and security, innovativeness, humanness, firmness, resourcefulness, sustainable development, equity and incorruptibility.

Good governance is not just about providing a range of local services but is also about preserving the life and liberty of residents, creating space for democratic participation and civic dialogue (Town Hall meeting), supporting market-led and environmentally sustainable urban development and facilitating outcomes that enrich the quality of residents.

A governance arrangement (i.e. creation of local government) is, therefore, needed for an urban centre or a city to be economically, socially and environmentally sustainable. The governance arrangement will help the city to realize its economic potential, achieve social justice and welfare and reduce the environmentally damaging effects of urban growth.

Given the regional wave towards government decentralization, the World Bank strived in recent years to strengthen local government capacity to assume increased administrative, planning, management and financial responsibilities while increasing government accountability and transparency. The World Bank activities include Ibadan Municipal Development Projects (IMDPs) under the Oyo State Urban Development Project (IDF II) between 1990 and 1997, analytical work evaluating the effectiveness of IMG financing mechanisms and the provisions of local services.

The objective of Municipal Development Projects (MDPs) is generally two-fold:

a) Improve municipal financial management capacity; and
b) Mobilize resources for municipal investments. The ultimate goal of MDPs is to incorporate sound investment planning and cost recovery mechanisms into municipal administration practices, recapitalize municipal development funds and thus:

(i) Provide a long-term source of borrowing for municipal investments; and
(ii) Build a platform for municipalities to responsibly enter the private capital market.

For the Ibadan Metropolitan area to maintain its position as a regional and international industrial, commercial centre among the ten (10) top investment destinations in Africa requires:

- The introduction of improved city governance and management to enhance responsiveness, predictability, accountability and transparency of government and provide a coherent and supportive framework for efficient urban management and planned development.
- Enhanced land use and development efficiency through facilitating the operation of an efficient urban land market and preparation, enactment and implementation of a master plan and its use as a guiding tool to reduce planning and jurisdictional conflicts and enhanced urban efficiency.
- Increased accountability of local government institutions and greater participation by civil society in development by involving stakeholders in the planning, design and implementation of policies and programme needs to be discussed and introduced. The roles and responsibilities of urban institutions need to be clarified in order to avoid the horizontal and vertical overlaps which currently exist.

Strengthening Local Governments will improve the provision of local infrastructure and services and improve the technical and management capacity of local governments (including the shedding of functions better performed by the private sector).

**5.5 Improving Urban Infrastructure and Services**

Upgrading and extension of city infrastructure and services to support economic development, particularly in the sectors of water supply, waste water supply management, electricity, transport, waste water disposal and solid waste management.

There is huge supply gap in the provision of the basic services and infrastructure. As a result, the investment opportunities that exist are very vast in Ibadan and Oyo State in general. To address this supply gap, the Government Transformation Agenda of Oyo State under Senator Is'haq Abiola Ajimobi has embarked on massive rehabilitation and reconstruction of public infrastructure and services to support economic development of the State in the following areas:

- Rehabilitation of 199 roads and seven bridges across the State between May 2011 and May 2012;
- Construction of Flyover Bridge at Mokola and at Challenge Roundabout, Ibadan;

- Construction of the 110km Ibadan Circular Road being processed for public-private partnership;
- Creation of modern and satellite Towns at Elenusonso, Ibadan, Lagos – Ibadan Expressway and Ibadan-Oyo Expressway through public-private partnership arrangement;
- Construction and expansion of water dams in the State to ease water supply for domestic and industrial use.
- Construction of a ₦6 billion five-star hotel in Ibadan in partnership with a private developer behind the Cultural Centre along the upper course of the Ogunpa River Channelization and close to the Ogunpa Lake.

The state government has also started making efforts to enhance the resources available to support large-scale infrastructure development through attracting private sector resources in a variety of public-private sector partnership arrangements. Land-Use Charge is being contemplated through a Bill in the State House of Assembly to increase sustainability of infrastructure and services through improved cost recovery services leading to better-founded and improved management, operation and maintenance of services.

The opportunity that exists in the power (Energy) sector is found in the generation and distribution of electricity to meet the huge demand in the state. State government should take advantage of the deregulation of the power sector by the Federal Government of Nigeria to venture into Independent Power Generation (IGP), tagged 'Independent Power Project (IPP). More private investors can still have their share in this highly lucrative sector.

The increase in the percentage of the population with sustainable access to improved drinking water has been growing steadily for decades now. However, the data provided by National Population Commission (NPC, 2006) show that there was a decline in the number of people having access to these facilities, 8.16% of the population have access to pipe-borne water and 2.31% have access to Tanker Supply water vendors;

6.88% have access to Bore-hole water and 55.74% of the population have access to well water; 8.32% have access to Ram water and 16.41% to River or stream and spring water.

***Water Supply Capacity to Ibadan***

(i) Asejire Dam has a total capacity of 32,218million Litre (Egbeda Local Government Area).

(ii) Eleyele Dam has a total capacity of 6,897.5 million Litres (Ido Local Government Area)

(iii) Pade Dam has 740 million Litres (Akinyele LGA)

(iv) Akufo Dam with 110 million Litres in Ido LGA

(v) Ijaye-Alabata with 2,022 million Litres in Akinyele LGA

(vi) Lalupon with 1.05 milllion Litres in Lagelu LGA

There is need for redevelopment and management of these existing dams and ponds all over the state through Public Private Partnership (PPP) for agriculture, domestic use, recreation, hydro-electricity and for irrigation, especially Ikere Gorge Dam at Iseyin and Asejire Dam on the Osun River.

## 5.6 Ensuring Stable Infrastructure Financing

Infrastructure deficiencies generally exert a heavy toll on businesses and industries. In Nigeria, lack of electrical, water and transportation services forces enterprises to divert precious resources to fund the self-provision of infrastructure. This latter option is extremely inefficient since it is impossible for firms to achieve economies of large-scale production. In Lagos, up to 25 percent of the costs of new plants goes for on-site infrastructure (World Bank, 2000).

In Oyo State, according to the National Population Commission (NPC-2006) Housing and Population Census Report Priorities Table released in 2009; (i) about ***9.39 percent*** of households have access to pipe-borne water, ***55.7%*** are using well water; (ii) On sanitation, ***18.47 percent*** of households have water closet; ***32 percent*** are using pit latrines and ***37 percent*** are using nearby bush. (iii) On waste Disposal, ***42.11 percent*** of households use unapproved dump-site for solid wastes disposal while ***9.92%*** households enjoy regular collection. However, more than ***60 percent*** have access to electricity.

The lack of adequate services imposes tragic health effects on millions of households in terms of dysentery, cholera outbreak and diarrheal disease-related death rates, especially among households without adequate water and sanitation facilities.

The most critical constraints thwarting infrastructure investments is the chronic lack of capital to finance projects. Because of limited financial resources available to State Local Governments in Nigeria, it is of paramount importance to design and implement new methods for financing infrastructure to support urban land development. One method apart from internally generated revenue (IGR) is for projects to pay for infrastructure development through imposition of land-use charge (or betterment charges), Development charges, tenement rates and other related property tax levies.

A more efficient mechanism is to impose ***"special assessments"*** on all owners of land to finance new infrastructure investments, regardless of whether the land is developed or not. The assessment will ensure that the costs of infrastructure are recovered by passing them on to benefiting properties. It may also provide a more powerful incentive to encourage the development of vacant land.

Property taxes are, by far, the largest untapped potential source of revenue for urban infrastructure and services. In the short medium-term, joint efforts by the State and Local Governments are required by devising an agreement that gives both parties adequate incentives to deliver results. This had been resolved a long time ago by the World Bank in Lagos and Oyo State before Governor Tinubu introduced the Land Use Charge in 2001.

Unfortunately, Oyo State is copying wrongly the system of property taxation practiced in Lagos State. According to international convention, there are two kinds of taxes on urban land and buildings namely:

a) ***All general taxes,*** on property, including those which are formally designated for certain uses. For example: Property tax on Income (i.e. Tenement Rate), Withholding Tax on Property Income (10%) and City Planning Taxes collected in Seoul in the Republic of Korea.

b) ***Special Assessments*** which are levied for a specified purpose and limited to those residents considered to be direct beneficiaries.

If Land Use Charge is a combination of the two (a+b), what proportion goes to the Local Governments? How do you levy properties in the traditional core areas of towns and cities that have no survey plans, inhabited by families and low-income earners? Definitely, the tax collectable will be higher than the income generated by the property. These are issues to be critically looked into when implementing the Land-Use Charge copied from Lagos State.

Instructively, reliance on Local Governments for collection of property taxes (i.e Tenement Rate) has been a failure in Oyo State since 1997, having collected a maximum of ₦85.5 million out of the projected collectable ₦1.2 billion per annum in 2009. The failure on the parts of Local Governments has set precedents that have allowed Oyo State Government to propose Land Use Charge in the state to replace Tenement Rate. Moreover, the required political support from the State Government and Local Government Chairmen is needed to make any property tax system work successfully.

Infrastructure financing would be helped enormously if the flow of statutory allocation could be made more predictable. This should be part of a rationalization of the budgeting process. The eventual goal would be a State (and later Local Government) capital budgeting system in which revenue projections can support an investment programme of specific prioritized projects.

Annual budget surpluses and federal grants will not be enough to pay for many larger-scale investments in urban roads, water systems, primary drains, and the like. The only alternative will be ***debt financing*** by States and eventually, Local Governments. A top-priority long-term goal of government policy should be to facilitate the use of the domestic capital market for infrastructure. Governor Bola Ige had used this facility to finance New Gbagi Market (now Bola Ige International Market). It is good news that His Excellency, Senator Is'haq Abiola Ajimobi is proposing to go to the capital market to finance some important capital projects in Oyo State. For this, fiscal and monetary

disciplines are required to bring inflation down and allow market interest rates to also settle down to affordable levels.

To promote confidence by investors, Oyo State may also establish ***Sinking Fund Accounts*** for redemption of debt obligations on maturity. This would help forestall undue financial pressures on the issuers. The most favoured method of payment into such account would be through Standing Payment Order (SPO).

## 5.7 Toward Sustainable Grassroots Development

Development is about improving the well-being of people. Raising living standards and improving education, health, and equality of opportunity are all essential components of economic development.

***Sustainable Development***

Sustainable development is development that lasts. A specific concern is that those who enjoy the fruits of economic development today may be making future generations worse off by general principle of sustainable development. The general principle of sustainable development adopted by the World Commission on Environment and Development (Our Common Future, 1987) – that current generation should ***"meet their needs without compromising the ability of future generations to meet their own needs"***, has become widely accepted and is strongly supported in the book.

Turning the concept of sustainability into policy raises fundamental questions about how to assess the well-being of present and future generations. What should we leave to our children and grand-children to maximize the chances that they will be no worse off than ourselves?

Essentially, our children would not just inherit our pollution and resource depletion but also enjoy the fruits of our labour in the form of education, skills and knowledge (human capital) as well as physical capital. They may also benefit from investments in natural resources, improvement in soil fertility and reforestation. Thus, in considering what we pass on to future generations, we must take account of the full range of physical, human and natural capital that will determine their welfare and their bequests to their successors.

***A Strategy for Sustaining Development***

The challenges facing this generation are formidable. Many countries have not yet achieved acceptable living standards for their people. Economic growth that improves human welfare is urgently needed. Protecting the environment will be an important part of improving the well-being of people today, as well as the well-being of their children and grandchildren. This Report suggests a three-fold strategy for meeting the challenges of sustainable development.

- ***Build on the Positive Links:***

  Policies for growth promote efficient use of resources, technology transfer and better-working markets, all of which can help in finding solutions to environmental challenges. Rising incomes can pay for investments in environmental improvement. Policies that are effective in reducing poverty will help reduce population growth and will provide the resources and knowledge to enable the poor to take a long-term view.

- ***Break the Negative Links:***

  Rising incomes and technological advances make sustainable development possible but they do not guarantee it. Usually, additional incentives that capture the true value of the environment will be required to induce less-damaging behaviour. Effective environmental policies and institutions are essential.

- ***Clarify and Manage the Uncertain Links:***

  Many relationships between human activity and the environment remain poorly understood, and there will always be surprises. The response should be investment in information and research and the adoption of precautionary measures, such as safe minimum standards, where uncertainties are great and there is a potential for irreversible damage or high costs in the long run.

***Participatory Approach to Project Design and Implementation***

Projects are more successful if they are participatory in design and implementation. A review of World Bank completed Urban Development Projects (UDP) Nigeria, including Community Driven Development Projects (CDDPP) has shown a strong correlation between participation and project success, especially when participation took place through organizations created and managed by the beneficiaries themselves.

The contrasts between environmentally beneficial projects designed in participatory principles and those that fail to include participatory designs can be striking. Ideally, both local communities and the responsible agencies gain from participation, as the experience of the National Irrigation Authority (NIA) in the Philippines illustrates (World Bank, 1992).

Early involvement of community groups in planning construction and in finding ways to avoid the silting of channels and drains has brought about better maintenance of irrigation works and higher agricultural yields. Users have also been more willing to pay for the NIA's services.

The situation in Nigeria is quite different. Generally, the model of development adopted at the local level has been the ***top-button approach***. This model is predicated upon the assumption that the government (decision maker) knows the problems of the people in the area to be developed and also that it has the where-withal to do what needs to be done. Therefore, the beneficiaries are recipients who are expected to do little or nothing to bring development. Consequently, government tries to identify the needs of the people, does the planning and executes the programme. On the other hand, the beneficiaries are expected to receive the projects, use them and take care of them in order to elongate their life.

The synergy between Ibadan city and its rural communities was as a result of its economic, cultural and traditional history. The surrounding villages of the metropolis and the surrounding small towns possess the potentials to depolarize the metropolis. Small-scale industries can thrive better in such towns and diversification of industrial base is necessary so

as to make it cater for agricultural development and thus strengthen the whole system of markets.

In order to stabilize the rural population and attract people to take up agriculture and allied operations in the rural communities, it is necessary to carry out integrated development of rural settlements in a planned manner. In addition to employment, basic amenities such as health, education and welfare services have to be provided within easy reach of rural population. This can be achieved by selecting important villages among group of villages, preferably of larger population with easy access to rural people, as centres where small-scale industries and community facilities can be economically operated.

Community participation in the development process of an urban neighbourhood or rural areas is expected to build demand for inclusive and effective local governance, empower the poor and vulnerable groups, improve the delivery of public services and livelihood opportunities, particularly for the most marginalized. In line with this, both government and donors have invested very substantial resources in programmes and projects which use participatory approaches to build local institutions.

Many environmental problems cannot be solved without the active participation of local people. Participation can also help with afforestation, wildlife conservation, park management, improvement in sanitation systems and drainage, and flood control. Local people can provide the manpower and knowledge for dealing with the aftermath of environmental disasters and local knowledge of genetic diversity has led to break-throughs in crop production.

***In summary, participatory approaches offer three main advantages:***

a) They give planners a better understanding of local values, knowledge and experience;

b) They win community backing for project objectives and community help with local implementation; and

c) They can help resolve conflicts over resource use.

Fostering of greater mass participation in decision making, policy formulation, execution and monitoring, thus develops the confidence of the people in themselves, in their societies and in their government. This, in turn, would lead to the development of a greater sense of commitment to development and readiness to sacrifice for it.

# CHAPTER SIX

# THE INFLUENCE OF PROPERTY TAX POLICY ON REAL ESTATE AND INFRASTRUCTURE DEVELOPMENT

## 6.1 Incidence of Property Taxation

The assessment practices now used in many developing countries were influenced heavily by these countries' colonial heritage but have developed over time into unique systems. Among the countries, which use capital value basis, there is a wide diversity in assessment practices. Each country has introduced its own variation on the basic assessment methods e.g. comparative sales, construction costs, or discounted cash flow.

Property tax policies often have long histories that are closely linked to complex systems of land ownership and property rights that have been developed over time . According to ESV. (Dr.) IRE-Okoli Chukemeka Romanus 2012, "Real estate connotes property consisting of land and buildings on it, along with its natural resources, such as crops, minerals, or water, immovable property of this nature, an interest in this is also an item at real property: (more generally) buildings or housing in general".

Nigeria as a nation from the amalgamation of 1914(the North and the Southern Protectorates) has been adopting Rental or Annual Methods of Valuation to determine the burden of tenement rates payable where land and buildings as a single entity formed the tax base. The approach is non-market based. In 1970s, Lagos State Government and some others changed to Market-based property valuation to determine the burden of tax payable by individuals and corporate bodies.

In year 2000,during the tenure of His Excellency, Asiwaju Bola Ahmed Tinubu the Governor of Lagos State, Nigeria, the Government adopted formula-based capital value to determine the amount of Land Use Charge payable integrating(i) Rates Payable on Crown Land, (ii) Neighborhood improvement charge, and (iii) Tenement Rate. In addition, land and buildings formed the tax base, valued separately.

Oyo state Government enacted the Land Use Charge Law in 2012 and adopted all the provisions of Lagos Land Use Charge, 2000 and transferred the State Rating & Valuation office to the Ministry of Lands, Housing and Survey to become Land Use Charge Department.

Contrary to the provisions of Land Use Act, 1978, Oyo state Government abolished **ground rent** in Oyo State. Whereas, **ground rent is the relationship between the lessors and the lesses usually contained in the registered titled documents** (Lease agreement; deed of conveyance or certificate of occupancy). There is clear evidence in the provisions of section one of the Land Use Acts, 1978 that the Governor is holding Land in THRUST for the people of the State and Nigeria in general, hence, he is not the OWNER of the Land in the Oyo State.

This government Land policy has affected the security of tenure of Land held by the lesses of Oyo State Property Development Corporation. In addition, it affects Federal Government and its Agencies, according to section 49 of the Land Use Act, 1978. It aslo affects Ibadan Local Government Properties Company Ltd. Private Estate Developers and Local Governments Estates, and Families' lease holders.

The major structural reform considered by the State Governments and Abuja (FCT) was a shift from Tenement Rating System based on rental valuation to capital value tax, because, the high-rise buildings and high value residences indicate more taxable capacity. To tax these properties would generate revenue and would be equitable since these properties are in the hands of higher-income individuals and businesses.

Property tax is a natural step in the development of market based economy because, when private property changes hands and new wealth is invested in real estate, with economic growth and development, the revenue capacity of a market value tax will increase with real estate prices. Such a tax can contribute to other important economic, political and legal objectives in developing new fiscal policies and new approach to property rights in a democratic dispensation.

Property rights vested in real estate are governed by the Land Use Act, 1978 and state Land Laws, which define real property, various possible tenancies, estate and interests, and ways to transfer the rights and obligations of real estate ownership. Taxpayers are therefore defined by law as ‘’physical or legal persons, or organizational entities without legal status’’, who are lease-holders, losses, users, or occupiers of taxable property {land and building}.

Efficient reallocation of land assets and users will require financial incentives in the form of market based rents and carrying costs, improved methods for the transfer, registration, and protection of property rights, easier access to credit, and the reflection of the real value of real estate in taxation and infrastructure fees.

As market transaction in real estate increase, financial institutions grow stronger, and public policy formation on fiscal matters continues to mature, Nigeria is well positioned to develop an urban strategy that is economically efficient and equitable for various social and income groups.

## 6.2 The Influence of Property Tax Policy on Real Estate And Infrastructure Development

The ideal market presumably would result in the most equitable distribution of goods being traded, at least from an economic point of view. Similarly it is reasoned that **a free and unrestrained urban land market should result in each parcel being put to its optimum “highest and best” use**. Unfortunately the land market is the least perfect markets. Moreover, in Nigeria the Land Use Act, 1978 appears to stifle the development of urban land markets by focusing more on administrative mechanism of land allocation. Market activities are usually shrouded in secrecy and information is lacking or inadequate. Most land transaction agreements are backdated to pre-Land Use Act 1978.

### (i) Characteristics of Urban Real Estate Markets

The market for urban real estate is localized because of the characteristics of real estate. For example, if there is to demand for a particular kind of real estate where it is located, it cannot be transported to where there is demand.

The market for real estate tends to be **thin**, **sluggish**, and **erratic**.

(a) It is thin because a large investment is usually involved, and therefore at times buyers are hard to find for particular properties.
(b) It is sluggish because there are technical difficulties involved in passing title and in giving possession. Then, every transaction involves a careful investigation of the particular property in order to decide what price shall be paid.
(c) It appears to be erratic because the market tends to be very active or very inactive. This condition is due to the act that real estate does not respond quickly to changing economic conditions.

Two pieces of property are not identical and this adds to the difficulties of making valid comparisons. The ability to finance purchases may vary sharply with property size and location because demand effectiveness is heavily dependent on the credit availability.

### (ii) Property Tax and Land Use Policy

The tax policies of governments influence directly or indirectly the patterns of urban development and may have some potential for aiding the implementation of land use plans

Property tax is the largest single source of revenue for states and local governments depending on the fiscal policy of each country. The frequent deliberate withholding of land from the market for speculative reasons is a violation of the market requirement that the seller will always sell at the prevailing market price. Land taxation

therefore, according to Charles Abrahams, is a more effective method of controlling its use than regulating it.

However, Pickford and Shannon contended that **tax and land use policy objective** should be coordinated in a way that would;

(a) encourage the rehabilitation of slum property;
(b) ensure he timely fill of vacant land in areas that are largely built up; and
(c) prevent premature development of open space on the outer fringes of suburb areas of the city.

They further suggest that preconditions for this coordination include an efficient uniform assessment by professionally qualified assessors, an adequate land use control system, and effective capital budgeting for (or investments in) community facilities such as good roads, water, electricity, schools, parks and utilities.

Other objectives of tax and land use policy include incentives for new developments of various land uses in accordance with land use plans and policies such as: preservation of open space, and the preservation of historically or esthetically valuable areas and structures.

**(iii) Financing Infrastructure Development**

Property tax, (otherwise known as Land Use Charge), has been principally used to finance improvements in the physical infrastructure in urban areas to recoup the cost of infrastructure projects, especially road construction and improvement embarked upon by the government. Therefore, land use charge or formula-based capital value form of taxation can significantly help to raise financial resources, particularly during periods of rapid expansion of urban infrastructure.

Infrastructure deficiencies in cities also exact a heavy toll on business and industries. In Nigeria, lack of electrical, water, and transportation services forces enterprises to divert precious resources to fund the self-provision of infrastructure. This

self-provision by individuals, institutions and corporate bodies is extremely inefficient since it is impossible for them to achieve economies of large-scale production and comfort. In Lagos, and other big cities in Nigeria, more than 40percent of the costs of these on-site infrastructures, would have been channeled to profitable ventures.

Therefore, a more efficient mechanism is to impose special assessments on all owners of land to finance new infrastructure investments regardless of whether the land is developed. The assessment will ensure that the costs of infrastructure are recovered by passing them on to benefiting properties. It may also provide a more powerful incentive to encourage the development of vacant land.

Cities and metropolitan areas make important contributions to economic growth, accounting for approximately 60 percent of the gross national product (GNP) of developing countries (World Bank, 1996). They are the principal engines of economic growth, serving as incubators for new and emerging enterprises and places of where goods, information, labour and others services are efficiently exchanged. In short, cities are theaters of economic productivity and land serves as the platform for economic activity. If land becomes too expensive or lacking adequate infrastructure, economic activity will be stifled.

**(iv) Real Estate Speculation and Property Tax Policy**

Real estate speculation has been a difficult problem for a long time and government has placed a priority on containing real estate inflation. Furthermore, the government was seriously concerned about the concentrated distribution of real estate and the severe shortage of urban land for housing and business.

Since tax relating to the transfer and ownership of properties (Capital Gain Tax) has hardly been an important source of the tax revenue, they have made little or no contribution to lessening prevailing inequities in the distribution of assets. Taxation of wealth or properties should therefore form an important element of the overall tax

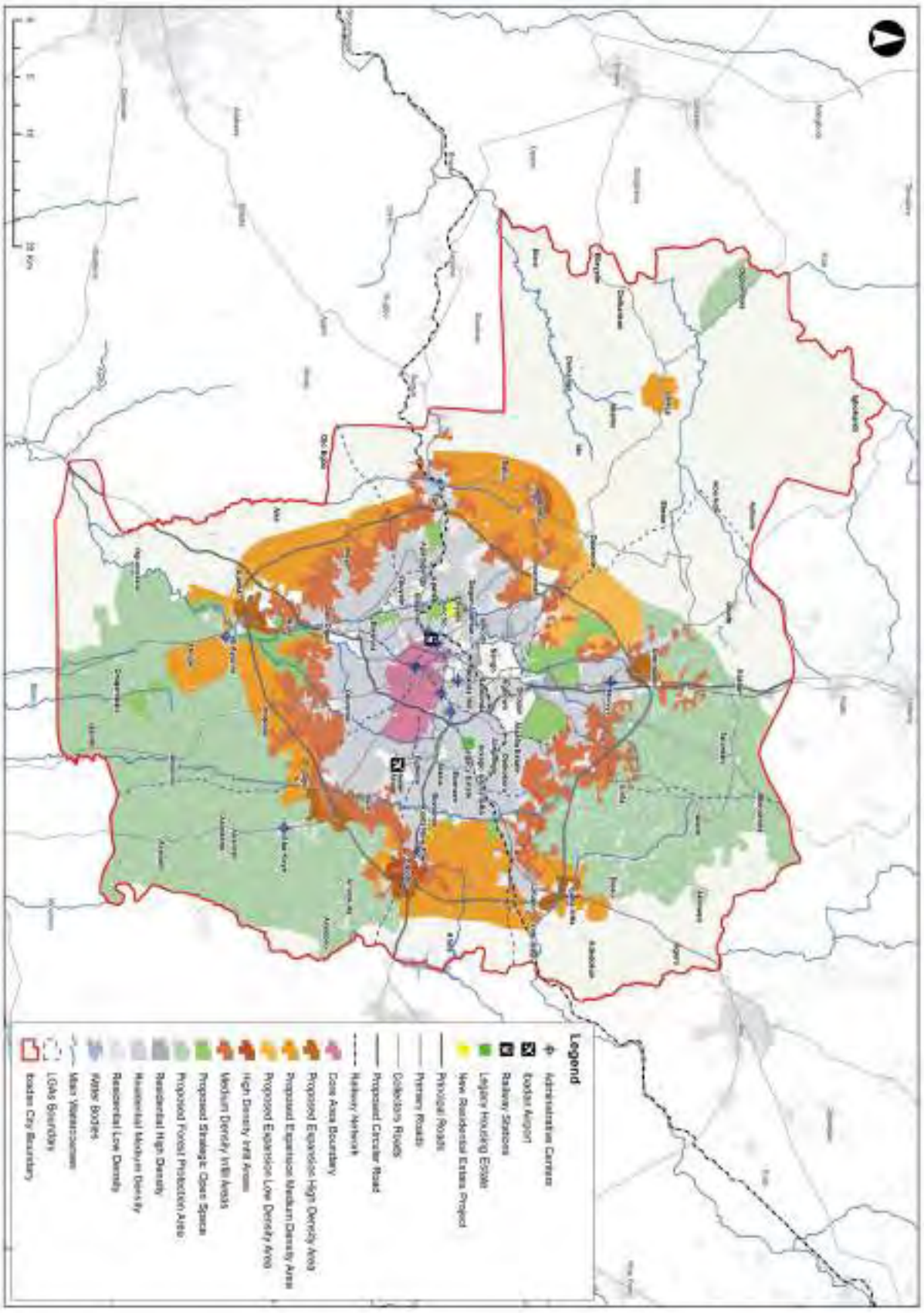
structure not for revenue purposes, but to complement income taxation, ameliorate the significant unequal distribution of wealth, an ensure efficient resource allocation.

The best tax instrument to curd speculative buying of real properties would have been **a property tax** imposed directly on ownership rather than the **Capital Gains Tax** (CGT) on real properties, which is imposed on property at the time of ownership transfer (Kwang Choi, 1999). According to Hein, both **administrative difficulties** on the tax collector's side (Revenue Board) and **widespread tax evading efforts by the taxpayers** nullified the government's efforts to reduce speculation on real estate via heavy taxation without expert valuation on **capital gains** from real properties.

**Table 1: Analysis of Estimated Property in Oyo Major's Towns and Cities**

| Towns | Population 1996 | Estimated Properties 1996 | Estimated Enumeration Properties 2006 |
|---|---|---|---|
| 1. Awe | 10,418 | 772 | 1,233 |
| 2. Ilora | 22,081 | 1,636 | 2,612 |
| 3. Saki | 103,415 | 6,894 | 16,651 |
| 4. Igbo-Ora | 53,639 | 3,973 | 7,091 |
| 5. Eruwa | 35,388 | 2,621 | 5,188 |
| 6. Igbetti | 31,011 | 2,297 | 4,943 |
| 7. Kisi | 40,780 | 3,021 | 5,463 |
| 8. Iseyin | 92,153 | 6,144 | 14,164 |
| 9. Okeho | 38,896 | 2,881 | 5,463 |
| 10. Ilero | 41,886 | 3,103 | 5,700 |
| 11. Ogbomoso Township | 181,473 | 12,098 | 21,264 |
| 12. Oyo Township | 257,043 | 17,136 | 28,164 |
| 13. Ibadan Metropolis | 1,418,182 | 143,996 | 157,417 |
| 14. Ibadan Outer City | - | 270,780 | 543,092 |
| **TOTAL** | 2,326,365 | 477,352 | 818,445 |

***Source:*** *Oyo State Valuation Office, Oyo State Urban Project (IDF II) Ministry of Finance and Economic Planning, Ibadan, 1997.*


Legend
Administrative Centres
Ibadan Airport
Railway Stations
Legacy Housing Estate
New Residential Estate Project
Principal Roads
Primary Roads
Collectors Roads
Proposed Circular Road
Railway Network
Core Area Boundary
Proposed Expansion High Density Area
Proposed Expansion Medium Density Area
Proposed Expansion Low Density Area
High Density Infill Areas
Medium Density Infill Areas
Proposed Strategic Open Space
Proposed Forest Protection Area
Residential High Density
Residential Medium Density
Residential Low Density
Water Bodies
Main Watercourses
LGAs Boundary
Ibadan City Boundary

## (i) Reason for Low Property Tax Revenue in Rural Areas

Population size and its rate of growth may have a substantial impact on the rate of growth of the economy of the city and the nation at large. This may affect the rate of investments, savings, allocation of resources to real estates, income distribution and the establishment of state and national priorities.

However, **Weak Land Markets** in Nigeria had contained income diversification in rural areas and this had further exacerbated rural poverty. (Prof. Ezekiel Olukayode Idowu (2015). Whereas, diversification strategies can benefit rural households by stabilizing income stream (Kelvin and Weiss, 2005).

In a free market economy, according to Professor E.O Idowu (2015), land is made available to people through the emergence of efficient land markets with little interference from the government which is limited to recording of transactions and taxation .this makes land available for agricultural and industrial development. In Nigeria, the land use act, 1978 appears to stifle the development of land markets by focusing more on administrative mechanism of land allocation. The relegation of free land market to the back stage has driven it underground. Market activities are usually shrouded in secrecy and information is lacking or inadequate. Most land transaction agreements are backdated to pre-land use act of 1978.

**Table 2: Cities/Towns in 8 Local Governments outside Ibadan**

| S/N | LOCAL GOVERNMENT AREAS | CITIES/TOWN SETTLEMENTS | POPULATION | | NO. OF ESTIMATED PROPERTY 2006 |
|---|---|---|---|---|---|
| | | | 1991 | 2006 | |
| 1 | Atisbo | Ago-Are | 10,136 | 21,792 | 2,724 |
| | | Tede | 14,687 | 31,577 | 3,947 |
| 2 | Saki East | Oje-Owode | 10,419 | 20,525 | 2,566 |
| | | Sepeteri | 12,317 | 24,264 | 3,022 |
| 3 | Ibarapa North | Tapa | 9,481 | 18,678 | 2,335 |
| | | Ayete | 7,200 | 14,184 | 1,773 |
| | | Igangan | 14,457 | 28,480 | 3,560 |
| 4 | Itesiwaju | Otu | 11,203 | 23,750 | 2,969 |
| | | Ipapo | 15,962 | 33,839 | 4,230 |
| | | Okaka | 9,974 | 21,145 | 2,643 |

| | | | | | |
|---|---|---|---|---|---|
| 5 | Iwajowa | Iwere Ile<br>Igana | 8,024<br>17,666 | 13,561<br>29,856 | 1,695<br>3.732 |
| 6 | Ogo Oluwa | Ajawa<br>Odo-oba | 4,635<br>6,324 | 8,343<br>11,383 | 1,043<br>1,423 |
| 7 | Orire | Ikoyi<br>Tewure | 3,329<br>3,639 | 4,794<br>5,240 | 599<br>655 |
| 8 | Surulere | Iresa Adu<br>Iresa Apa<br>Oko | 2,707<br>1,307<br>5,647 | 5,928<br>2,862<br>12,367 | 741<br>358<br>1,546 |
| | **TOTAL** | | **169,144** | **332,568** | **41.572** |

***Source:*** *Oyo State Valuation Office, Ministry of Local Government and Chieftaincy Matters, Ibadan 2009.*

The provision of a resilient source of revenue to rural based local government council in Nigeria by taxing agricultural lands in their areas of jurisdiction is desirable. It is widely acknowledged that majority of these local councils are unable to meet statutory obligation as a result their sole dependence on deriving allocations from the federation account. They also have low internally generated revenue (IGR), especially, from property tax due to dominance of low valued properties and absence of infrastructural facilities.

Even, public utilities are non-existence or insufficient. The introduction of property tax on agricultural properties is desirable.

## 6.3 Global Practice of Property Tax System

The **capital value system** of taxation has the virtue, as urban tax, of possibly affecting the intensity and spatial distribution of land use and would also seem preferable on grounds that it can be adapted more easily to affect land use pattern.

Many **annual value system** {investment methods}, however, already rely to a certain extent on capital value assessment, and in some countries and cities, annual and capital value systems exist side by side. In these cases, a conversion may in fact reduce duplication, clarify procedures, and increase horizontal equity across different uses of real property [e.g. assessment of special properties for tenement rates on annual rental basis].

Rapid urbanization is placing demands on property tax system that annual value systems probably cannot meet where there is need to use land use effects and to raise

more revenue, and a desire to capture land value increments resulting from urbanization. Moreover, the advantages of mass assessment of homogenous rented properties will continue to diminish as urbanization brings more owner-occupancy and more diversity in the housing stock.

On the political side, one would expect more willingness to yield to the pressures for centralization, in exchange for greater leeway in affecting land use and for greater revenues from the property tax base.

**(a) Definition and Coverage of the Tax Base**

The tax base is defined as the assessed value of land and improvements. In practice, however, actual assessed value is generally below market value because of infrequent reassessment and poor assessment practices. Hence, the fractional percentage in annual value system used to multiply the gross value is referred to as assessment ratio. In capital value system:

- The ratio of assessed value to market value has been roughly been estimated at 25% in Jakarta (Lerche 1974)
- The ratio is 45% for Manila [Youngo 1971] and
- About 20% in the cities of Taiwan [China] criew 1987.

In the United States of America, most local Governments impose a property tax as a principal source of revenue. The tax is nearly always computed as the **Fair Market Value (FMV)** of the property times an **Assessment ratio;** times a **Tax rate** [i.e. annual tax rate].The property tax always produces the required revenue for municipalities' tax levies.

In less than half of the states in America including New York, assessed value was essentially 100percent of Market value. In the rest of the states, including California, assessed values were at some fractions of market value. For example, 25% of MV in Kansas, 35% of MV, in Nebrasloca, 40% in Georgia and 50% of MV. In Michigan

[Ronal E. Gettel 1980] in Real property Tax analysis published in the Real Estate Handbook].

**(b) The Land Use Charge Formula in Oyo State**

The Basis of valuation is statutory; as stated in the Land Use Charge Law, 2012; section 6 of the schedule. The basis of determining the amount of Land Use Charge payable in expressed I the formula below.

LUC=M*{[LA*LV]} + (BA*BV*PCR)}

Where

LUC = annual amount of land use charge in Naira

M = The annual charge Rate expressed as a percentage of the assessed value of property, and which may, at the state Government discretion vary between owner-occupied residential and commercial (revenue generating) property.

LA= the area of land parcel in square meters

LV= the average value of land parcel in the neighborhood per square meters in Naira

BA= the total developed floor area of building on the plot of land in square meters

BV= the average value of machines quality buildings in the neighborhood, per square meters in Naira

PCR= The property code rate for the building being of higher or lower value than the average buildings in the neighborhood and which also accounts for the degree of completion of construction of the building.

Assessed value of the property = (LA*LV)+(BA*BV*PCR)

Non-determination of property code rate (PCR) which Land-Use Charge Department considered crucial should be determined by the Oyo State Government according to the Land Use Charge Law, 2012. However, the PCR is supposed to be a depreciation factor on the building cost to obtain the building value and not a critical

factor in raising the Land- Use Charge Bill is the Annual Rate Charge (ACR) which is the percentage of the assessed value that has to be introduced and approved by the State Government according to the use of the property.

From the above formula for assessed property, the property means Land and Building. The land value is ascertained and added to the estimated current cost of the building as reduced by accrued depreciation as at date of valuation, to give the assessed value of each property.

This disparity in tenement rate collection as recorded in the table was due to the fact that larger cities of Oyo, Ogbomosho, Iseyin, and Saki including Ibadan Metropolitan Area reply on property tax revenues, because they are more densely populated and have larger per capita tax base than smaller cities and rural areas, where property values industrial properties have greater ability to levy property taxes.

The major structural reform considered was a shift from tax on land and building as a single entity based on Rental value to a Capital Value Tax (CVT) based on land and building as separate tax bases .The popular appeal of such a change is apparent because large buildings and high value residence indicate more taxable capacity. To tax these structures would be equitable since these properties are in the hands of higher-income individuals and businesses. Both land and buildings are included in the property or land use tax base, but the valuation of each is made separately.

The tax base reflects primarily the area of land plots and the floor space of buildings all in square metres. The process by which a property's actual value is determined is established by the state law. Tax rates are also centrally determined by the state, and there are separate rates for land and for buildings.

However, the administrative system should be completely overhauled, with particular emphasis on:

(i) Improving collection procedures and record keepings;

(ii) Developing a sales data bank that would permit assessment-sales ratio studies;

(iii) Indexing land and building values to update the valuation roll between general valuation; and

(iv) Monitoring relief and derating in a more systematic way.

Finally, the gap between tax law and practice, indicative of the shaky state of tax administration, most be closed in order to achieve a reasonable degree of efficiency.

**Features of the Capital Value System**

The strength and weakness of capital value systems are reflected in the application of five features more common to capital values than annual assessments such as indicated below (Roy W. Bahl & Joannes F. Linn, 1992).

(a) A formula-based valuation;
(b) Separate assessment of land improvements;
(c) Multiple sources of valuation information
(d) Provisions for reassessment ; and
(e) Centralized assessment

The process typically starts with a classification of urban land in the city according to its location, amenities, and/or use e.g. GRA, public Estate Development, Educational, Industrial and Residential Uses.

The assessment of improvement requires up-to-date manual of construction costs and substantial fieldwork to record the features of each property and neighborhoods characteristics such as road network, street names, house address, provision of water and electricity.

The property tax base, that is, the value of urban real estate, grows rapidly with urbanization of the city and can be objectively assessed. It reflects the value of many

urban services where population and valuable properties are concentrated with higher per-capital tax income that the smaller towns or rural areas.

**SALES TAXES**

Similarly, because of the higher level of economic activity, larger cities and metropolitan areas in Nigeria have greater ability to levy income and sales tax; sales taxes generate significant revenues for large cities that attract people from neighboring cities and metropolis who come to shop or work there. Therefore, it could be assumed that SALES TAXES are one way of capturing the benefits that commuters and visitors enjoy from using various services in the metropolis and municipalities including large cities.

# CHAPTER SEVEN

# THE IMPORTANCE OF EMBRACING GEOGRAPHIC INFORMATION TECHNOLOGY

## 7.1 Introduction

I believe this is the time for the Nigerian Institution of Estate Surveyors and Valuers (NIESV) to develop interest in GIS application to Real Estate practice. We now have Abuja GIS, Kaduna Geographic Information Service Agency while Oyo State is about to establish similar Agency in 2018.

The National Population Commission (NPC) now relies on GIS technology to produce Census Maps generated from GIS database which contains; census Maps feature (such as roads, railway lines & rivers), names, towns, cities, metropolitan areas, Local Governments and Enumeration Area Demarcation (EAD).

## 7.2 Concepts of GIS:

GIS is a tool and can be defined as a computerized data management system of hardware, software and procedures designed to support the capture, management, manipulation, analysis, modeling and display of spatially-referenced data for solving complex planning and management problems.

A GIS does in fact, as a tool, create high quality maps that communicate considerable amounts of information in an efficient and attention getting manners. GIS is therefore a marriage between computerized mapping and database management system.

GIS is a effective for urban planning and land management. It enables data to stored, used, compared, analyzed and integrated to make critical planning decisions. It deals with the object whose locations or positions are represented geographically on a map and the characteristics are recorded in a database as attribute (Aybet 194). GIS is also used to determine the effects of land prices of parcels on a geographical sace within neighbourhood.

## 7.3 APPLICATION OF GEOGRAPHY INFORMATION SYSTEM (GIS)

### I. Urban Land Management Information System (ULMIS)

Urbanization is becoming more and more complex for cities in Nigeria and developing countries in general. It is indeed an undeniable fact that the trend of urbanization cannot be reversed. Urbanization also brings with it unbudgeted financial commitments towards waste generation which becomes challenging for many cities. It is therefore important that proper **urban management measures and strategies** are put in place to deal with this complex situation.

Effective operation of the local authorities depends on land information processed by the LAND SECTOR AGENCIES. The current land administration processes in Nigeria are centralized at national and state levels according to the provisions of the Land Use Decree, 1978. Consequently, the information generated is difficult for the local authorities to obtain. All land processes manifest at local level within the jurisdiction of Local Governments where actual action (such as planning, implementation, and management) takes place but collaboration between Local Governments and the land sector agencies is week and information that is needed about land is not always available at local level.

ULMIS is a system combining **geographic** and **alphanumeric** data. Digital mapping is however, only a part of geographic information system (GIS). The later can help a local government have, apart from cadastral map, a more comprehensive database about different aspects of its environment and socio-economic circumstances (Mat, 1963). It can also provide facilities for the agencies of these data to answer vital management and policy questions.

Ultimately, inconsistencies in or lack of urban land management information system (ULMIS) have been identified as one of the main reasons for low collection of property taxes. ULMIS can facilitate exchange of information and can be a tool for improving its quality.

## II. GIS Based Infrastructure Management

The GIS has the potential to allow project managers and different people involved in project with different backgrounds to get the information about the progress of the project and support decision making. Thus GIS will provide a common basis of understanding and communication among these people.

(a) Real Estate and GIS

(b) Urban transpiration

(c) Urban Regional Planning

### (a) GIS Application In Real Estate Infrastructural Facilities

GIS is a catalyst for economic growth and development in the real estate sector. It can potentially play an important role in real estate research and permit the study of location to be easily factored into the explanation of various phenomena. Location is one of the factors, influencing property value

Some of the earliest applications of GIS in facility management were related to flight and hotel management at airport, municipal water and wastewater infrastructure, and electricity utility distribution.

The spatial data that exist in a facility geo-database has often been developed from aerial (satellite) imagery or global positioning system (GPS) field data collection practices. The limitation of these data collection techniques is that they are blind to building interiors. Aerial photography cannot see through roof. GPS signals are not available inside the building.

The organizing and integrating feature of GIS has assisted in closing the separating wall between the inside and outside of building facilities. In GIS, emphasis has always been on location. Physical and locational characteristics are included as variables in models of residential real estate. That is, the suitability of the location for the proposed project, the climatic soil and general geographical condition of the area under scrutiny.

## (b) GIS-Based Resource Management

There has been study the purpose of which is to improve the utilization of resources in construction industry. Resource planning is a critical task for management. It identifies the various resources that are needed for building throughout its life period. Effective resource management increases profitability of optimum utilization of resources in and around construction industry and in developing property tax system. This system provides a technical support for the full and effective management and use for the transportation of resources. This can be done with the use of GIS, as a tool, which has an ability to handle both **spatial** and **attributes**. This platform provides a sophisticated facility compared to available tool, which helps to interlink various resources to be allocated effectively. This facility provides the manager, to a new experience in construction industry.

**Keywords**: map, GIS, resources

### (i) Resource Management Process

In organizational studies, resource management is the efficient and effective deployment of an organization's resources when they are needed. Such resources may include financial resources, inventory, human skills, or production resources. As the case with the larger discipline of project management, there are resource management software tools available, according to experts. Those software tools automate and assist the process of resource allocation to projects and portfolio resource transparency including supply and demand of resources.

The goal of these tools typically is to:

- there are employees within our organization with required specific skill set desired profile required for a project
- decide the number and skill of new sets of employees to hire; and
- allocate the work force to various projects.

**(ii) Capability of a GIS in Property Tax System Development**

Property unit represent the basic economic assets from which the city can expect to generate the revenue sources. Property tax: that is market based, can be a natural step in the development of market based economy as private property changes lands and now wealth is invested in real estate. With economic growth and development, the revenue capacity of a market value property tax will increase with real estate prices.

Some of the resources/ Infrastructure used in property tax system development are:

- CAMA, * GIS, * Estate Surveyors & Valuers * Mobile Phones * Digital Maps, * Computer Systems and furniture, Land and Buildings, * towns/cities and neighbourhoods.

Each parcel of landed property is given a unique identification number which must correspond with the parcel ID in the CAMA database. CAMA is computer Aided Mass Appraisal System that stores information on all transfers in real estate in tabular form (or spreadsheet). This data is categorized in a variety of ways by parcel, land, building, value history and residence characteristics. The system automatically maintains property data and ensures tax equity through a uniform application. Most CAMA systems have four subsystems: sales analysis, valuation, database management and administration (Yang 2000).

CAMA and GIS have been used successfully in most developed countries, especially in North America, and have recently been adopted by the Lagos State Government in its **property identification scheme** bit without a GIS (Samuel O. Dekolo 2003).

**(iii) Transportation System Facilities Management**

Ibadan is a clear example of ancient city or pre-colonial city where there is a clear distinction between the inner and outer areas with the former having consistently low growth rates tangling from **0.2% to 1.2%** annually while the outer areas having much

higher rates (2.9% to 5.7%) annually. This variation is a clear indicator of a trend of increasing movement of population from the densely occupied inners to lower density peripheral areas where land is available for residential development.

Rapid population growth and sporadic and uncontrolled development together with increasing car ownership has given rise to serious congestion and parking problems across the built-up areas of the city. These inefficiencies within the transport network have significant in pacts upon the city in terms of upon the city in terms of pollution, health, the economy and general quality of life and well only continue to worsen with the expansion of the urban area if not properly addressed.

However, GIS can be used to maintain inventories of signs, traffic signals, and other assets, to plan future facilities in response to anticipated growth of the city; to provide driving directions to citizens and operators of delivery vehicles; to support intelligent transportation systems (ITS) applications; and to maintain inventories of pavement quality and their maintenance.

**(c) Urban and Regional Planning With GIS**

GIS technology is used to analyze the urban growth and its direction of expansion, and for selection of potential development sites. The principal highest and best use is conveniently adopted and achieved through the use of GIS. Best locations for development are easily determined. It can also detect and estimate the changes in the pattern of land use within a trend of time. GIS facilitates the allocation and reallocation of land for suitable needs.

For instance GIS is used to measure the dynamics of land-use change between 1972 in Ibadan and 2006 which varied as a result of the rising population has prompted the utilization of land and other natural resources. This resulted invariably in the degradation of forest resources, flooding, building on hill-sides and flood/plains. GIS facilitates the allocation and reallocations of land for suitable needs among land-users

determine sales process of Real Estate (land & buildings which is responsible for the pattern of land-use activities in urban are as summarized below:

***Table: Summary of Existing Land Use Analysis in Ibadan***

| Land Use | Area in $km^2$ | Area in Hectares | Percentage of Total |
|---|---|---|---|
| Residential | 468.58 | 46,858 | 14.88% |
| Educational | 29.704 | 29,704 | 0.94% |
| Recreational | 3.17 | 3,1668.686 | 0.10% |
| Green | 1m898.506 | 189,850.604 | 60.30% |
| Agricultural | 644.30 | 644,299.581 | 20.46% |
| Water body | 8.39 | 8,387.109 | 0.27% |
| Industrial | 35.64 | 35,639.382 | 1.13% |
| Public | 38.43 | 38,427.232 | 1.22% |
| Commercial | 21.83 | 21,829.691 | 0.69% |
| **TOTAL** | **3,148.54%** | **314,853.957%** | **100.00%** |

According to Egbenta, Ndukwu and Adisa (2012) GIS improves security of tenure, simplifies compulsory land acquisition process and encourages development of an organized market. Development activities however, disrupt the conservation policy of natural resources and environment. Such urban developments can produce potential adverse environmental effects. A case in point is AGALA Forest Reserve at Oke-Aremo, in Ibadan which is now replaced with a New Housing Estate, and New Olubadan Place Complex.

Geometric and attribute data for land, buildings and other functional amenities such as road network, electric poles, water and drainage system could be captures; spatial and non-spatial (attribute) database for neighbourhood features created and then spatial analysis on the database created through the instrumentality of the GIS technology.

## 7.4 Case Study of Ibadan Masterplan

The planning and engineering of infrastructure system is an interactive process whereby the engineer tries to achieve an optimal solution within the applicable engineering design criteria as was done in the urban renewal projects and new towns and cities. An optimal solution will generally have a number of characteristics in terms of costs. On the other hand, the design should be such that all inhabitants have access to a service, that this service is of good quality and that the organization or government responsible is able to take care of the infrastructure once constructed. Hence, the application of GIS in the planning and design of urban infrastructure in a newly planned urban development is imperative.

GIS can be an important tool for the success of the Nigeria Government, particularly Oyo State, in urban development strategy to facilitate informed decision-making in its planning process if it incorporates GIS in the planning system.

With the aid of satellite imageries which shows details of Ibadan environment, the Oyo State capital, the World Bank has decided to assist the State Government in the major areas to create economic conditions in an appropriate living environment, while at the same time solving some of the environmental problems of Ibadan Metropolitan Area covering 3,145.96 sq.km. which is about 11% of the area of Oyo State and the largest metropolitan area in Nigeria with eleven (11) Local Government Areas. With the assistance of the World Bank, the proposed Ibadan Master Plan Object will include the followings:

(i) Ibadan City Master Plan covering 315,000 hectare
(ii) Solid Waste Management
(iii) Drainage Masterplan

The World Bank has been able to deploy GIS capabilities and optimization applications for the selection and locations of the existing cultural heritage and historic sites, selection of sites for utilities such as water, electrical, sewage and solid waste dump

sites, drainage network. Also included was transportation network and the redistricting of electrical boundaries to accommodate changing population distribution and new satellite towns.

In transportation, the consultants had used GIS technology to maintain inventories of signs, traffic signals, and other assets; to plan future facilities in response to anticipated growth; to provide driving directions to citizens and operators of delivery vehicles; to support intelligent transportation systems (ITS) applications; and to maintain inventories of pavement quality and maintenance.

In order to understand the context of due process and main criteria for selecting location of suitable sites for urban infrastructure, there is need to follow these criteria as recommended by GIS experts:

(ii) The location and extent of the city or site of the new urban development are as already identified;
(iii) The network of utilities required and the proposed or existing population of the communities;
(iv) The closeness of water and electricity resources;
(v) Does the location offer possibilities for further expansion in the future?
(vi) Is land available, which means that the government could carry out plans to be considered for the same land; and
(vii) Does the site have suitable topography, which means that the land could be relatively flat and the change in elevation is rather gradual?

Before a final selection of location, a further study into the environmental and natural conditions of the site should be done. This study consisted of 6 main elements:

- Identification of the main features of the new location or entire coverage area of the old city or urban areas due for renewal
- Climate
- Topography

- Geology
- Environmental pollution
- Environmental impact assessment

A new step involved additional studies on the following aspects:

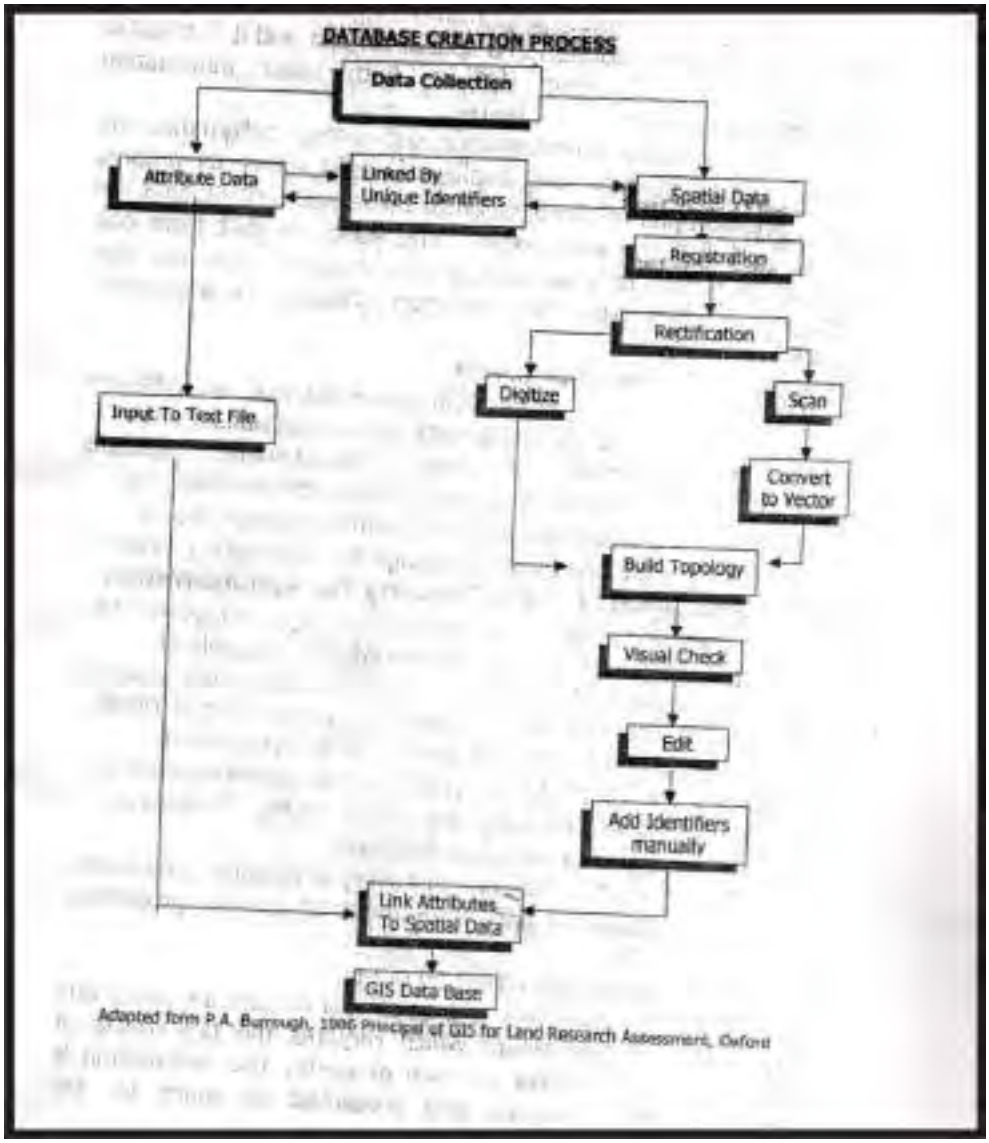
(i) The expected public services needed for the new area according to the expected population.

(ii) The expected housing needed for the new area according to the expected population

(iii) The general planning of an urban centre including limitations of the urban planning such as topographic, demographic, economics, and environmental limitations.

Unfortunately all of the above mentioned studies are carried out in most cases by the government and organizations using traditional procedures without involvement of GIS analysis. For this reason, there is need to explore whether GIS could be a suitable tool to assist in the location selection and impact studies.

***Picture 1: Database Creation Process***




**The Use of Satellite Images for Urban Planning**

Effective urban planning requires access to accurate and continually updated information concerning the changing conditions of urban areas. The use of satellite images for urban planning has been generating land resource data for such purposes as agriculture, forestry, mining and urban use. Because it roughly captures most urban features of concern: such as streets, buildings, and plot layout boundaries, it is generally adequate for urban planning applications. This will require installation of a complete computer-mapping system or a GIS-Computer base system for conducting of the land and

housing market assessment. This system can also be used for other management and research functions such as demographic projections, data base management, and report production.

## III. Land Market Assessment Project

The Land Use Charge Project contracted out to the Nigerian Institution of Estate Surveyors and Valuers (NIESV), Oyo State Branch in 2017 involving **property enumeration and assessment** necessitated the engagement of the services of a GIS consultant. The ultimate goal was the purposeful utilization of locational/spatial information for planning development and management of the land use projects in all the towns, cities and urban centers of Oyo State.

The GIS consultant is to among other things;

a. Develop detailed maps of towns and cities showing the road networks of identified urban settlements such as Ibadan, Oyo, Ogbomoso, Iseyin, Saki etc.
b. Assist the NIESV in the delineation of Neighbourhoods and assignments of POSTCODES, for each neighbourhood in a manner that promotes intelligent/ informed decisions that would be essential for;

i. Efficient identification, enumeration and recording.
ii. Effective data collection of the city/urban areas by filed staff.
iii. Quality Control and Assessment
iv. Preparation of valuation Roll; and
v. It was also possible to provide access to GIS database directly from the Field, sing wireless links and mobile services

The pre-Land Use Charge tax was property (tenement rates) which constituted a substantial part of the total revenue for Local Governments, but the collection of property rates was not efficient. This is a common problem not only in Nigeria but also in Ghana and other developing countries.

The Land market assessment procedure is an effective strategy to develop Urban Land Management Information System (ULMIS) with the aid of Geographic Information System (GIS).

The ULMIS project is an efficient tool for collection of **property tax** (or Land Use Charge) and for **urban management** in general. Information about buildings, parcels, use, value, owners and rates to be paid is stored in digital form and the **information can easily be illustrated and identified in a digital map**.

The possibility of storing data from various sources in a common platform (GIS technology), is a starting point for exchange of information and collaboration between departments and different organizations. GIS uses location as the cornerstone of data management for organizing project information used for careful monitoring, coordination, and management.

In developing a property information system, for Land Use Charge collection in Oyo State using both manual and GIS technology. The GIS consultant prod-used digital maps of the cities in Oyo state which was delineated into enumeration zones (Neighborhoods) for data collection on property units, land values and property sales/cost values ant photographs to assists in the final valuation and preparation of Valuation roll.

The digital camera was used to capture the passport photograph of each house owner and hyperlinked to the digitized house parcels to create a robust and reliable GIS-based property information system which could easily be up-dated.

**REFERENCES**


- **Anwar shah and Sana Saha:** The New Vision of Local Governance and the Evolving Roles of Local Government Published by the World Bank in Washington D.C. and Edited by Anwar Shah, 2006.
- **Asaju A. S. (PHD, ANIVS):** Fiscal Federalism, Local Government Finance and the property Tax in Nigeria Being a paper presented at a 2-Day Property Tax reform in Nigeria under the Auspices of The Department of Estate Management, university of Lagos, Akoka, Yaba, July, 16th – 17th 2002.
- **Ayodele Ibuoye, Abdullahi Hassan Ahmed: _** Transformation of federal capital city through internally Generated Funds – A Case for FCT! Property Tax implementation. A paper delivered at the 42nd Annual conference of the Nigeria Institutional of Estate Surveyors and Valuers (NIESV), 2012. At Abuja FCT.
- **Danny Myers (2006):** Economics & property = The Estates Gazette Guide – Second Edition – EGBooks
- **David E. Dowall (1995):-** The Land Market Assessment: A New Tool for Urban Management
- **David E. Dowall, Gites Clerk (1996):-** A Framework For Reforming Urban Land Policies in Developing Countries
- **D.N. Banerjee (1998) -** principle and practice of valuation – Fifth Edition. Eastern Law House Private Ltd. Vel Delwillon
- **Fawahinmi Abayomi: -** infrastructure for Property Tax Collection in Nigeria – paper delivered at the Workshop Organized by ALGON, Oyo State Branch in 2002 at Kakanfo Inn, Ibadan.
- **Federal Republic of Nigeria:** Government White Paper on Report of the Presidential Committee on Urban Development and Housing (2002), printed the Federal Government Printer, Apapa, Lagos.
- **Glenn W. Fisher Wichita State University (Emeritus):** History of property Taxes in United State. http://www.eh.net.?encyclopedia/article/fisher.propertytax.history.us-3/25/2006
- **Jane H. Malme and Joan M. Youngman (eds):** The Development of property Taxation in Economics in Transition Case Studies from Certain and Eastern Europe (2001) World Bank institute Publication.
- **Kolawole Olayiwola:** "Taxation and Democratic Governance" Paper presented at the Training Workshop on property Tax and Financial Resources Mobilization at Local Government Level. December, 2002. Organization by the Local Government Services commission, held at Aboyade House, Agodi GRA, Ibadan.
- **Kelly Roy:** "The Evolution of Property Tax Information Management System in Indonesia" in G. Jenkis (ed) Information Technology and Innovation in Tax administration (Cambridge, M.A. Kluwer, 1996), pg. 115-135.

- **Olatoye Ojo (Dr):** Urban Financing and Property Tax System (2002) A Paper delivered at the Training Workshop organized by the Development Policy Center in collaboration and Chieftency Matters, held at Kakanfo inn, Joyce B Road, Ibadan.
- **Oyo State Government:** Land Use Charge Law 2002
- **Professor Akin L. Mabogunje:** Land Management in Nigeria: Issues, Opportunities and Threats. (Being text of a Lead paper presented at the National Conference on "Land Management and Taxation" organized by the Department of Estate Management of the University of Lagos in 2002".
- **Peter Sunf (1989):-** Land and Water Resource Management in Asia.
- **Roy W. Bahi, Johnnes F. Linn:** Urban Public Finance in Developing Countries, a World Bank Book. Oxford University press, 1988.
- **Roy Kelly:** Designing a property Tax Reform Strategy for Sub-Saharan Africa: An Analytical Framework for Applied to Kenya - Development discussing Paper No. 707 Harvard International Development, Harvard University; June 1999.
- **Samuel O. Dekolo:** Land Management and property Tax Reform in Nigeria: The Role of Geographic Information Systems: UNILAG, 2002.
- **Sylvester Gabianu and Herbert Daba, Ghana and Magdalena Anderson, Sweden:** Urban Management Land Information System in Ghana, 2006
- **Tomori M.A. "**Legal and Administrative Framework for Property Taxation in Nigeria**"** A paper delivered at a 2-day Training Workshop on "Local Government and Challenges of property Tax and Financial Resources Mobilization at State and Local Government Level" organized by Development policy Centre in Collaboration with Oyo state Ministry of Local Government & Chieftaincy Masters, Ibadan. 2002
- **Tomori M.A.**: Principles and Practice of Urban Property Taxation printed and published by Business mirror Newspapers. Ijokodo, Ibadan, October 2000.
- **Tomori M.A.** "The Challenges of Urban Property Tax administration in Nigeria" - A Paper presented at the Seminar Series of the Development Policy Centre, Aboyade House, Agodi G.R.A, Ibadan – 19th September. 2002.
- **Tomori M.A.** "Property Tax Reform in Nigeria: The Success Story of Local Governments in Oyo State, Nigeria. A paper delivered at the National Conferences on "Land Management and Taxation "Organized by the Department of Estate Management of the University of Lagos at the Conferences centre in Tuesday, July 17th, 2002
- **Williams Dillinger:_** "Urban Property Tax Reform: Guidelines and Recommendations". (Washington D.C. World Bank 1991) World Bank Urban Management Programmes Tools # 1.
- **Williams Dillinger:** Decentralization and its Implication for Urban Service Delivery, Published by The World Bank, 1994
- **World Bank AFP3;** Nigeria Status Finances study Decision Draft, June 2002.