Assessment of Urban Sprawl Occurrence in Oyo State, Nigeria

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ABSTRACT

The increasing urban sprawl in most cities in developing countries continues to attract attention of national and international agencies but the efforts had not achieved much result at checking the sprawl. This project therefore revealed the associated effects of migration and urban expansion in Moniya, Oyo Nigeria. Using Systematic Random sampling technique, data were collected with the use of a set of questionnaires. Interviews were also held to complement data from questionnaire survey. Data obtained were analyzed qualitatively and quantitatively using the Statistical Package for Social Sciences (SPSS). Descriptive statistics were employed to resolve the objectives. Some of the findings include the poor state of roads and structures, inefficiency of infrastructure and public services, loss of farmland etc. Further findings reveal the effects of urban sprawl phenomenon on the socio-economic life style of residents, health and the physical outlook of the area. However, possible solutions and methods for structural growth and sustainable environmental management of the study area in form of recommendations were proffered to guide various stakeholders and policy makers in their interventions. Among these are rehabilitation, renovation and provision of essential facilities. Others include supportive roles of governments through public enlightenment and provision of job opportunities to the residents of the area.

Keywords: *Assessment, Urban, Sprawl, Occurrence*

INTRODUCTION

Background to the Study

The modern age is an age of urbanization, where villages are fast growing into towns and towns into cities. It is therefore necessary to assess the impact and rates at which areas develop in other to advice on strategies for conservation and exploitation of resources, especially land. Many peripheral areas around the urban centers are rapidly assuming most characteristics formerly associated with urban settlement, thus the distinction between peripheral areas and urban centers have become so verge that many town planners and geographers now believe that no effort at all should be made to differentiate between the two (Okafor and Onokerhoraye 1986). Rapid urbanization exerts strong impact on the peripheral areas in the wake of continuous urbanization and modernization processes with the increased demands they make for land, housing, physical infrastructural development and transportation can affect significant changes in the peripheral areas/settlements. Factors attributing these changes are as a result of the improvement of infrastructural facilities as well as associated with socio-economic development. These play crucial roles in organization and changes in peripheral areas near the urban areas.

Generally, urbanization processes introduce radical changes in the pattern of most peripheral areas. For instance, a lot of villages located near semi-urbanized settlement. In these areas, modern buildings are intermixed with traditional ones and modern infrastructure are put in place which brings changes in the way of life of the people, changes in occupation as well as in population composition. These areas may be characterized as the rural-urban fringe. The rural-urban fringe is generally defined as the zone of interpenetration of urban and rural environment (Mannion 1991). These can also be defined as an incorporated residential of non formal and formal dwellings outside the legal city boundary.

Moniya is a centre within Akinyele Local Government Area of the State is gradually becoming a city centre with the influence of urban expansion from the core, area to the peripheral areas.This research undertaking is meant to highlight the various impact of urbanization on the peripheral zone of the study area.Consequently, urbanization in Oyo State is associated with a variety of problems, which

may include pollution, high land value, poor planning leading to poor housing conditions and scattered developments, etc. These problems in turn would lead to environmental problems such as soil erosion, flooding and general environmental degradation. This research study therefore would be focused on those problems related to the growth process ofMoniyaas an urban centre.

Urbanization is increasing in both the developed and developing countries. However, rapid urbanization particularly the growth of large cities and the associated problems of unemployment, poverty, inadequate health facilities, poor sanitation, urban slums and environmental degradation pose a formidable challenge in many developing countries. Available statistics show that more than half of the world's population live in urban areas, crowded into three percent of the earth's land area (Angotti, 1993; UNFPA, 1993). The proportion of the world's population living in urban areas, which was less than 5 percent in 1800 increased to 47 percent in 2000 and is expected to reach 66.5 percent in 2030 (UN, 1991). However, more than 90 percent of future population growth will be concentrated in cities in developing countries and large percentage of this population will be poor. In Africa and Asia where urbanization is still considerably lower (40 percent), both are expected to be 54 percent urban by 2025 (UN 1995; 2002).

Although urbanization is the driving force for modernization, economic growth and development, there is increasing concern on the effects of expanding cities principally on human health, livelihoods and the environment. The question that arises is whether the current trend in urban growth is sustainable considering the accompanying urban challenges such as unemployment, slum development, poverty and environmental degradation, especially in the developing countries.

Research Problem

Although there are diverse problems associated with urbanization in Ibadan, the study is concerned with the impacts the physical growth of Ibadan hason its peripheral areas. The city of Ibadan has been experiencing rapid population and expansion of its environment due to influx of migrants from rural areas. The population of the city is on the rise and this has always had a negative effect on the quality of services rendered in the city. The growth was accompanied by a substantial expansion of the city's boundaries

and much higher level of industrial, economic and social activities. The continuous expansion of Ibadan, the Oyo State capital, means demand for available spaces to accommodate increasing population and basic infrastructures. However, associated problems such as:

- The agricultural land in the study area has been taking over as a result of urban expansion.
- Misuse of land, urban sprawl and inadequate provision of facilities and amenities.
- The spatial expansion of Ibadan has lead to the encroachment into the peripheral land uses, and
- Distortion of ecological areas.

Justification for Study

Ibadan like many other towns in Nigeria is in a continuous state of urbanization, thus the need to examine the rate of development.The physical growth of Ibadan and increase in population has led to rapid development spreading outwardly. Population growth which is generally reflected in space, increase land use intensity, these lead to the developmental encroachment into peripheral land uses and it brought about development of peripheral settlement. As at 1982, the pattern of land use distribution shows that about 65.7% is used for residential purposes while the remaining portions are shared for industrial (2.1%), commercial (1.6%), public offices (14.4%), cultural or recreational (0.2%) and educational purposes (14.8%). Unused or vacant land was 1.1% (Ayoade, 1993).

This study therefore is of great importance and is necessary for the control of future growth of Ibadan with more emphasis on the fringe. The study makes available information on the quality of the environment, which is of great necessity and importance to the well-being of the citizens and the socio-economic activity within the town.

This study is therefore geared towards solving the problem of formless expansion of unplanned physical developments in Moniya such as the development of squatter settlements, urban squalid and slum etc. which is the aim of this research study.

Aim and Objectives

Aim of the Study

The aim of this research is to study the effects of urban sprawl in Moniya with a view to ensuring a livable environment.

Objectives of the Study

The specific objectives to achieve the stated aim are to:

- Identify urban sprawl characteristics of the study area and its causes.
- Assess the socio-economic characteristics of the resident and in the study area.
- Examine the existing condition of housing and infrastructural facilities in the study area
- Examine the effects of urban sprawl in Moniya

Research Questions

The research questions formulated to carry out this study are as stated below:

- What are the urban sprawl characteristics and its causes in the area of study?
- What are the peculiar socio-economic characteristics of the residents of Moniya?
- What are the conditions of housing and infrastructural facilities in the study area?
- What are the effects of urban sprawl in the study area?

Scope and Limitations of the Research

The scope of this study is focused on the impacts of migration and unplanned expansion on the selected area in Oyo State. It investigated the diverse impacts and highlighted the residents' attitudes to this fast growing phenomenon. The location has been carefully selected to demonstrate the complexities of the phenomenon and effectively gave a representation of the happenings in most low-income areas across the country.

Limiting factors or issues that created some form of hindrances to the outlined program of activities during the reconnaissance surveys vary in their nature and scope across different places of the study area. These are however outlined below as problems that were encountered during field survey activities.

Limitation could be related to timing, finance, level of education of the respondents, authentication of data collected etc. This point is further emphasized by the fact that human beings can be rational and irrational hence the understanding of their psychology in a view to persuade such individuals to supply comprehensive valid data had to be anticipated as was clearly encountered during the interviews which lead to poor response to the research questions. There was not enough time to reach all parts necessary to get hold of needed information. The respondents were not willing to respond but after much perforation some obliged while others decline totally. The issue of contemporary relevance and social acceptance is one issue that must be achieved and properly tackled if the objectives of proposing this project must be actualized. Thus, this has led to the need for responsive planning approach whereby the existing gap between the public perception of how the environment should be modeled and the diverse professional approaches to be intergraded. Difficulties in securing relevant materials for example the Topographical sheet/base map of the study area.

Definition of Terms

Urbanization

This is defined as the agglomeration of population in settlements classified as urban and subsequent expansion of the settlement in question. Urbanization is the increase in the proportion of a population living in urban places. While it is measured in relative terms, it refers to a complex process of social transformation. It is arguably the most significant demographic trend to emerge over the twentieth and twenty-first centuries, and it has deeply affected rural development, agriculture and overall food security (Axel W. Drescher and David L. Iaquinta 2002)

Urban area

This may be described as those areas that constitute part of a town or city.An urban area is spatial concentration of people who are working in non-agricultural activities. The essential characteristic here is that urban means non-agricultural. Urban can also be defined as a fairly complex concept. Criteria used to define urban can include population size, space, density, and economic organization. Usually, however, urban is simply defined by some base line size, like 20 000 people. Anyway this definition varies between regions and cities (Long 1998).

Urban Sprawl

Sprawl is defined as one or more existing patterns of development. It is a process of development that occurs over some period of time as an urban area expands. In some literatures, sprawl is frequently defined by one or more examples of low-density or scattered patterns of urban development (Tofowomo, 2008). Generally, sprawl is widely known as ugly development with tendency to

discontinuity and haphazard layout. So also, Sprawl is widely seen as a cause of an externality, such as high automobile dependence thus resulting to the isolation of the poor (Bruckner, 2000).Urban sprawl is the unchecked, unguided or uncontrolled spreading of urban settlements without any regard to interrelated factors such as transport, employment, health, recreation and other needs.Urban sprawl may be seen as the growth of a metropolitan area through the process of scattered development of miscellaneous types of land use in isolated locations on the urban fringe.

Urban Fringe

Urban fringe is a dynamic area which changes with span of time. This is the area outside the edge of an urban center. Sometimes, it shares boundary with some rural areas.The term urban fringe has many different manifestations in the literature in terms of its definition, characteristics and delimitation. A study of available literature reveals that the term urban fringe was introduced by Smith (1937) to describe built up area just outside thecorporate limit of the city. There is a common understanding that urban fringe in developed countries is a fashionable suburb for higher income group whereas in developing countries it is populated by poorresidents arrived recently from rural areas (Adesina,2007).

Squatter Settlements

Squatter settlement (also referred to as a shanty town or Informal settlement) has been defined in various ways. For the purposes of this study, squatter settlements are defined as residential buildings built on "planned" and "unplanned" areas which do not have formal planning approval. They are characterized mostly by the towns in Nigeria, as its rural hinterland by a system of roads, railways and air routes.

Akinyele is a local Government Area in Oyo State, igeria. It is one of the eleven local governments that make up Ibadan metropolis. Akinyele local government was created in 1976 and it shares boundaries with Afijio local government to the north, Lagule local government to the east, Ido local government area to the west and Ibadan north local government to the south. It occupies a land area of 464.892km2 with a population density of 516 persons per km2. Akinyele local government area has a population of 211,811(and) is subdivided into 12 wards, one of which is

Moniya the main focus of this study. Moniya is the headquarters of Akinyele local government area. It is located in ward 5 and shares boundaries with villages as Onilu, Asanmajana Balogun, Aponmeme Alade, amongst others. The city of Ibadan is known to be the third largest metropolitan area in Nigeria, after Lagos and Kano. This is because it is one of the fastest urbanizing cities in Nigeria. The increase in urbanization is attributed to the provision of better economic opportunities due to setting up of factories and industries. This has led to migration of population from rural regions to the city. As the city reaps the benefits of innovations in the fields of science and technology, urbanization still continues to take place. As a result of this, people spread to the rural areas along the boundaries of Ibadan. These rural areas are peripheral areas also known as fringe. This spread is not planned thus causing a lot of health and environmental disturbances to a particular community of society.Moniya in Akinyele Local Government Area is located at the periphery of Ibadan. It is therefore used as the case study.

low quality houses and the lack of, or inadequate infrastructure and social services. Theseare developments in an area by people who do not have legal right to the area. The occupants are not bonafide owners of the place but they occupy it illegally (Omole, 2000).

Urban Squalid

This is an unkept and untidy environment. It is an area in which all the elements of pollution such as air, water,visual and other physical hazards are present. (Omole, 2000).

Urban Slum

Slums areheavily populated areas in cities where the poor are concentrated in substandard conditions such as poor access roads, poor housing conditions, formless physical developments, high unbearable environmental pollution, etc. It can also be said to be a poor, dirty, crowned area in an urban area(Omole, 2000).A slum, as defined by the United Nations agency (UN-HABITAT2004), is a run-down area of a city characterized by substandard housing and squalor and lacking in tenure security. Although their characteristics vary between geographic regions, slums are usually inhabited by the very poor or socially disadvantaged. Other terms that are often used interchangeably with "slum" include shanty town, skidrow, barrio, and ghetto

Development

This is the process of increasing the level of per-capital income in the urban sector and also increasing the standard of living has it impact on the environment. Development is a process of structural societal change. Thomas (2000, 2004) refers to this meaning of development as 'a process of historical change'.

Environmental Degradation

The United Nations International Strategy for Disaster Reduction defines environmental degradation as the reduction for the capacity of the environment to meet social and ecological objectives, and needs (ISDR, 2010)

The Study Area

Location

The present site of Ibadan was established by Lagelu after the destruction of the first settlement near Awotan in the neighbourhood of Apete in Ido Local Government area. The presence of hills makes the site of the city easily defensible while its location close to the boundary between forest and grassland makes it a melting point for people and products of the forests as well as those of the grassland areas. However, Ibadan was resettled in about 1820 as a camp by the soldiers of the Ife, Ijebu and Oyo after they had successfully destroyed the neighbouring kingdom of Owu.

The city of Ibadan is located approximately on longitude 3051 East of the Greenwich Meridian and latitude 70231 North of the Equator at a distance some 128kilometers North East of Lagos and 530 km southwest of Abuja, the federal capital, and is a prominent transit point between the coastal region and the areas to the north. Ibadan is directly connected to many
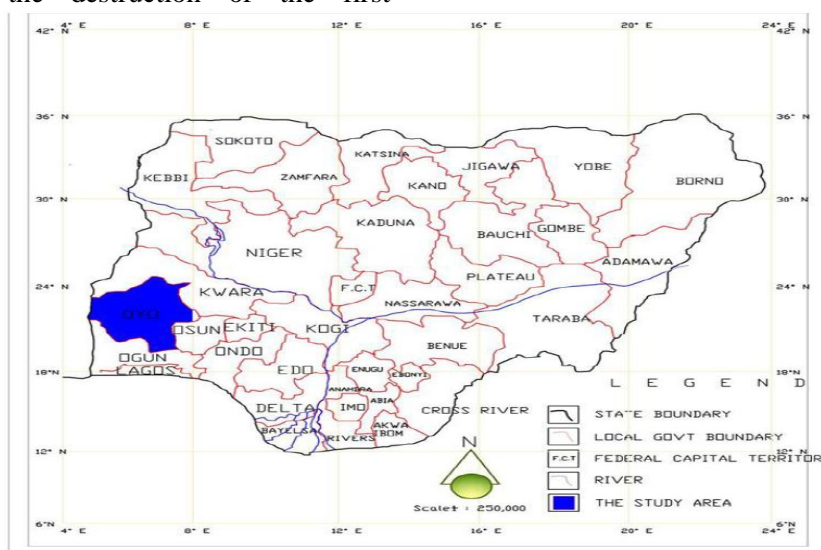

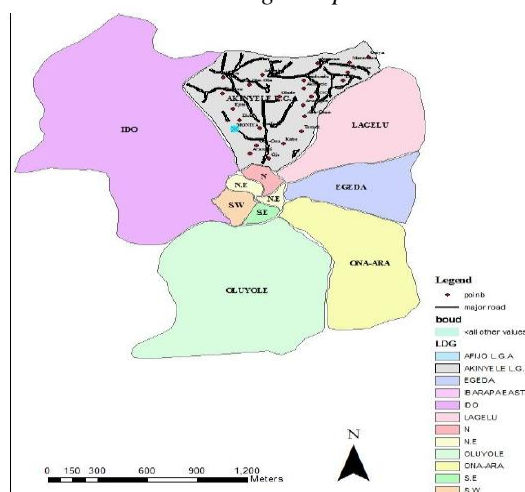**Figure 1.1.** *Map of Nigeria Showing Oyo State.*
Source: Google maps 2017

Figure 1.2. *Map of Local Government Areas of Ibadan metropolis showing the Study Area*

Source: *Department of Mapping, Geo-informatics and Boundary: Office of the Surveyor General (2018). Digitized by Author*
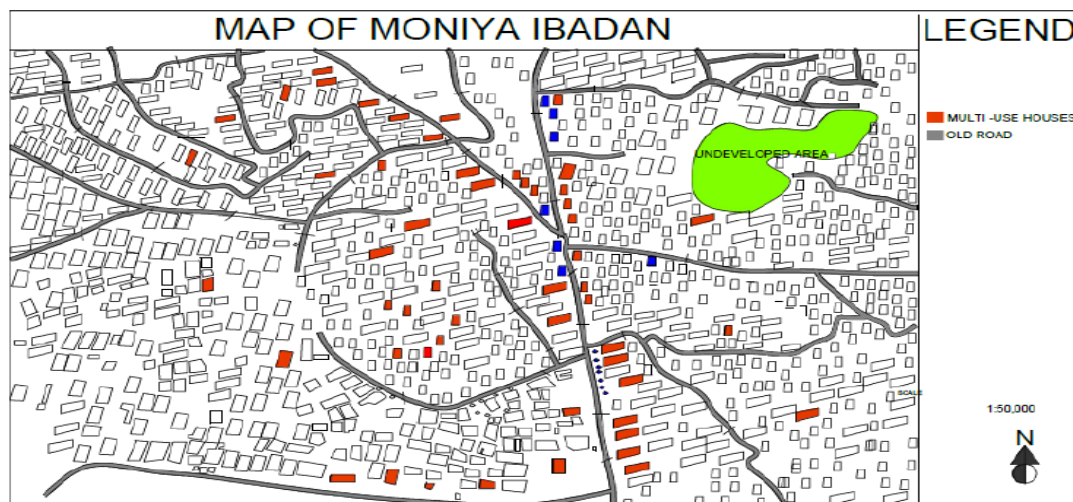

Figure 1.3. *Map showing Moniya in Akinyele Local Government Area of Oyo State*
Source: Department of Mapping, Akinyele Local Government Planning Authority.(2018). Digitized by Author.

Climate and Rainfall

Ibadan has a tropical wet and dry climate, with a lengthy wet season and relatively constant temperatures throughout the course of the year. Ibadan's wet season runs from March through October, though August sees somewhat of a lull in precipitation. This lull nearly divides the wet season into two different wet seasons. November to February forms the city's dry season, during which Ibadan experiences the typical West Africanharmattan. The mean total rainfall for Ibadan is 1420.06 mm, falling in approximately 109 days. There are two peaks for rainfall, June and September. The mean maximum temperature is 26.46^{o} C, minimum 21.42^{o} C and the relative humidity is 74.55%.

Population

Ibadan is the capital city of Oyo State and the third largest metropolitan area in Nigeria, after Lagos and Kano. It has a population of 1,338,659 according to the 2006 census which placed it as the largest metropolitan geographical area. At Nigerian independence, Ibadan was the largest and most populous city in the country and the third in Africa after Cairo and Johannesburg.

Until 1970, Ibadan was the largest city in sub-Saharan Africa (FRN Official Gazette, 2007). In 1952, it was estimated that the total area of the city was approximately 103.8 km^2(Areola, 1994). However, only 36.2 km^2 was built up. This meant that the remaining 67 km^2 were devoted to non-urban uses, such as farmlands, river floodplains, forest reserves and water bodies. The land area increased from 136 km^2 in 1981 to 210 and 240 km^2 in 1988 and 1989 respectively (Areola, 1994). By the year 2000, it is estimated that Ibadan covered 400 km^2. The growth of the built-up area during the second half of the 20th century (from 40 km^2 in the 1950s to 250 km^2 in the 1990s) shows clearly that there has been an underestimation of the total growth of the city. In the 1980s, the Ibadan-Lagos expressway generated the greatest urban sprawl (east and north of the city), followed by the Eleiyele expressway (west of the city). Since then, Ibadan city has spread further into the neighbouring local government areas of Akinyele and Egbeda in particular. The 2006 census put the total population of Ibadan to 2,550,593 while the average population density was 828 persons per km2 (NPC, 2006). The total population size of the wider Ibadan region was 1,258,625 in 1963 and 1,991,367 in 1991 (Afolayan, 1994). The population size of Ibadan urban was 627,379 in 1963 while that of Ibadan rural was 631,246. However, the development in the core area of the city has encroached and took over most of these villages that surround the area.

Economic Base

The administrative and commercial importance of Ibadan has resulted in land being a key investment, an asset and a status symbol for the population. According to Ayeni (1994) residential land use is the most predominant among all land uses in the built up part of Ibadan. The arrival of the railway bringing European goods and personnel for trade and administration marked the beginning of large-

scale immigration. The railway system began in 1896 in Lagos and reached Kano in 1911 while the first motor able road in Nigeria was constructed from Ibadan to Oyo in 1906. The growth of Ibadan became more rapid from 1946 when it was made the headquarters of the then Western Region of Nigeria. It then began to attract more Europeans as administrators and businessmen, Yorubas mostly as civil servants but also as traders, and other ethnic groups who came into various un-skilled occupations.

Land Use

The most versatile land use in Moniyais purely residential use for Urban Ibadan which shows that it is purely an urban area as such not much agricultural land. However, few piece of land were found scattered around the study area. Some are attached to residential land use. Crops are cultivated by owner of such land which makes farming a secondary means of living for the people. There are some educational institutions in the study area which are private and publicly owned which also includes Islamic schools.

Light industries are found in the study area such as small block molding industries, local food processing industries(e.g. plantain flour). Commercial activities take places along the major route of the study area i.e. Oyo road. Some locks up shops were also found there, such as. There is presences of Motor Park just along the major route, also found is a market where farm product are sold.

LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

Introduction

One of the remarkable development in the world especially since 1920s is the rapid urbanization, by 1950s virtually all part of the world become involve in the process of urbanization, in this period about 724 million people were living in urban areas in different part of the world, all this development processes were involved in the impaction of urban centers to the peripheral areas.

Many peripheral areas of the core city are rapidly assuming most of urban characteristics formally associated with urban areas, thus the distinction between peripheral areas of the city centre has become so vague. However, the peripheral areas of the core city are enjoying the effect of urban growth from the core to the periphery.

Literature Review

The concept of 'sprawl' was developed by Earle Draper in 1937 in the United States of America (Osborn, 1965), ad this term has been used by city planners to refer to a wasteful type of urban growth (Black, 1965). Urban sprawl is a pattern of uncontrolled development around the periphery of a city, and is an increasingly common feature of the built environment.

Nigeria, like most developing countries is experiencing unprecedented rates of urban growth. In the 1952 census, there were about 56 cities in Nigeria with population of about 200,000. Their combined population of 3.24 million was about 10.2% of the total population of 30.4million. This rose dramatically to some 19.1% of the nation's populations of 55.7 million in 1963. And it is being estimated that by the year 2020 more than 68% of Nigerians will be living under urban condition. Population increase accounts in part for the rapid expansion of cities for example the physical extent of Ibadan Oyo State capital was 103.8 km^2 in 1952, then it increased to 136 km^2 in 1981 to 210-240 km^2 in 1988-89 (Areola, 1994) and by 2000, it had more than doubled to it is estimated that Ibadan covered 400 km2 (Onibokun, 1995). This gives an account of areal expansion (growth) of Ibadan. The physical growth of Ibadan is an example of urban expansion in Nigeria which leads to demand for peripheral land space for development. According to Gillham (2002) there are four main characteristics of sprawl, which mirror the earlier definition given by Nelson et. al. (1995). These characteristics are leapfrog or scattered development, commercial strip development, low density, and large expanses of single-use development. Leapfrog and scattered development go beyond the urban fringe to create built-up communities that are isolated from the city by areas of undeveloped land. In many ways these can be seen as the most extreme examples of urban sprawl, with a highly inefficient use of the land, and a greater need to build highways and other infrastructure to service the outlying areas.

Leapfrog development can be distinguished from 'satellite towns', a similar type of development beyond the urban fringe, by the former's much lower density and once again the almost exclusive reliance on the automobile as the method of transport for those living in such areas. 'The result is a haphazard patchwork, widely spread apart and seeming to consume far

more land than contiguous developments' (Gillham and Maclean, 2002), and even though the open tracts of land are usually filled in eventually, leapfrog development remains an inefficient use of land.

According to Clarke (1975) in his book titled Advance Geography of Africa, there are three (3) component of urban growth; (a)The extension of built-up areas to incorporate surrounding peripheral area (b)Natural increase in population (c)Net in-migration, lead to the extension of the urban area by centrifugal expansion and swallowing up of peripheral areas. Natural increase in population is a much overlooked factor in urban growth and expansion which makes demand for available peripheral space for development outside the city centre. Moniya settlement in Akinyele Local Government Area is gradually experiencing centrifugal expansion from the core of the city centre to the peripheral settlings. The urbanization process and the growth process of Ibadan, the core urban center towards Moniya provides a useful outline of urbanization as a process. It is clear that urbanization involves much more than the mere increase in the number of people living and working in towns and cities, it is driven by a series of interrelated processes of change-economic, demographic, political, cultural, environmental, social, and technological. It is also modified by local factors such as topography and natural resources it also causes changes in pattern of land use, in social ecology (the social and demographical composition of neighborhood) in the built environment and the nature of urbanism (the form of social interaction and ways of life that develop in the area).

Urbanization and Sprawl

Urbanization, simple defined, is the shift from a rural to an urban society, and involves an increase in the number of people in urban areas during a particular year. Urbanization is the outcome of social, economic and political developments that lead to urban concentration and growth of large cities, changes in land use and transformation rural to metropolitan pattern of organization and governance. An urban area is spatial concentration of people who are working in non-agricultural activities. The essential characteristic here is that urban means non-agricultural. Urban can also be defined as a fairly complex concept. Criteria used to define urban can include population size, space, density, and economic organization. Usually, however, urban is simply defined by some base line size, like 20 000 people. Anyway this definition varies between regions and cities (ODLCD 1998).

Great Britain and some European countries were the first countries, which became urbanized. They urbanized relatively slowly, which allowed governments time to plan and provide facilities for the needs of increasing urban populations. So, a city itself is not a new phenomenon. Only the present explosive and rapid growth is a new unique feature. In the year 1800, over 97 percent of the world's population was rural. Hundred years after this, still only 5.5 percent of the world population lived in cities, but already 2000 slightly over half of the world's population lived in cities (Long 1998). In the 19th and early 20th centuries, urban growth was occurring mainly in the developed nations. The reason for this was the spread of industrialization and the associated rapid increase in the use of fossil fuels.

These days the urbanization is much faster than those days and it is most rapid in the Third World countries. Today the largest and fastest growing cities are in developing countries, because of the new urban-industrial development (Envio Facts 2001, Girardet 1996). More and more towns and cities are blooming with a change in land use along the high ways and in the immediate vicinity of the city. This dispersed development outside of compact urban and village centers along highways and in rural country side is defined as urban sprawl (Theobald, 2001). Urbanization is a form of metropolitan growth that is a response to often bewildering sets of economic, social and political forces and to the physical geography of an area. Some of the causes of sprawl include; population growth, economy, pattern of infrastructure initiatives like the construction of roads and the provision of infrastructure using public money encouraging development. The direct implication of such urban sprawl is the change in the land use and land cover of the region.Sprawl generally infers to some type of development with impacts such as loss of agricultural land, open space, and ecologically sensitive habitats. Also, sprawl is equated to growth of town or city (radial spread). In simpler words, as population increases in an area or city, the boundary of the city expands to accommodate the growth; this expansion is considered as sprawl. Usually, sprawls take

place on the urban fringe, at the edge of an urban area or along the highways.

Major Causes of Urbanization in Africa

Natural population increase (high births than death) and migration are significant factors which lead to growth of cities in developing countries, the natural increase is fuelled by improved medical care, better sanitation and improved food supplies, which reduce death rates and cause populations to grow. In many developing countries, rural poverty drives people from the rural area into the city in search of employment, food, shelter and education. In Africa, most people move into the urban areas because they are "pulled" into the urban areas by the advantages and opportunities of the city including education, electricity, water etc. even though in many African countries the urban areas offer few jobs for the youth, they are often attracted there by the amenities of urban life (Tarver, 1996). They are "pushed" out by factors such as poverty, environmental degradation, religious strife, political persecution, food insecurity and lack of basic infrastructure and services in the rural areas.

The urbanization processes are largely driven by market forces and government policies that lead to simultaneous processes of change in livelihoods, land use, health and natural resource management including water, soil and forests and often reactive changes in local governance. Government development policies and budget allocations, which often favour urban residents over rural areas, tend to pull people into the urban areas. In the cities, public investment, which often misses the urban poor, with expenditures biased towards the higher income classes and poverty among vulnerable groups such as new migrates force them into slums and squatter settlements.

Need for Studying Urban Sprawl

In industrialized countries the future growth of urban population will be comparatively modest since their population growth rates are low and over 80% of their population already live in urban areas. Conversely, developing countries are in the middle of the transition process, when growth rates are highest. The exceptional growth of many urban agglomerations in many developing countries is the result of a threefold structural change process: the transition away from agricultural employment, high overall population growth and increasing urbanization rates (Grulber, 1994). The biggest challenge for science, engineering and technology in the 21st century is how to ensure adequate housing, sanitation and health, and transportation service in a habitable urban environment in developing countries. Sprawl is seen as one of the potential threats for such development.

Normally, when rural pockets are connected to a city by road, in the initial stages, development in the form of service centers such as shops, cafeteria, etc. is seen on the roadside, which eventually becomes hub economic activities leading to sprawl.

Eventually a significant amount of upsurge could be observed along these roads. This type of upsurge caused by a road network between urban/ semi- urban/rural centers is very much prevalent and persistent in most places in Nigeria. These regions are devoid of any infrastructure, since planners are unable to visualize this type of growth patterns. This growth is normally left out in all government surveys (even in national population census), as this cannot be grouped under either urban or rural center.

The investigation of patterns of this type of growth is very crucial from regional planning point of view to provide basic amenities in these regions. Prior visualization of trends of growth enables the planning machineries to plan for appropriate basic infrastructure facilities (water, electricity, sanitation etc.). The study of this kind reveals the type, nature and extent of sprawl taking place in a region and the drivers responsible for the growth. This would help developers and town planners to project growth patterns and facilitate various infrastructure facilities.

Major Causes of Urban Sprawl

The process of urbanization is fairly is fairly contributed by population growth, migration and infrastructure initiatives resulting in the growth of villages in to towns, towns in to cities and cities in to metropolis. However, in such a phenomenon for ecologically feasible development, planning requires an understanding of the growth dynamics. Nevertheless, in most cases there a lot of inadequacies to ascertain the nature of uncontrolled progression of urban sprawls. Sprawl is considered to be an unplanned outgrowth of urban centers along the periphery of cities, along highways, along road connecting a city, etc.

Due to lack of planning these outgrowths are devoid of basic amenities like water, electricity,

sanitation, etc. Provision of infrastructure facilities like new roads and highways, fuel such sprawls that ultimately result inefficient and drastic change in land use affecting the ecosystem.

Some of the Major Changes Due to the Process of Urbanization

Economic Change

At the heart of the dynamics that has driven and shaped urbanization and economic changes. The sequence and rhythm of economic change will be a recurring theme as we trace and retrace the imprint of urbanization. The urbanization processes that produce the urban out comes operate at different spatial scales. The rapidly increasing interdependence of the world system means that economic and social well being of cities.

Demographic Change

One of the most important subset of interdependence suggested that between demographic change and urbanization, cities are in a fundamental way the product of their people put another way the size, composition and rate of change of the urban populations significantly shape the character of urbanization. Yet the condition of urban areas; themselves can in turn influence those characteristics. Crowded and degraded slums for example, can lead to urban sprawl, environmental deterioration, and poor housing quality.

Political Change

The broad ideological swings and shifts that occur from time to time are an important aspect of the influence of political change on urbanization. One well-known example is the reform movement that emerged in the United States in the 1870s and 1880s in response to a variety of social problems. Urban expansion directly affects political changes in some ways; one example is the way that coalitions of urban voters shaped the basis of modern party politics at the state or national level.

Cultural Chang

We can find parallel example of the interdependence of urbanization and cultural change. The broad culture shift towards "post modernity" that began in the 1970s and 1980s for example brought among other things a renewed interest in the past that has found expression in urban form through historic preservation and the recycling of architectural styles.Meanwhile, urbanization has contributed to cultural dynamics through the youth, subcultures that have flourished in certain urban settings.

Environmental Change

The complexity of the interaction between urban expansion and environmental changes creates problems through global proportions. The area of the earth's surface needed to absorbs the waste products of a large urban area likely to exceed that city's boundaries.

Social Change

There we can site the changes that have occurred over the past 10 years in terms of people's behavior towards racial minorities – change that have carried over the affected educational achievement, occupational composition and ultimately, urban residential patterns, urbanization can also induce social change, the physical and socio-economic attributes of urban settings.

Impact of Urban Centre to the Peripheral Areas

Good Health Facilities

The study area as an urban centre has tremendously been impacted from the process of urbanization and urban growths towards the study area, example primary health centre and hospital, maternal maternity hospital in the study area.

Portable Water Supply

The provision of pipe born water and borehole for providing water to the inhabitants in the area.

Electricity Supply

With the help of democratically inception peripheral areas have been impacted in the use of electricity and this present administration bring into the study area, a street light for the purpose of street lighting at night.

Housing Expansion

Housing development is one of the most physical characteristics in the process of development, many houses has been built, some under-construction which lead to the expansion of the settlement in question in question.

Increase in Population

With the process of urbanization people tends to live in peripheral area and work at the city

centre and it impact on the increase in population.

Current Urban Challenges

In Africa, the dramatic effects of rapid urbanization are very clear in the cities and peri-urban areas. As the cities expand, the main zone of direct impact is the peri-urban area, and those living in the peri-urban areas face many new changes and opportunities in meeting their needs and accommodating the by-products of the urban populations. Although, cities serve as "engines" of growth in most developing countries by providing opportunities for employment, education, knowledge and technology transfer and ready markets for industrial and agricultural products, high urban populations place enormous stress on natural resources and imposes "ecological footprints" on the peri-urban areas (Rees and Wackernagel, 1994). For example, urbanization leads to the outward expansion of cities and results in changes in land use whereby urban residents buy up prime agricultural land for residential or commercial purposes. The conversion of farm lands and watersheds for residential purpose have negative consequences on food security; water supply as well as the health of the people, both in the cities and in the peri-urban area.

Understanding Slums

The term 'slum' is used in this report and in the Millenium Development Goals (MDGs) in a general context to describe a wide range of low-income settlements and/or poor human living conditions. These inadequate housing conditions exemplify the variety of manifestations of poverty as defined in the Programme of Action adopted at the World Summit for Social Development (Global report on human settlement 2003). 'Slum', at its simplest, is 'a heavily populated urban area characterized by substandard housing and squalor'. This definition encapsulates the essential characteristics of slums: high densities and low standards of housing (structure and services), and 'squalor'. The first two criteria are physical and spatial, while the third is social and behavioural. This spread of associations is typical, not just for the definition of slums but also of our perceptions of them. Dwellings in such settlements vary from simple shacks to more permanent structures, and access to basic services and infrastructure tends to be limited or badly deteriorated.

The definition of the term 'slum' includes the traditional meaning – that is, housing areas that were once respectable or even desirable, but which have since deteriorated as the original dwellers have moved to new and better areas of the cities.

The condition of the old houses has then declined, and the units have been progressively subdivided and rented out to lower-income groups. Typical examples are cities in both the developed and the developing countries.

Slums have, however, also come to include the vast informal settlements that are quickly becoming the most visible expression of urban poverty in developing world cities, including squatter settlements and illegal subdivisions. The quality of dwellings in such settlements varies from the simplest shack to permanent structures, while access to water, electricity, sanitation and other basic services and infrastructure is usually limited. Such settlements are referred to by a wide range of names and include a variety of tenure arrangements (Global report of human settlement 2003).

Types of Slum

Global report of human settlement (2003) also divided slum into two broad classes:

- *Slums of hope:* 'progressing' settlements, which are characterized by new, normally self-built structures, usually illegal (e.g. squatters) that are in, or have recently been through, a process of development, consolidation and improvement; and

- *Slums of despair:* 'declining' neighborhoods, in which environmental conditions and domestic services are undergoing a process of degeneration.

Characteristics of Slum

A review of the definitions used by national and local governments, statistical offices, institutions involved in urban sprawl issues and public perceptions reveals the following attributes of urban sprawl.

Lack of Basic Services

Lack of basic services is one of the most frequently mentioned characteristics of slum definitions worldwide. Lack of access to sanitation facilities and safe water sources is the most important feature, sometimes supplemented by absence of waste collection

systems, electricity supply, surfaced roads and footpaths, street lighting and rainwater drainage.

Substandard Housing or Illegal and Inadequate Building Structures

Many cities have building standards that set minimum requirements for residential buildings. Slum areas are associated with a high number of substandard housing structures, often built with non-permanent materials unsuitable for housing given local conditions of climate and location. Factors contributing to a structure being considered substandard are, for example, earthen floors, mud-and-wattle walls or straw roofs. Various space and dwelling placement bylaws may also be extensively violated.

Overcrowding and High Density

Overcrowding is associated with a low space per person, high occupancy rates, cohabitation by different families and a high number of single-room units. Many slum dwelling units are overcrowded, with five and more persons sharing a one-room unit used for cooking, sleeping and living.

Unhealthy Living Conditions and Hazardous Locations

Unhealthy living conditions are the result of a lack of basic services, with visible, open sewers, lack of pathways, uncontrolled dumping of waste, polluted environments, etc.

Houses may be built on hazardous locations or land unsuitable for settlement, such as floodplains, in proximity to industrial plants with toxic emissions or waste disposal sites, and on areas subject to landslip. The layout of the settlement may be hazardous because of a lack of access ways and high densities of dilapidated structures.

Insecure Tenure; Irregular or Informal Settlements

A number of definitions consider lack of security of tenure as a central characteristic of slums, and regard lack of any formal document entitling the occupant to occupy the land or structure as *prima facie* evidence of illegality and slum occupation. Informal or unplanned settlements are often regarded as synonymous with slums. Many definitions emphasize both informality of occupation and the noncompliance of settlements with land-use plans. The main factors contributing to non-compliance are settlements built on land reserved for non-residential purposes, or which are invasions of non-urban land.

Poverty and Social Exclusion

Income or capability poverty is considered, with some exceptions, as a central characteristic of slum areas. It is not seen as an inherent characteristic of slums, but as a cause (and, to a large extent, a consequence) of slum conditions.

Slum conditions are physical and statutory manifestations that create barriers to human and social development.

Furthermore, slums are areas of social exclusion that are often perceived to have high levels of crime and other measures of social dislocation. In some definitions, such areas are associated with certain vulnerable groups of population, such as recent immigrants, internally displaced persons or ethnic minorities.

Conceptual/Theoretical Framework of the Study

One of the foremost problems associated with industrialization and civilization is the urbanization and the consequent ills and fallouts. This is because industrialization and civilization are pull factor for the rural-urban migrants as well as cross-national migrants. In recent times most Nigerian cities especially Ibadan, Lagos and Kano have experienced tremendous planned and unplanned growth due to population explosion, which led to congestion, environmental degradation and urban socio-spatial upheavals. Planners and other urban gatekeepers manage urban space and residents for the purpose of efficient functioning and performance of urban systems. They however require the understanding of changed process in urban land use and the interactions with the changed agents in order to discharge their functions in urban space (Meyer, 1995). In essence, managing and planning for towns require the understanding of the forces and processes operating in them and the factors that naturally sort people of different socio-economic status out in space. Information on the existing land use/land cover pattern, its spatial distribution and changed process is a pre-requisite for planning, utilization and formulation of policies and programme for making any micro and macro-level development. The account that follows is based on the primacy theory and concept. As nations undergo socioeconomic and political development and modernization, for example the theory indicates that urban primacy; socio-spatial and individual inequalities increase initially then decrease over time as socio-economic and political

development and physical development progress within a nation or region.

Very central to urban land use changes is the development of sprawl which is seen today as a global phenomenon. According to Besussi et al. (2010), Sprawl is loosely associated with the tradeoff between the desire to live as close to the city as possible against the desire to purchase as much space as possible and still retain the benefits of "urban" or "suburban" living. Sprawl thus comes about through rising wealth and transportation technologies that allow such suburban development and urban morphologies to reflect this tradeoff. The dynamics of the processes defining such spatial interaction and land development are thus central to an understanding of urban form and structure.

The theories of urban land use have been subjects of a number of criticism, amplification and modification since the 1920s. It is a crude attempt to compartmentalize urban systems into structure that we can easily understand and explain. Though the proponents and many authors that had worked on these theories recognized the fact that every city has unique experience and history and thus it is difficult to box into a unified theory or concept the changed process and pattern of any urban area. It is however undeniable that theorizing and modeling urban land use greatly help in simplifying complex urban systems for easy understanding, interpretation, comprehension and therefore management. The theoretical framework of this study is based on the fact that cities expand or grow for many/various reasons.

Concentric Zone Model

Burgess developed the concentric zone theory in 1925, which states that cities tend to expand radially from the centre to form a series of concentric zones. The expansion comes about as a result of centripetal forces from an original core and as the growth occurs, each inner zone tends to extend its area by invading the next outer zone following a sequence know as invasion - succession.

The rate of this process depends on the rate of the city's economic growth and on population expansion. In his study of American cities, Burgess postulates that urban land use development and pattern are represented in 5 concentric zones and a sixth lying beyond the immediate confine of the urban area (Onokerhoraye and Omuta, 1986).

- The central business district (CBD), which is the focus of commercial social, civil life and of transportation.
- The fringe of the CBD which is an area of wholesale, truck and rail road depot.
- The zone of transition characterized by property in poor condition and run-down area being invaded by business and light manufacturing.
- A worker' housing and factory zone with residence and plants in close proximity
- A high class residential zone.
- A commuter zone of residential suburbs and satellites commercial and shopping areas within accessible time distance.

Though, this theory was based on certain assumptions such as; cultural and social homogeneity, economy based on commerce and industry, private ownership of property and economic competition for space, easy rapid and cheap transportation in every direction the city centre is the main centre for employment. It provides a simplistic view and serves pedagogical purposes with regards to dynamics or urban growth. A major feature of this model is the fact that as cities grow and develop over time, the Central Business District (CBD) would exert pressure on the zone immediately surrounding it (the zone of transition). Outward expansion of the CBD would invade nearby residential neighborhoods causing them to expand outwards. This applies to the city of Ibadan in Oyo state. As the CBD which is Ibadan (zone 1) grows, outward expansion occurs thereby exerting pressure on the immediate surrounding zone. This pattern of growth is showed in the figure below.
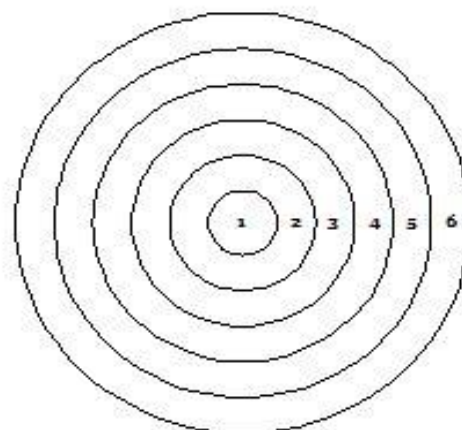
Theoretical Frame Work

Figure 2.1: *Showing Concentric model diagram*
Source: *Basorun, 2003*

1. *Zone1: Central Business District (CBD)*
2. *Zone2: Fringe of the CBD which is the wholesale area*
3. *Zone3: Transition zone*
4. *Zone4: Low class residential area after which the middle class residential area is located*
5. *Zone5: High class residential area*
6. *Zone6: Transition zone*

Sector Model

Soon after Burgess generalized about the concentric zone form of the city, Hoyt re-cast the concentric ring model.

While recognizing the value of the concentric ring model, Hoyt also observed some consistent patterns in many cities.

He observed, for example, that it was common for low-income households to be found in close proximity to railroad lines, and commercial establishments to be found along business thoroughfares. In 1939, Hoyt modified the concentric zone model to account for major transportation routes.

Recall that most major cities evolved around the nexus/ routes of several important transport facilities such as railroads, seaports, and trolley lines that emanated from the city's center.

Recognizing that these routes (and later metropolitan expressways and interstate highways) represented lines of greater access, Hoyt theorized that cities would tend to grow in wedge-shaped patterns, or sectors, emanating from the CBD and centered on major transportation routes.

Higher levels of access translate to higher land values.

Thus, many commercial functions would remain in the CBD, but manufacturing activity would develop in a wedge surrounding transport routes.

Residential land use patterns also would grow in wedge-shaped patterns with a sector of lower-income households bordering the manufacturing/ warehousing sector (traffic, noise and pollution making these less desirable locations to live) and sectors of middle- and higher-income households located away from industrial sites.

In many respects, Hoyt's sector model is simply a concentric zone model modified to account for the impact of transportation systems on accessibility.

This model of land use is also seen in the growth of the study area. This is illustrated in the figure below.

The city grows in sectors emanating from the CBD along transportation routes.

Multiple Nuclei Theory

This theory departs the mono-centre approach of the concentric and the sector model and contended that cities develop around several distinct nuclei rather than one centre of origin.

These other centres may be district centre established in an earlier urbanization phase and which persist as centres as city growth fills in the space between them (Harris and Ullman1945).

For well over a century, demographers, sociologists, and geographers have been trying to understand the spatial structure of human communities influenced by changing transportation and communication technology and growing or declining population, particularly the nature of the center or centers of large metropolitan communities, focusing attention on the **nucleus** or possible multiple nucleiof these areas.

A metropolitan area encompasses those persons and activities intensely "interrelated and integrated with reference to daily requirements" by virtue of their diversity or differences (Hawley, 1950).

A metropolitan area performs significant coordinating functions through specialization, usually requiring sufficient population and infrastructure size (Hawley, 1986). According to Hawley (1950), although there may be many\sub centers within a metropolitan area;

If the network of interdependences in which the several centers of a communal complex are enmeshed, the largest or major center forms the core [or nucleus].

Concentrated there are communication agencies, financial and legal services, and the administrative offices of political, recreational, religious, and other services as well as of industry and commerce.

The major or primary nucleus as well as all other nuclei of the metropolitan area is integral aspects of the metropolitan concept.

With the population and a real growth of metropolitan areas over time, many secondary

nuclei have developed, perhaps overtaking the

original dominant nucleus.
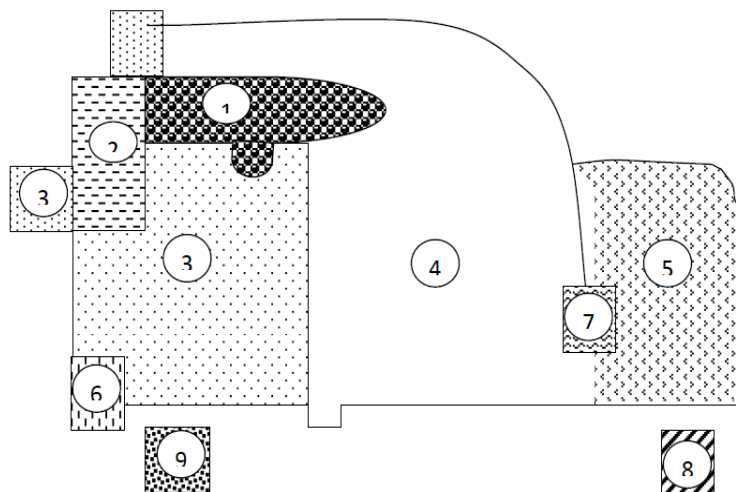
The Theoretical Framework Work

Fig 2.2: *Multi-nuclei Model Diagram*

Source: *Basorun, 2003*

1. *Central business district (CBD)*
2. *Whole sale and light manufacturing*
3. *Low-class residential*
4. *Medium-class residential*
5. *High-class residential*
6. *Heavy manufacturing*
7. *Out laying business district*
8. *Residential suburb*
9. *Industrial suburb*

The adoption of this theory is seen in the study area whereby the major primary nuclei is located in the city of Ibadan (i.e. the zone1 which is the CBD) then over time, emergence of many secondary nuclei would occur which then leads to land use expansion filling in the area.

RESEARCH METHODOLOGY

Introduction

Research methodology is the method used in the collection of data for analysis. This chapter explains how this research was conducted.

In other to attain the objectives of this study, data were collected through two major sources; the primary and secondary sources of data collection after which they were subjected to statistical analysis and finally presented using tables, charts, etc.

Sources of Data

The two major sources of information and data adopted were primary and secondary. The primary sources include personal interviews, questionnaires administration, field photograph and observation.

The secondary source includes data and information collected from Oyo state ministry of physical planning, Akinyele local government secretariat and journals and textbooks. The interviews conducted involve the staff of the state ministry of physical planning and inhabitants of the study area. The purpose of these was to obtain data on socio-economic characteristics, condition of housing, infrastructure and the environment as a whole that would provide basis for the study output.

Primary Sources

These are data obtained by direct contact with the person or place either as aninterview or as a physical survey.

Oral Interview

This is a method where by questions were asked from the inhabitants of the study area to obtain their views on the impacts of urban sprawl in the study area and the possible solutions.These questions are usually unstructured questions in the sense that the answers will not be limited tojust a particular answer like that of the questionnaire

Questionnaire

This is a method whereby well structured questions were administered also to the inhabitants of the study area. Unlike the oral interview, this is a formal method of data collection.

Physical Survey

A physical survey of the area was done by the use of Google earth satellite imagery to capture a photograph of the site and then visiting the site

and collecting data. Different Photographs were taken for visual identification. The data obtained on site include the physical condition of the facilities such as the buildings, drainage, road network etc.

Secondary Sources

These include the textbooks, publication, journals, magazines, internetre sources, and maps etc. which were used in the work.

Research Population and Sampling Frame

The population of the study area is 51716. This was gotten using average number of persons household size in Nigeria which is 7 (Olajuyigbe, 2010; Fasakin, 2000), average number of households per building and multiplying it by the number of buildings gotten which is 1847.

That is p = ʒ × w (h)

P = 7 × 4 (1847)

P = 51716

Where;

p = population

ʒ = average number of person per household

w= average number of households in a building/ dwelling

h= number of building

i = number of household

Number of households was gotten thus; i = ʒ × h

7 × 1847

i = 12929

Therefore, there are 12929 households in the study area.

The sample frame = 1847 which is the number of houses on site.

Sample Size

In order to determine the sample size for questionnaire administration, 10% of the sample frame was taken.

That is 1847 × (10 ÷ 100) = 184.7 which is approximately 185.

A total of 185 questionnaires were administered.

Sampling Technique

Data collection activities followed directly from the objective of the study. Systematic Random Sampling Technique was used to get data for analysis. The idea of this type of sampling is to obtain wholesome information as it is inferred to

be useful representative of the entire picture of information.

Data Collection Instrument

This involves the various types of research methods that were adopted during the course of the project. These include the use of structured questionnaire, personal observation, field photography and personal interview. Other research instruments used include textbooks, journals and monographs.

Procedure for Data Collection

Questionnaire Preparation

Questionnaire was prepared based on issues that have to do with facilities and services such as water supply, electricity, drainage, method of waste management, condition of housing and the environment as a whole.

Administration of Questions

For the questionnaire survey, systematic random sampling technique was used. To achieve a good representation of the population under study, various streets were selected at random and on each selected street every 3rd building was selected in a serpentine order starting from the entrance of each street in the study area and a total of 185 questionnaires were administered.

The method used for the questionnaire administration is both the personal interview; which is the means of administrating the questionnaire by mere giving it to the correspondence and self-interview; which is a means if administering questionnaire where by the person administering reads it to the hearing of the correspondence to reply. Interviews were also held to complement data from the questionnaire survey.

Data Analysis Procedure

All information and data collected from the field through the questionnaires were organized and analyzed through the application of computer – aided statistical packages.

Two main statistical packages was used namely; Statistical package for social science SPSS (Statistical Packages for Social Sciences) and Microsoft Excel.

Finally, the results of the analysis were interpreted using descriptive statistics and represented either ideographically in form of tables, pie chart, bar chart

DISCUSSION OF FINDINGS

Introduction

This chapter discusses the analysis and findings from data collected. These results and findings are presented in four parts according to the research questions;

- What are the urban sprawl characteristics and its causes in the area of study?

- What are the peculiar socio-economic characteristics of the residents of Moniya?

- What are the conditions of housing and infrastructural facilities in the study area?

- What are the effects of urban sprawl in the study area?

Inferences were drawn to give an in-depth understanding of this study and at the end of the research work a logical conclusion arrived.

Characteristics and Causes of Sprawl in the Study Area

From the survey carried out, it is noted that Moniya is attributed to the characteristics of a slum area. These characteristics are noted and listed below;

Inadequate Basic Services

Records show that the study area lack basic services which is important in the sustaining an environment. These services include access to sanitation facilities (Figure 4.14, Plate 7), safe source of water supply (Figure 4.11),electricity supply (Figure 4.14), dilapidated surfaced road conditions (Plates 11 and 12), dominance footpaths in the environment.

Substandard Housing or Illegal and Inadequate Building Structures

There is high number of substandard buildings in the community, these buildings are buildings are classified as substandard because they are constructed with low quality and non-permanent materials unsuitable for housing such as; mud blocks, iron sheet, strips of timber, etc. (Figure 4.1). Various space and dwelling placement bylaws are extensively violated this is seen in leapfrog pattern of development in the study area (Figure 1.3).

Overcrowding and High Density

Overcrowding in the study area is as a result of low space per person (Fig 4.7), high occupancy rates, cohabitation by different families and a high number of single-room units.

The dwelling units in the study area are overcrowded, with five and more persons sharing a one-room unit used for cooking, sleeping and living.

Unhealthy Living Conditions and Hazardous Locations

These are associated with air pollution, water pollution, overcrowding and poor ventilation. In the study area, unhealthy living conditions are the result of a lack of basic services, with visible, open sewers, uncontrolled dumping of waste, polluted environments, etc.

Houses are built on hazardous locations or land unsuitable for settlement, such on areas subject to erosion. The layout of the settlement is hazardous because of a lack of access ways to buildings and lack of airspace around buildings (Figure 1.3).

Insecure Tenure; Irregular or Informal Settlements

There is existence of squatter settlements. This is a central characteristic of slums. Informal or unplanned settlements were identified in the study area. Many definitions emphasize both informality of occupation and the noncompliance of settlements with land-use plans.

Poverty and Social Exclusion

Income and standard of living of residents in the study area are low (Figure 4.3). Poverty which is a central characteristic of the study area is not seen as an inherent characteristic of slums, but as a cause (and, to a large extent, a consequence) of slum conditions. These conditions are physical and statutory manifestations that create barriers to human and social development.

Cheap housing is one factor that brings people into this area (Fig 4.5). This is because there are cheaper lands and housing in the suburbs as compared to urban centers.

Household accommodation costs are very high compared to those in the suburbs owing to rise in land value which makes purchase, mortgage, rental rates higher.

This has lured many to settle in this area. Also from the personal interviews conducted, it is evident that migrants came into the area as due to the fact that they were herdsmen. This was as

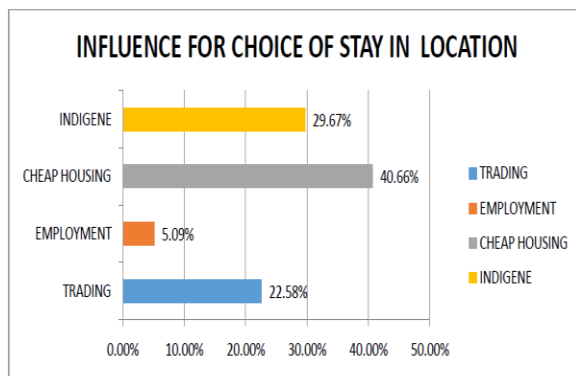a result of the presence of agriculturally rich environment.

Figure 4.1: *Resident's influence for choice of location*
Source: *Author's Field Survey, 2018*

Socio-Economic Characteristic of Respondents

Age Distribution of Respondents

There is predominance of youth residents in the community. Specifically, age composition of the community was 38.9% are between 18-25yrs, 20.5% between 26-35yrs, 36.2% 36-45yrs and 4.3% between 46-65yrs. This implies that the community has able force that can be utilized.

Table 4.1: *Age of Respondents*

Age composition	Frequency	Percent
18-25yrs	73	38.9
26-35yrs	38	20.5
36-45yrs	67	36.3
46-65yrs	8	4.3
Total	185	100.0

Source: *Author's Field Survey, 2018*

Sex Distribution of Respondents

It was also gathered that there is predominance of male population (54.1%) over female population (45.9%).

Table 4.2: *Sex Distribution of Respondents*

Sex	Frequency	Percent
Male	100	54.1
Female	85	45.9
Total	185	100.0

Source: *Author's Field Survey, 2018*

Marital Status of Respondents

The table below indicates that about 40.5% of the community is single while 59.5% are married. Majority of the residents are married. This implies that there could be high natural growth rate of the population because majority of the inhabitants are still active in procreating.

Table 4.3: Marital Status

Marital Status	Frequency	Percent
Single	75	40.5
Married	110	59.5

| Total | 185 | 100.0 |

Source: *Author's Field Survey, 2018*

Occupational Structure

Out of the total number of the respondent surveyed, it was gathered that 39.56% were farmers, 31.87% were traders, 16.97% were self employed, 7.20% were civil servant, 4.40% were unemployment, this shows that most of the respondents are farmers.
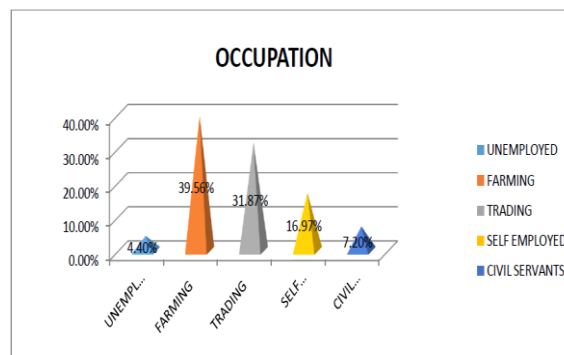

Figure 4.2: *Occupational status of residents*
Source: *Author's Field Survey, 2018.*

Income Level

Figure 4.2 shows the monthly income of the respondents that were surveyed. The survey thus revealed that 47.46% of the residents in Moniya earn between N20,000-N50,000 monthly, 43.96% earn between N60,000-N90,000. 6.59% earn below N20,000 while 1.99% above 100,000.
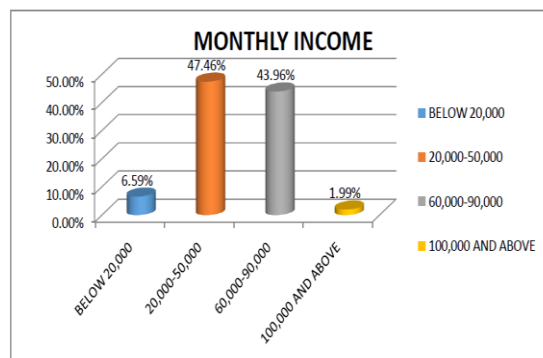

Figure 4.3: *Monthly Income of Residents*
Source: *Author's Field Survey, 2018*

Educational Status

Figure 4.3 below indicates that 54.95% of the residents have no formal education, 31.16% have primary school certificate, and 9.89% have secondary, while none had any form of tertiary education.

This shows that majority of the resident have only primary school education in the rural setting this has affected their socio economic characteristics in terms of occupational status, income level as well as their standard of living.

There is no adult literacy school in this community, also there are no vocational schools where skilled training can be carried out. Therefore this has affected the population in terms of their poverty level.
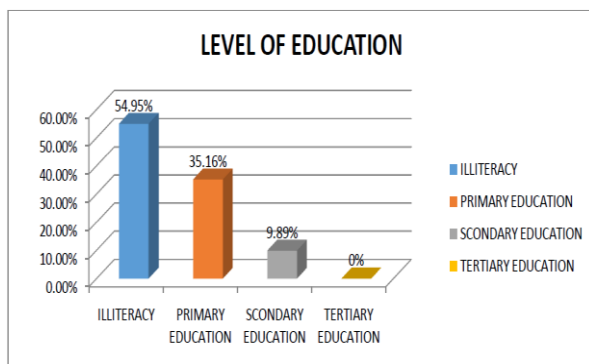
Use of Building	Frequency	Percent
Mixed use	94	50.8
Residential	91	49.3
Total	185	100.0

Source: *Author's Field Survey, 2018*

Figure 4.4: *Level of Education of Residents*
Source: *Author's Field Survey, 2018.*

Household Size

Figure 4.4 below illustrates that 44.73% has between 6-10 household, 30.72% has 10 and above household, 21.25% has between 3-6 household, while 3.30% has less than 3 households. This reveals that Moniya is dominated with households that consist of 6 people and more. This goes a long way to reflect on the overall population of the study area in terms of size.
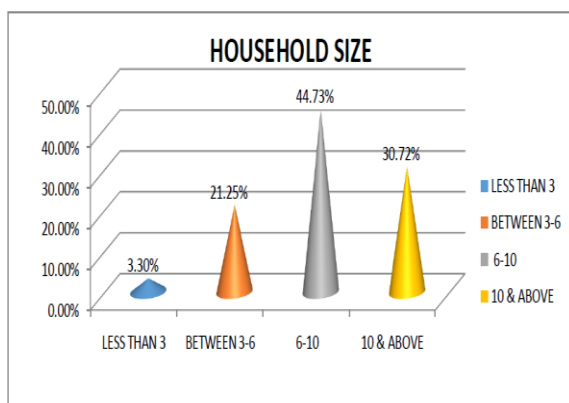
Figure 4.5: *Household size of Residents*
Source: *Author's Field Survey, 2018.*

Condition of Housing and Infrastructural Facilities

Use of Building

Table 4.1 below shows that 50.5% of buildings in the study area are for residential use, while 49.5% are for mixed usei.e. a part of the building used for commercial activities (such as hair dressing or barbing salons, retail shops where minor goods are sold etc). Therefore, it can be concluded that the bulk of buildings in Moniya are for residential use.

Table 4.4: *Use of Buildings in the Study area*
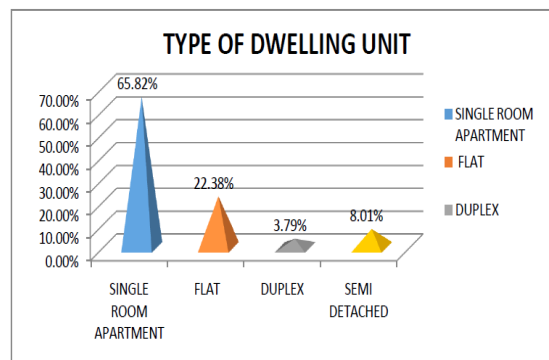

Fig 4.6: *Type of Dwelling Unit*
Source: *Author's Field Survey, 2018.*

Type of Dwelling Unit

Figure 4.7 shows that 68.82% of respondents live in Single Room apartment (popularly called face to face), 22.38% live in flats, 3.79% live in duplex while 8.01% live in semidetached dwelling units. This concludes that majority of dwellers in the study area reside more in single room apartments.

Number of Persons per Room

This indicates that 73.83% of residents stays 5 persons and above per room,22.3% 3-4 persons per room, while 3.7% stay 1-2 persons per room, This reveals that the occupants don not have enough space.
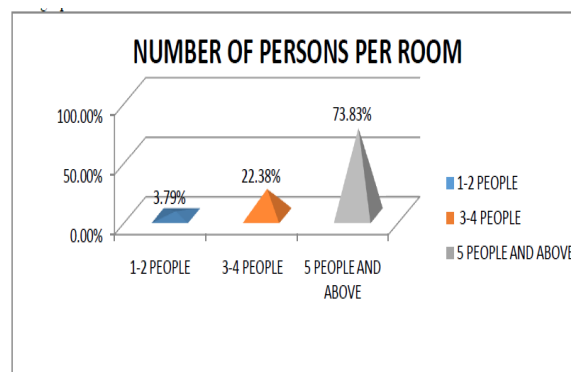

Fig 4.7. Number of Persons per room
Source: *Author's Field Survey, 2018*

Type of Building Material

The statistical analysis below shows that 29.89% use mud for constructing their building, 1.10% use timber, 45.82% use sun dried block and 23.19% use cement block. Sun dried blocks and mud accounts for the highest used building material in the study area. This is indicating that the materials used for construction are substandard.
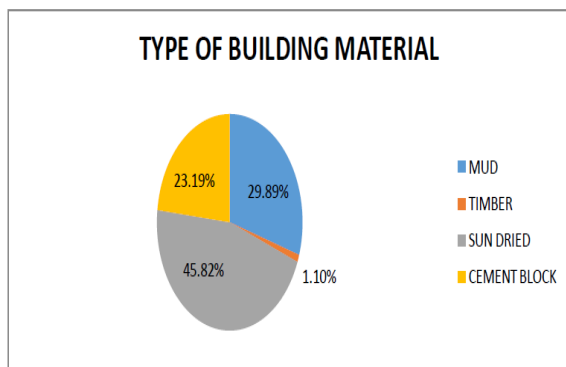
Figure 4.8. *Type of Building Material*
Source: *Author's Field Survey, 2018*

Plate 4.1. *Showing type of building material used in the study area.*
Source: *Author's Field Survey, 2018*

Type of Roofing Material

Table 5 shows that 95.7% use corrugated iron sheet and 4.4% use Aluminum roofing sheet.

Table 5: *Types of Roofing Materials Used in the Study Area*

Type of Roofing Material	Frequency	Percent
Corrugated iron sheet	1778	95.7
Aluminum roofing	8	4.4
Total	185	100.0

Source: *Author's Field Survey, 2018*

Plate 4.2. *Showing roofing material used in the study area*
Source: *Author's Field Survey, 2018*

Type of Toilet Facility

The figure below shows that 62.24% use pit latrine in their homes, 32.78% use aqua privy and 8.9% use water closet. This shows that the use of pit latrine is dominant in the study area.
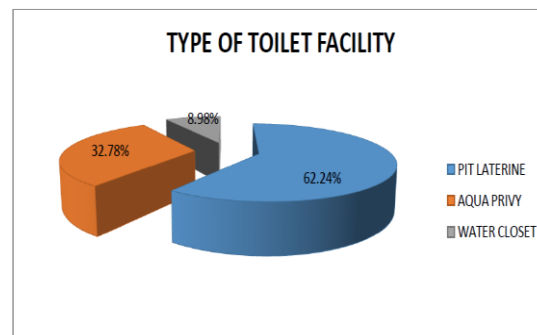
Figure 4.9: *Type of toilet facility*
Source: *Author's Field Survey, 2018*

Plate 4.3: *Showing external toilet and bathroom*
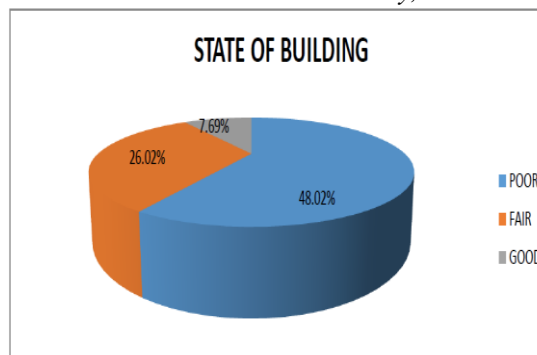**Source:** *Author's Field Survey, 2018*

Figure 4.10: *State of Building*
Source: *Author's Field Survey, 2018*

Plate 4.4. *Showing the state of building in the study area.*
Source: *Author's Field Survey, 2018*

Source of Water Supply

Figure 4.10 shows that 63.74% get water from well, 10.68% pipe borne water and 25.58% from borehole. It can therefore be concluded that hand dug well is the main source of water supply in the environment.
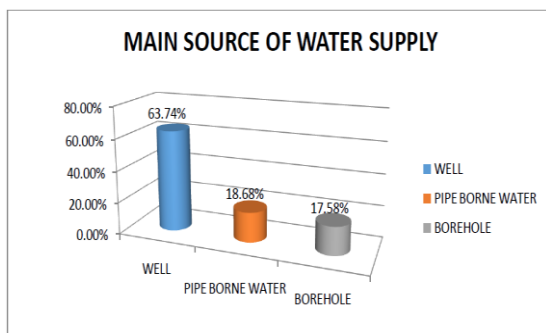
Figure 4.11: *Source of Water Supply*
Source: *Author's Field Survey, 2018*

Plate 4.6: *Showing a nonfunctional borehole in the study area.*
Source: *Author's Field Survey, 2018*

Plate 4.7: *Showing an unprotected hand dug well in the study area.*
Source: *Author's Field Survey, 2018*

Performance of Water Supply System

The figure below reveals the performance of water supply system in the study area. It shows that 80.22% of the available water supply system is effective and 19.78% is fairly effective. Water supply is effective in this environment because water can be readily assessed from the source which is well except during dry season when it is fairly effective.
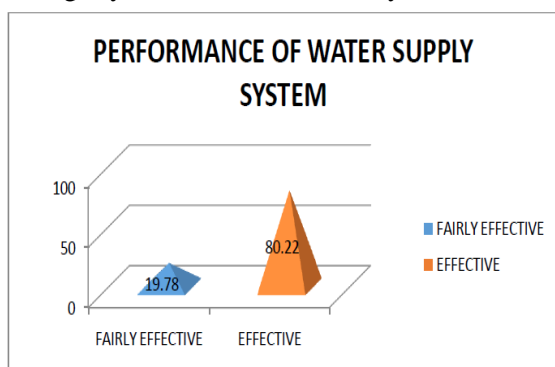

Figure 4.12: *Performance of Water Supply System in the Study Area.*
Source: *Author's Field Survey, 2018*

Source of Electricity Supply and Performance

Table 4.6: *Source of Electricity Supply*

Source of Electricity	Frequency	Percent
PHCN	105	56.8
Generator	80	43.2
Total	185	100.0

Source: *Author's Field Survey, 2018*

Figure 4.12 below reveals the level of the performance of electricity supply in the study area. It shows that 89.20% of residents' experience very poor level of electricity supply and 10.80% poor. The poor level of electricity supply in the study area according to the survey carried out is as a result of over use of existing electricity supply system. This is because the capacity of system provided is not enough to serve the existing population of the area.
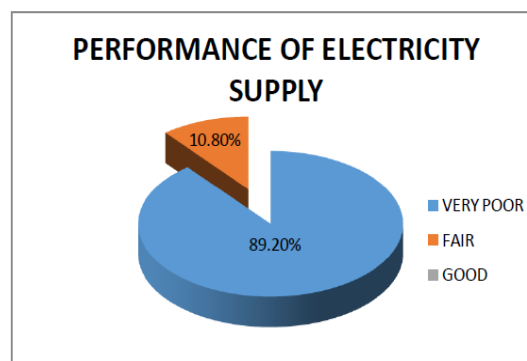

Figure 4.13: *Performance of Electricity Supply.*
Source: *Author's Field Survey, 2018*
Condition of Drainage

Figure 4.12 below reveals the condition of drainage system in the study area. It shows that 60.44% is in a very poor condition, 21.98% is in a poor condition and the remaining 17.58% is an average condition. Therefore, it can be concluded that the condition of drainage system in the environment is generally very poor.
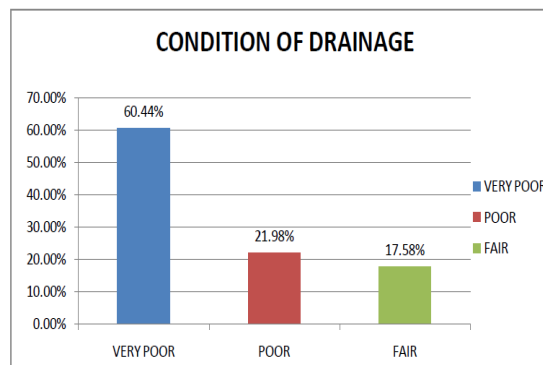

Figure 4.14: *Condition of drainage in the Study Area.*
Source: *Author's Field Survey, 2018*

Plate 4.8: *Showing Dilapidated drainage System*
Source: *Author's Field Survey, 2018*

Plate 4.9: *Showing dilapidated Septic Tankin the study area.*
Source: *Author's Field Survey, 2018*

Method of Waste Disposal

From figure 4.13 below, 67.03% of residents dispose their waste on dump site while 32.97% burn the waste they produce as a method of disposal.

This means that majority of the resident dump their waste.

Plate 4.9, 4.10 below shows that these wastes are dumped haphazardly in any available open space within their immediate environment.

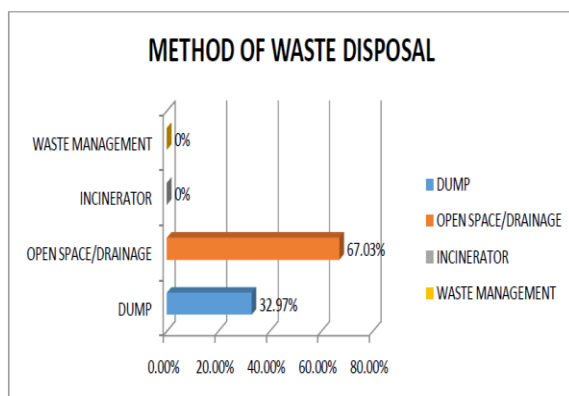This explains the current un-conducive state of the environment.

Figure 4.15: *Method of Waste Disposal in Study Area.*

Source: *Author's Field Survey, 2018*

Plate 4.10: *Showing how wastes are burnt within the area*
Source: *Author's Field Survey, 2018*

Plate 4.11: *Showing how waste is indiscriminately deposited in open space*
Source: *Author's Field Survey, 2018*

Health and Educational Facilities

There are no basic Hospitals in this community. There are other notable privately owned health institutions such as clinics and maternity homes. These health institutions are poorly staffed. Educational facilities in the area are primary and secondary schools which are not in good condition.

Plate 4.12: *Showing an educational facility in the study area*
Source: *Author's Field Survey, 2018*

Type of Access to Building

From the statistics below, 71.43% use footpath to access their building while 28.57% use access road. This shows that the dominant type of access to buildings in the study area is footpath.
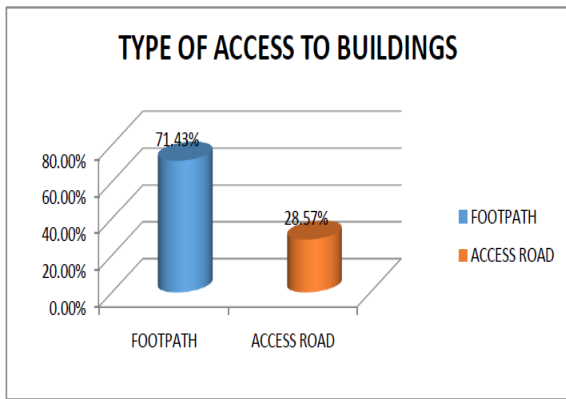
Figure 4.16: *Access to Buildings in Study Area.*
Source: *Author's Field Survey, 2018*

Plate 4.13: *Showing footpath leading to a dwelling unit*
Source: *Author's Field Survey, 2018*

Plate 4.14: *Access road in the study area*

Plate 4.15: *Access road in the study area*

Source: *Author's Field Survey, 2018*

General Condition of Study Area

Figure 4.15 shows that 48.25% of the overall condition of the study area is very poor, 21.78% is poor, 17.88% is fair and 12.09% is good. With these statistics therefore, it can be concluded that the study area is in a very poor condition which is not favourable for the whole environment in terms of functionality and aesthetics.
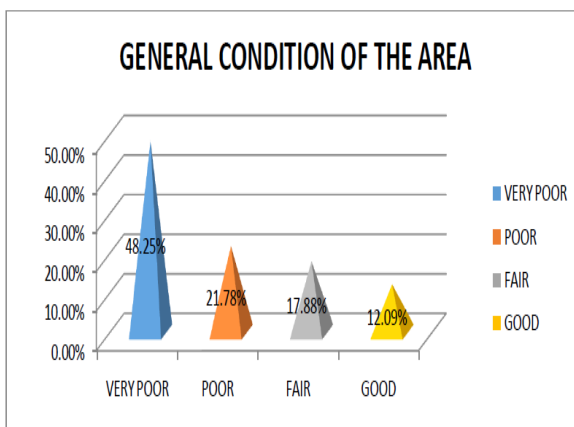

Figure 4.17: *General Condition of the Study Area.*
Source: *Author's Field Survey, 2018*

Effects of Urban Sprawl in the Study Area

In the course of this study, various negative impacts of urban sprawl were identified. They include:

Loss of Farm Land

Agricultural lands have been converted to provide urban expansion for residential, commercial and other land use for the community.

This is associated with widespread removal of vegetation to support urban ecosystem and this activity put additional pressure on nearby areas that are more ecologically sensitive.

This has therefore, reduced the ability of famers to grow food, timber and other agricultural activities.

Health and Safety

The impacts of urban sprawl on the health and safety of the study area comes from water and air pollution.

This is as a result of closeness in the location toilet facility (i.e. pit latrine) to source of water supply (well).

Here, untreated waste water from pit latrine sips into ground and contaminates the groundwater thereby contaminating source of water supply.

This is dominant especially at the households and community levels at large.

While ambient air pollution is generated from unprotected drainage system, indiscriminate dumping and burning of waste, effluent from vehicles as a major road is located at the center. All these impair the health of the residents.

Also, indoor air pollution is present in the area and this is particularly hazardous for women and children of various households who are regularly exposed to higher concentrations of air pollutants from cooking and heating sources in poorly-ventilated housing.

Poverty

The growth of Moniya has been accompanied by an increase in poverty level of the residents. This is reflected in the income level and standard of living of the residents (Figure 4.3).

This is because majority of the resident were attached to a common means of livelihood which is was farming and cattle rearing. This form of livelihood was lucrative for them until they started losing their forests and farm lands to development.

Overcrowding

Migration in to the study area has led to overcrowding. This in turn leads to overuse of available infrastructural facilities thereby causing them to deteriorate Overcrowding in the study area has led to the over use of available infrastructural facility.

Overcrowding increases, the rate at which pollution occurs and also aids the wide spread of disease.

Degraded, Noisy Surroundings

Sprawl has also led to Helter-skelter development in the study area which hasled to loss of beauty and order in the environment.

This is as a result of informal acquisition of land; an effective mechanism through which low-income people get access to land.

Noise pollution comes from traffic on the existing major road in the study area.

Damage of Ecology and loss of wildlife

As developments in the study area expands, wildlife habitat shrinks, scenic qualities of the environment would there by loose its aesthetic quality. Hunters are left with fewer and smaller hunting lands. In the study area, there is increased unplanned demand for water and electricity as a result of sprawl affecting the structural distribution and supply of these services. Additionally, the increasing demand has exerted pressure on the infrastructure available leading to early and frequent breakdown of infrastructure.

The high cost of service provision has posed serious problems associated with increasing expansion and extension of utilities (Electricity and Water) in the face of a rapidly growing area.

This is because urban sprawl influences the demand pattern of the utilities causing inadequate supply of services.

From the analysis of the impacts of urban sprawl in Moniya, it appears that the study area is in a condition of depreciation (according to (Omole, 2000), depreciation is a term used to describe a situation where structures and facilities in an urban center deteriorate and becomes an eye-sore in the urban scenery).

Reason being that the green land has almost completely disappeared while developments have not been properly monitored.

Basically, the study area is marked by the destruction of the natural environment, agricultural land and the pollution of both the water bodies and air.

Other physical issues in this sprawling area involves: missing sanitary facilities, high housing density, structural deterioration, poor maintenance and lack of access roads which result in the depression of housing value coupled with poverty.

SUMMARY OF FINDINGS RECOMMENDATION AND CONCLUSION

Introduction

This chapter reveals the summary of the study.

The study was set out assess the socio-economic characteristics of the residents, to identify urban sprawl characteristics in the study area, examine the existing condition housing and infrastructural facilities and examine the impacts of urban sprawl in the study area.

Suggestion and recommendations are also made as regards to ways by which problems emanating from the study area can be mitigated to improve the livability as well as the functionality of the study area.

Summary of Findings

The research revealed that the general building condition of the existing housing stock in the study area are in a very poor state outdated and built with substandard materials, lack of adequate ventilation and toilet facility as it has been shown in Figure 4.10, Plate 1 and 3.

During the course of the research, it was noted that the study area has inadequate basic facilities and services.

This is as a result of over use of the few available facilities rendering them non functional. Other notable problems in the study area are poor method of waste disposal where by the residents dump and burn their waste randomly on any available open space and drainages and this constitute breading grounds for dangerous animals that may be dangerous for the people.

Very poor level of electricity supply, lack of access roads to facilitate communication and functionality of the environment at large were also revealed.

Based on personal interview, it was found out that migration in to the study area was a as result of richness in landscape which made the initial dwellers (who were herdsmen) migrate to the suburbs. Presently, the major cause of urban sprawl is as a result of flow cost of housing which is followed by trading.

It was also discovered that there is overcrowding in the study area and this is due to low space per person, high occupancy rates, cohabitation by different families and a high number of single-room units (popularly known as face to face).

However, some possible measures are proffered inform of recommendation that can be employed to mitigate the problems in the study area.

Recommendation

The main intention of this section is to evolve a proposal that will bring about socioeconomic growth and balanced physical development in the study area.

Therefore, the main considerations in this regard include social, economic and physical issues that are considered as limiting factors for the gradual transformation of Moniya community into a slum. In evolving the concepts for the development, the principles of sustainable development were rigorously addressed.

These include the following: Economic Viability, Social Acceptability, Environmental Protection and Preservation, Decent Living Conditions, Practicability of Implementation.

The plank for the evolvement of the development concepts and strategies for redevelopment of Moniya community are built on the thorough knowledge of both the natural characteristics and the existing developmental characteristics of the community.

It is obvious from the survey carried out that the factors that are contributing to the deterioration of physical conditions of Moniya community are largely related to lack of both technical and social facilities, security of tenure, deterioration of building quality and overcrowding.

Therefore, it is important to put up some policy recommendations that are necessary to the improvement and upgrading of the study area.

Policies that can be used have been classified into two (Onokeroraye and Omuta, 2000). Short term and Long term policies.

The short term policy relates to various developmental porgrammes aimed at upgrading the physical environment of any deplorable area. The aim of these policies is to provide descent and adequate housing units as well as healthy environment for urban dwellers.

This involves total redevelopment approach and rehabilitation/ renovation approach.

After due considerations of the characteristics and potentials of the study area including source of funds to undertake any gigantic project in the study area; upgrading programme through rehabilitation/renovation approach and provision of urban basic services are considered suitable for the area.

This simply has to do with rejuvenation of the affected parts of the areaby retaining those structures that are retainable, rehabilitating some old buildings and structures, upgrading the roads particularly the untarred ones and introducing new ones with a view to opening up blight areas.

It also involves improving the existing infrastructural facilities as well as providing new ones with a view to improve the structural quality and aesthetics of the environment.
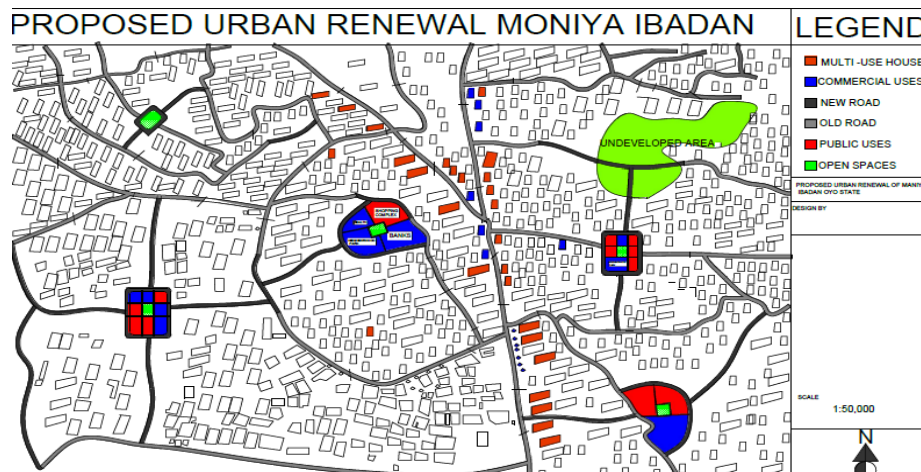

Fig 4.18: *Showing Proposed Plan of Study Area*
Source: *Designed by Author, 2012*

The second category, which is the short term policies relate to prevention of further occurrences of slum conditions in the area. Policies here therefore should be centered on generation of employment opportunities otherwise known as "Economic Revitalization" (Onokerhoraye, 1995; Omole, 2000; Okoko and Omole, 2002). This approach yields future proceeds that have potential to sustain any improvement effort that may be put in place or aimed at improving the area. Similar to this is the issue of effective public enlightenment to effect community participation at individual and collective levels with a view of improving the sanitary condition of the area as the level of personal hygiene of individual residents. Osoko(2000) and Owoeye (2003) argued that without an enlightened public, to enforce environmental sanitation laws would have very little of prospect success. The starting point therefore is to educate the public about the dangers of poor sanitation on the health of the people and way to attain sustainable, management of their environment.

Apart from these, essential infrastructural facilities such as rehabilitation of existing access roads including construction of drainage systemto improve connectivity and proper sanitation, provision of transformers to ensure adequate supply of electricity, provision of public toilet, modern neighborhood market, basic health centre, provision of standard schools, boreholes having a balanced distribution.

Various strategies should be embarked upon to facilitate the provision of housing. For instance, in the provision of loan, mortgaged bank and infrastructural development fund have a lending role to play.

A waste management board must be established to handle waste collection and disposal. The board shall buy standard type of waste-bins and make them available to households at a subsidized price. These should be placed at convenient strategies reached for collection by the board.

To promote grassroots participation in development planning, skills acquisition and implementation of project, provide training in income-generating activities for women's groups to reduce poverty and promote proper governance and effective management of such projects and also initiate poverty-reduction programs with community participation.

Planning Strategy for Managing Urban Sprawl should be adopted by planning authorities with the aim of creating a livable environment.

Proper implementation of planning schemes has not been satisfactory which have resulted in the mushrooming of slums and squatters, unauthorized and haphazard development, environmental degradation and lack of basic amenities problems in the study area. Therefore, planning department should prepare land use schemes/plans in collaboration with other decentralized government departments of the state to plan for meeting the demand for infrastructural facilities and ensuring the delivery and maintenance of basic services.

Conclusion

Over the past century, urban growth has taken the form of sprawl.The major findings of this research study revealed the impacts of

urbanization from the core area of the city to the peripheral areas contribute to the rapid development and their consequence on the neighbourhood environment. The root cause of sprawl is the first people. The economic and social consequences of sprawl do not appear to be dire.Hence, a long term solution can only be achieved through an overall economic development of the of the study area and its immediate region by the way of better employment and livelihood generation activities in the rural areas that can lessen the migration of people from rural areas to urban areas and mitigate urban sprawl.

Recommendations for Further Research

People are using more resources than they need, they are undermining the efforts to create sustainability therefore urban sprawl would still further, the pollution that comes with urban sprawl is having effects which support the issue of global warming. Therefore, to promote smart growth and sustainability, the recommendations of this study should be incorporated into the transformation process of these areas as it will impact positively in reducing urbanization problems.

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