

**DYNAMICS OF LAND USE PLANNING AND ITS EFFECTS ON SOCIO-ECONOMIC
DEVELOPMENT. CASE STUDY OF SUNYANI MUNICIPALITY AND ODUMASI IN
THE BRONG AHAFO REGION**

By

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DECLARATION

Amponsah Maxwell, hereby declares that with the exception of the reference to other peoples work made in the text, this submission towards the award of MSc. Development Planning and Management is the result of my independent investigation under the guidance of my Supervisor Dr. Daniel K. B. Inkoom and had never been published or presented to any institution for any other degree elsewhere in the world to the best my knowledge.

However, any error of interpretation, fact or format remains the author's responsibility.

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ABSTRACT

The general objective of the study was to assess how land-use planning can be effectively used to enhance socio-economic development in the Sunyani Municipality and Odumasi. It is based on the aforementioned that this research was designed to identify some of the inherent problems associated with land use planning and how it has impacted on socio-economic development in both Sunyani Municipal and Sunyani West District Assemblies in the Brong Ahafo Region of Ghana.

Sunyani Municipality has several layouts but for the purpose of this study the sectors 2, 3 and 4 were purposely selected as these areas are high class residential and well planned communities in the Sunyani Municipality. In Odumasi sector 9 was purposely selected. All these sectors gave a total of 3516 (Sunyani, 3116 and Odumasi, 400). 84 landlords were interviewed in Sunuyani Municipality and 40 landlords were interviewed in Odumasi. .

The study indicated that all the landlords interviewed had an approved site plan which was prepared from a planning scheme. The nature of land ownership can delay land use planning process as there are some cases of litigation over who owns land and has the right to sell land. The Assemblies could not effectively control physical developments as they were constrained by inadequate logistics and personnel. 55 percent of landlords in Odumasi did not have building permits.

In response to these findings this recommendation among others were made: The District/Municipal Assembly in the study area should resource the Development Control Unit in terms of logistics to effectively monitor all forms of physical development.

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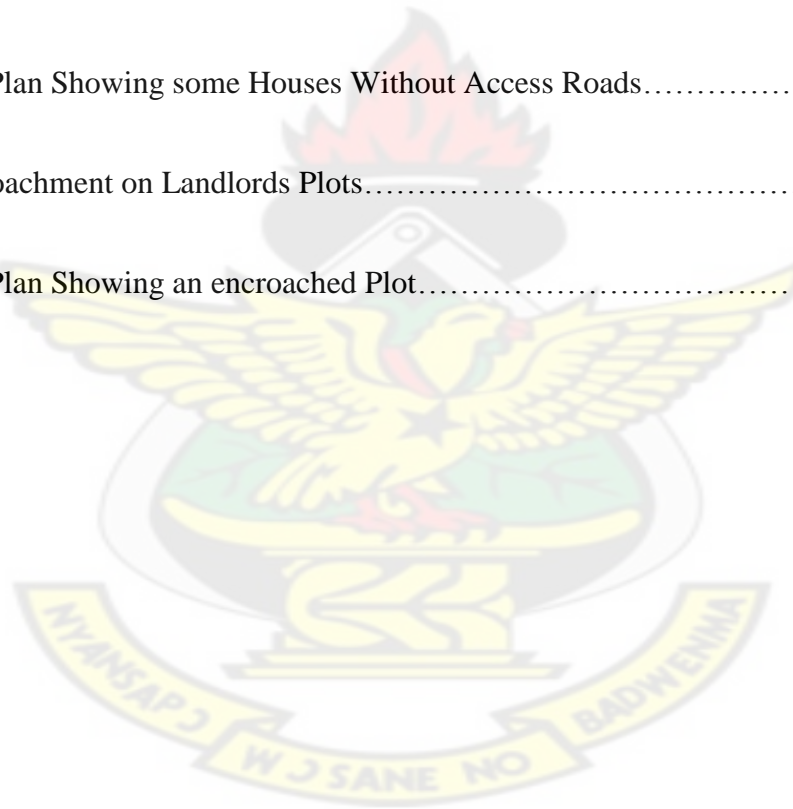
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LIST OF ABBREVIATIONS

CBD.....	Central Business District
TND.....	Traditional Neighborhood District
U.S.....	United States
UN.....	United Nations
CBOs.....	Community Based Organizations
UNCHS.....	United Nations Centre for Human Settlements
LUPMP.....	The Land Use Planning and Management Project
LAP.....	Land Administration Project
TCPD.....	Town and Country Planning Department
MLFM.....	Ministry of Lands, Forestry and Mines
NDPC.....	National Development Planning Commission
SPSS.....	Statistical Package for Social Scientists
MPCU.....	Municipal Planning Co-ordinating Unit
GSS.....	Ghana Statistical Service
PHC.....	Population and Housing Census
DMTDP.....	District Medium Term Development Plan

CHAPTER ONE: GENERAL INTRODUCTION

1.1 BACKGROUND

Today, it is recognized that social and economic considerations are completely interconnected. In the city context, this means that effective and efficient land use planning and socio-economic development are not a choice but a necessity if cities are to meet the needs of their citizens. Urban centres must be socially equitable, economically successful and environmentally sustainable if cities are indeed to be the home of humanity's future (Cities Alliance, 2007).

Urban areas in Ghana have over the last few years developed into educational, commercial/economic, social and cultural centres- the natural result of urban growth. The trend of events generally brings to the fore the need for effective urban planning to cater for the competing urban demands in order to ensure sustainability of the urban resources as well as ensure the achievement of land use principles. Land use principles which include safety, aesthetics, harmony, convenience and economy are the main drivers underpinning this research as these are the variables against which data gathered would be compared with in order to draw inferences upon which policy can be formulated. These policy interventions would seek to address all forms of problems inherent in violations of these land use drivers/principles.

In Ghana, the current growth rates of urban areas averages 3.4 per cent with Accra and Kumasi growing at 4.2 per cent and 5.2 per cent respectively (GSS, 2000). The high growth rate of urban centres and cities has enormous implications for their development and management in terms of waste management, slum avoidance, public health management, poverty reduction, employment generation, and infrastructure provision and maintenance (Afrane, 2006). These objectives can

be attained through effective planning of the cities to promote sustainable development of towns and cities.

The demand for public action to direct land use practices seldom arises as long as there are sufficient supplies of land and environmental resources at the right locations to care for the needs of prospective users. With growing competition for land and environmental resources resulting from increasing population numbers and rising per capita demands for these products, however, here is the need for the encouragement of sustainable development, green building technologies and the preservation of environmentally sensitive areas.

Indeed, unguided individual action often leads to resource exploitation, social waste, and a shifting of costs to other members of society. In the search for answers, it has been found that land use is based on the functional dimension of land for different human purposes or economic activities. Typical categories for land use are dwellings, industrial use, transport, recreational use or nature protection areas (United Nations, European Commission, International Monetary Fund, Organization for Economic Co-operation and Development, World Bank, 2005). Land resource planning has been designed to promote orderly development of the nation's land resources, minimize problems and conflicts associated with private land use, foster optimum development of the land resource base and maximize public satisfaction and safety in the use of land resources.

1.2 PROBLEM STATEMENT

The planning of research projects involves a chain of thought processes. The first and the deciding or the critical step is the isolation and definition of the problem to be investigated because all scientific inquiries or investigations stem from problems (Kumekpor, 2002). Here

interest is in finding connective relationships between two or more categories of variables that have influence on poor land use planning and uncontrolled development in Odumasi.

Development Planning is a conscious and continuous process of evolving policies, programmes and projects that would contribute significantly to the social, economic, cultural and spatial transformation of a society. As Afrane (2006) puts it, town planning as an integral component of the larger Development Planning process, connotes the optimal allocation of space for various human activities and ensuring functional relationships among these activities and that the ultimate result of the town planning process is to ensure that there is a place for everything and everything in its place. Also, land use planning should be a decision-making process that "facilitates the allocation of land to the uses that provide the greatest sustainable benefits" (UNCED, 1992).

Thus, the basic rationale for undertaking town planning is to achieve; convenience and harmony in the use of space for all land uses; economy and efficiency in the use of resources and space; enhanced safety and adequate health standards in the space economy; and enhanced aesthetics and serenity in the built environment (Afrane, 2006).

The rationale for undertaking land use planning is diverse which are described above. The attainment of these objectives of land use planning would have positive effects on the people living within that planning area. Thus social and economic development would be sustained. However, in Odumasi, the situation is completely different as land use planning has not been applied effectively by land owners.

The unwillingness of the land owners to engage planners and surveyors to effectively plan their land has violated the laudable objectives of land use planning which has culminated into negative

effects like poor orientation of buildings, poor access to infrastructural facilities, wrong alignment of roads and drainage facilities. These problems have further worsened the social and economic plight of the people living in Sunyani West District. The Town and Country Planning Law, Cap 84 spells out the regulations for undertaking any form of physical development in the community has been violated with impunity.

These problems that have occurred in this community can be attributed to lapses in Town planning Authorities, other land sector agencies and traditional authorities that are to ensure smooth land use planning and implementation at their area of jurisdiction. This is evident in the lack of transparency in the process of allocating land to prospective developers. The poor land allocation and documentation have denied developers the opportunity of using their properties as collateral in accessing loans and other forms of credit facilities that would help them to improve upon their economic and social well being.

The proper allocation of land to prospective developers offers them the opportunity of security of ownership which results in enormous benefits to both the state and the landlord. Without security of ownership of land it implies that effective planning has not taken place which result in both public and private developing control systems in the cities to deal with the adverse consequences. This coupled with the deliberate development of structures without permits are all issues that need to be taken seriously in the planning of the town by the authorities responsible for development control and enforcement of planning regulation to ensure orderliness in towns development. These problems certainly pose major challenges for the planning and regulation of land use in Odumasi and the solutions to these problems will require new policies in many fields. The research problem is improper land use planning and uncontrolled development in Odumasi in Sunyani West District. Thus to be able to analyze the dynamics of land use planning, Sunyani

Municipality where land use planning has been effectively implemented would be taken as a case in point in comparison with Odumasi.

1.3 RESEARCH QUESTION/HYPOTHESIS

One cannot fully evaluate or appreciate advances made in knowledge, science, or technology without some understanding of the circumstances within which these developments occurred (Salkind, 2003). The research will seek to answer the following questions which indicate what the researcher wants to investigate into.

1. What is the nature of land use planning in the Sunyani Municipality and Odumasi?
2. What are the benefits of effective land use planning in both areas? and
3. What are the implications of ineffective land-use on socio-economic development?

The null hypothesis (H_0) underlying this study is land use planning impacts positively on socio-economic development. The alternative hypothesis (H_1) is land use planning impacts negatively on socio-economic development. The test of the hypothesis is shown in Appendix D.

1.4 OBJECTIVES OF THE STUDY

The general objective of the study is to assess how land-use Planning can be effectively used to enhance socio-economic development in the Sunyani Municipality and Odumasi. The specific objectives of the study are to;

1. examine the land use planning system in the Sunyani Municipality and Odumasi;
2. analyze the relationship that exist between land use planning and socio-economic development;
3. investigate the causes of ineffective land use planning process;

4. discuss key issues arising from land-use planning and socio-economic development, and
5. make recommendations for improving land use planning with emphasis on socio-economic development.

1.5 SCOPE OF THE STUDY

The focus of the study is Sunyani Municipality and its immediate environs-Odumasi. Odumasi and Sunyani Municipality are administratively the same, but spatially Odumasi is within Sunyani West District. The content of the study focuses on land use planning and its impacts on socio-economic development, and assessment of the roles of institutions involved in land use planning in the Municipality.

1.6 JUSTIFICATION OF THE STUDY

It is far less costly to avoid ineffective land use planning than it is to live with its consequences or to repair its damage just as preventing urban poverty is far cheaper than alleviating it once it occurs. Today, much of the unsustainable urban growth that has occurred and the problems it has generated need to be resolved and the cost to do so will be substantial. It is therefore important to begin to develop cities in a sustainable way, using a new paradigm of participatory approach of land use planning that would avoid land use catastrophe and transform the livability of cities and the future of human civilization.

Odumasi has become a victim of ineffective land use planning, thereby depriving the land lords the needed socio-economic benefits that would aid development. Certain sectors in this town do not have access to basic infrastructure like roads, drainage, electricity, pipe borne water and

other emergency services as a result of poor land use planning and uncontrolled development. Therefore this research would focus on the issues hampering effective land use planning and to make recommendations to help improve the situation.

The main drivers underpinning this research are the land use planning principles which entails safety, aesthetics, harmony, economy and convenience. These would be the empirical evidence that would be examined in the research as indicated in the research objectives.

1.7 METHODOLOGY

Methodology refers to procedures, approaches and methods underpinning how the research was carried out as a scientific enquiry. These include research design, sampling techniques, sample distribution, instruments for data collection, methods of data collection and data analysis.

1.7.1 Research Design

Human ecology is concerned with the interrelationships among people in their spatial setting and physical environment (Bery, 2006).

A case study research method is an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used (Yin, 2002).

Case study allows one to investigate and understand the dynamics of a particular system and with the attributes of investigating a contemporary phenomenon within its real life context, the kind which is ongoing, and when boundaries between the phenomenon and the context are not clearly defined as well as the availability of multiple sources of evidence makes the adoption of this approach imperative in this instance.

1.7.2 Unit of Analysis

The unit of analysis refers to the actual empirical units, objects and occurrences which must be observed or measured in order to study a particular phenomenon, and having defined the problem to be investigated, it is important to identify how the problem will be measured. This will point out the key factor for decision making about the appropriate unit of analysis the researcher wants to discuss and draw inferences and conclusions at the end of the research.

Following from above, the research is based on two main units of analysis, the first unit of analysis is an examination of processes, and challenges facing institutions involved in land use planning. Another unit of analysis would be an assessment of the impacts of land use planning on socio-economic development in the Municipality. In this study the units of enquiry are landlords and Town and Country Planning Officers as well as other important stakeholders such as Land Sector Agencies in both Sunyani Municipality and Odumasi.

1.7.3 Data Collection and Source of Data

Data collection is that stage of a research where the subjects are approached and the information required for the study is gathered. Data collection in the case – study is accomplished by means of methods defined in the case study protocol.

Indeed, the general rule is that data collection is just an execution of plans developed during the stage of research design. This design specifies exactly what is to be done, where, how, when and under what conditions.

Therefore, following from the above the primary source of data was collected from both structured and semi – structured interviews administered as a first step to gather data for the

study; this facilitated interaction with respondents in a guided manner which enhanced the collection of required data. In collecting secondary data for relevant existing literature relating to the study, the World Wide Web (internet) was consulted for relevant information and best practices as pertains in other jurisdictions.

The research was based on qualitative and quantitative data collected from planning and related institutions in the Municipality. The simple random sampling method which is probability sampling technique was used to select landlords for interviews using structured questionnaires. On the other hand the Planning institutions were also interviewed using the same structured questionnaires. Other land sector agencies were interviewed using interview guides.

The decision on the number of questionnaires that were administered for the landlords was guided by the sampling frame. In this study, two areas were considered, that is Sunyani Municipality and Odumasi. Sunyani Municipality has several layouts but for the purpose of this study the sectors 2, 3 and 4 were purposely selected as these areas are high class residential and well planned communities in the Sunyani Municipality. All these sectors yielded a total of 3116 properties.

In Odumasi, sector 9 was purposely selected as these communities are low class residential areas. These two sectors gave a total of 400 properties. The purpose of selecting these two contrasting study areas are to help analyze the dynamics of land use planning and its impacts on socio-economic development so as to draw inferences and make appropriate recommendations as interventions to enhance land use planning.

In each of these towns a sample is being taken from based on the sample size determination formulae given by: $n = N / (1 + N(a)^2)$. Where; n is the sample size, N is the sample frame and “ a ” is

the margin of error, which in both towns was considered at 90 percent confidence interval at 10 percent margin of error “a” is (0.1). Therefore the sample size determination for both Odumasi and Sunyani Municipality are calculated below based on sample frame of 3516 landlords (Sunyani, 3116 and Odumasi, 400):

Sample size is given by: $n = N / (1 + N(a)^2)$. Where N is 3516 and “a” is 0.1. Substituting into the formulae:

$$n = 3516 / (1 + 3516(0.1)^2), n = 3116 / (1 + 3516(0.01)), n = 3516 / (1 + 35.16), n = 3516 / 36.16, n = 97$$

Based on proportional stratified sample, 87 percent of the questionnaire were administered in Sunyani Municipality (84 Landlords), while 13 percent of the questionnaire were administered at Odumasi (13 Landlords), but to ensure effective analysis of the research the number of the questionnaire in Odumasi were increased to 40 landlords.

The simple random method which is probability sampling technique was used to select landlords for interviews using structured questionnaire. For Sunyani Municipality 84 landlords were interviewed whereas 40 landlords were interviewed in Odumasi.

1.7.4 Analytical Techniques

Finally, the data from the various sources notably Town and Country Planning offices and landlords in both Sunyani Municipality and Odumasi were collated, analyzed and synthesized from which inferences and conclusions were drawn based on both qualitative and quantitative approaches and relevant statistical software packages such as Statistical Package for Social Scientists (SPSS) version 16 were used for data analysis.

1.8 ORGANIZATION OF CHAPTERS

Chapter one deals with general introduction to the research, problem statement and research methods used. Chapter two considers the literature review on land use planning which involves historical and contemporary issues in this arena of study. Chapter three looks at the analysis of the data collected from the study area from which inferences have been drawn. Chapter four contains information on the key findings identified during the analysis and synthesis stage of research. The concluding section of the study is chapter five which provides information on recommendations and conclusion.

1.9 LIMITATIONS OF THE STUDY

In social science and planning research, several factors hinder the process of carrying out research in this discipline. Notable among these factors that adversely affected this study are the following:

- a. Difficulty in meeting landlords for data to undertake analysis segment of the study as most of them have travelled to their workplaces. The assistance of close relatives such as spouses and children reliable data was obtained for the analysis.
- b. Quantitative data in terms of plot prices at the time it was bought became difficult to ascertain as most landlords had bought their plots long ago. However, Lands Commission was able to provide information on land values in the study area.

CHAPTER TWO: LITERATURE REVIEW

2.1 OVERVIEW OF LAND USE PLANNING

The managers of urban growth and the land use planner looks at land through several perspectives. Land in its natural and urban states is both an input to, and a product of, the planning process. It is fought over by those who would change it through development and those who would stabilize it through maintaining existing and traditional uses. It represents potential opportunity for social and economic mobility or a potential disaster as an area for property and crime. In making plans to encourage the positive uses of land and to discourage its negative uses, the land use planner must build a knowledge base that encompasses the technical, social, economic, and institutional aspect of land use. According to Ollenu (1985), “land includes..... the land itself, that is the surface soil, it includes things on the soil which are enjoyed with it as being part of the land by nature. Examples are rivers, streams, lakes, lagoons, creeks growing trees like palm trees or as being artificially fixed to it like houses, buildings and structures whatsoever, it also include any estate, interest or right in it over anything which land denotes”.

2.2 EVOLUTION AND THEORETICAL FRAMEWORK OF LAND-USE PLANNING

Several authors have contributed to the evolution of theories underpinning land-use planning in diverse ways. Among them are the following theories and their postulators. They have been arranged successively to the currently adopted model of land-use planning world wide.

2.2.1 Concentric ring model also known as the Burgess model is one of the earliest theoretical models to explain urban social structures. It was propounded by sociologist Ernest Burgess in 1925. Based on human ecology theories done by Burgess and applied on Chicago, it was the first to give the explanation of distribution of social groups within urban areas. This concentric ring

model depicts urban land use in concentric rings: the Central Business District (or CBD) was in the middle of the model, and the city expanded in rings with different land uses. It is effectively an urban version of Von Thunen's regional land use model developed a century earlier. It contrasts with Homer Hoyt's sector model and the multiple nuclei model. The zones identified are: The center was the CBD, The transition zone of mixed residential and commercial uses, Low-class residential homes (inner suburbs), in later decades called inner city, Better quality middle-class homes (Outer Suburbs) and Commuters zone.

2.2.2 Sector theory holds the view that housing areas in a city develop in sectors along the lines of communication, from the CBD outwards. High quality areas run along roads and also reflect the incidence of higher ground. Industrial sectors develop along canals and railways, away from high quality housing. Thus a high status residential area will spread out along the lines of the sector by the addition of new belts of housing beyond the outer arc of the city. Once contrasts in land use have developed in a sector near to the city, these contrasts will be perpetuated as the city grows. This theory was advanced by Hoyt (1939) as an alternative to Burgess' concentric model, and was based on residential rent patterns in the USA.

2.2.3 Multiple Nuclei Theory, this theory was first proposed in 1945 by Harris and Ullman. They constructed this model to demonstrate that not all cities fit into the concentric and sector model. They claimed that although these patterns may exist, reality is far more complex than those two theories imply. They argued that land use patterns do not grow from a single central point in the city but from multiple points or nuclei. They assumed more than one desired location for access. This is based on the fact that many towns and nearly all large cities grow about many nuclei rather than around a simple CBD. Some of these nuclei are pre-existing settlements;

others arise from urbanization and external economies. The number and functions of the nuclei differ from city to city (Harris and Ullman in 1945).

2.2.4 Central Place Theory was first developed by the German geographer Walter Christaller in 1933 after he began to recognize the economic relationships between cities and their hinterlands (areas farther away). He mainly tested the theory in Southern Germany and came to the conclusion that people gather together in cities to share goods and ideas and that they exist for purely economic reasons. Central place theory is a spatial theory in urban geography that attempts to explain the reasons behind the distribution patterns, size, and number of cities and towns around the world. It also attempts to provide a framework by which those areas can be studied both for historic reasons and for the locational patterns of areas today (Amanda B. 2010).

Land use planning is nothing new and many countries have policies of this kind regulating land use. It has thus been adopted all over the world. Even in societies where free enterprise is a major value and a mode of operation, a certain amount of government guides private along the lines of officially idealized features with less conflict or more health (Olima, 1993:84). For instance, Germany has the most ancient tradition in land use planning (Matthew A. 1999). Apart from the building regulations which were applied to the development of towns since the Middle Ages the first planning law (the “Building Lines Act”) was enacted in 1868 in Baden. It was followed by similar laws and regulations in other regions. The modern era of land use planning legislation in Germany was established in 1960s when the “Bundesbaugesetz” (meaning the “Federal Planning Law”) was passed. This Law, with its subsequent amendments in 1969 and 1976 provides the legal framework for land use planning, building and zoning plans. In addition, it regulates the implementation of the plans with regards to building control, land acquisition, and land markets.

Land use planning in Britain originated in the latter part of the 19th century, when the public health legislation and building by-laws were introduced to prevent the worst excesses of rapid and haphazard urbanization that accompanied industrialization. The rationale of this initial government intervention was geared towards “safeguarding the environment”, “promoting good design”, “promoting suitable land use”, and “using national resources efficiently”. Reports written by Barlow, Scott and Uthwatt commissions provided the foundation of urban land use planning in Britain from the wartime to the late 1960s. The report of the Planning Advisory Group (PAG) of 1965 reaffirmed the importance of land use planning as a regulatory mechanism for both, land use allocation and the quality of the physical environment.

In Japan land use planning dates back to the mid 1970s. In the 1960s Japan introduced policies that attempted without much success to get to the grips with the problems of urbanization including traffic congestion, pollution and skyrocketing land prices in the areas of Tokyo, Nagoya and Osaka (McAuslan 1985: 74). Japan currently has two parallel and close systems of land use planning. One system is aimed at land and regional development, while the other deals with zoning and the regulation of private land use and transactions in order to ensure an orderly and more equitable development of urban land. Planning literature in the 1980s revealed certain concerns that shifted the focus of land use planning towards the security of the public by establishing restrictions for the individual liberty through land use planning controls (Held/Visser 1984; Dawson 1984; Okpala 1982:43).

In the English speaking world, the terms land use planning, town and country planning, regional planning, town planning, urban planning, and urban design are often used interchangeably, and will depend on the country in question but do not always have the same meaning. In Europe the

preferred term is increasingly spatial planning or more recently territorial cohesion (for regional and trans-national planning).

In Australia, the United Kingdom, and New Zealand, the term town planning is common, although regional planning, statutory planning and land use planning are also used. In the United States and Canada, the terms current planning, urban planning and regional planning are more commonly used.

Land use is the human modification of natural environment or wilderness into built environment such as fields, pastures, and settlements. The major effect of land use on land cover since 1750 has been deforestation of temperate regions. More recent significant effects of land use include urban sprawl, soil erosion, soil degradation, salinization, and desertification. Land use change together with use of fossil fuels, are the major anthropogenic sources of carbon dioxide, a dominant greenhouse gas.

Land use is based on the functional dimension of land for different human purposes or economic activities. Typical categories for land use are dwellings, industrial use, transport, recreational use or nature protection areas (World Bank, 2005).

Land use planning is the term used for a branch of public policy which encompasses various disciplines which seek to order and regulate the use of land in an efficient and ethical way, thus preventing land use conflicts (Walters, David, 2007).

Despite confusing nomenclature, the essential function of land use planning remains the same whatever term is applied. Canadian Institute of Planners (2011) offers a definition that: "[Land use] planning means the scientific, aesthetic, and orderly disposition of land, resources, facilities

and services with a view to securing the physical, economic and social efficiency, health and well-being of urban and rural communities.

From the above definitions quoted by the authorities, land use can be conceptualized as the art and science concerned with formulating policies and plans on the use and development of land

Following criticisms leveled against the above theories, **The Traditional Neighborhood District** (TND) have been widely adopted in most countries across the globe. February 2010 Neighborhood Edge Area Civic use Green Space Indicate on plans low, medium, and high density residential areas Indicate the proposed density for each category Indicate office, commercial and industrial uses (indicate proposed intensity (square footage per acre) of all nonresidential uses) Indicate Common open space provisions such as squares, plazas, preserves, greenbelts, golf courses, parks, passive or scenic areas; community recreation or leisure time facilities; and areas for such public or quasi-public institutional uses such as public facilities.

A separate sketch plan for pedestrians and vehicular circulation showing the general locations and rights-of-way widths and the general design capacity of the system as well as access points to the major thoroughfare systems. Thoroughfares and utilities in TND Districts shall connect to existing thoroughfares and utilities, or dead-end as stubs intended for connection to future thoroughfares, unless otherwise prohibited by topography, environmental constraints or other considerations.

Each area within a TND District shall identify permitted land uses within the TND by reference to other zoning districts available with the Unified Development Code. Areas which are proposed for the sale or consumption of alcohol shall be indicated on the plans and must be approved for an alcohol license by the Alcoholic Beverage Control Board. All residents shall be within approximately quarter mile distance from existing or proposed commercial, civic and

open space areas. Single-family detached dwellings shall account for at least fifty percent of the total number of residential units within the TND District. Two-family units, Townhomes and Multi-family Units shall comprise less than fifty percent of units within the TND District. In areas devoted to mixed residential uses: The number of single-family attached and detached units permitted shall be 5-8 dwelling units per net acre. The number of multi-family units shall be 8-40 dwelling units per net acre. The number of secondary dwelling units shall not be comprised of more than 20 percent of the total number of single-family attached and detached units. In mixed-use areas: The number of single-family attached and detached units shall allow 5-8 dwelling units per net acre plus an additional number of units not to exceed ten percent. The number of multi-family dwelling units shall be 8-40 dwelling units per net acre plus an additional number of units not to exceed ten dwelling units or ten percent whichever is greater (Brian W. 2001).

2.3 MODULES IN LAND USE PLANNING

The rationale for highlighting on these modules is to assist planners and other stakeholders in land use planning to choose the appropriate module that would be appropriate in their situation. Development of each of the following modules will be based on: (1) a careful review, analysis and evaluation of existing software packages and their potential to accomplish the objectives of a given module and be linked to other modules, (2) selection of existing packages or development of new software that will best accomplish the desired focus on community-based land use planning, (3) the use of written, graphic and pictorial information specific to locations within Dane County, and (4) citizen/professional participation during module development for feedback on the usefulness, ease of use, and ability of modules to engage and involve citizens and professionals in land use issues. Here is a brief explanation of each of the modules:

2.3.1 The Exploration Module

The Exploration Module provides a single-source, readily accessible framework for citizens to obtain existing written, graphic and pictorial information about the county's natural and cultural resources, existing land uses, land use plans, and local ordinances. This module uses County data resources and build upon and be integrated with the County's information infrastructure and access mechanisms (Falk, K, 1998.).

2.3.2 The Analysis Module

The Analysis Module provides planning professionals and citizens with the ability to conduct a variety of spatial analyses from data sets that reside in the module. Examples of analyses that this module could support include systematic evaluation of environmental corridors, establishing farmland protection zones and in other policy-related activities using criteria selected or generated by the users of this module (Falk, K, 1998.).

2.3.3 The Allocation Module

The Allocation Module provides planning professionals and citizens with the ability to participate in the spatial allocation of various land uses and development densities using their own, or mutually agreed-upon, values. They will receive immediate written, statistical, pictorial and graphically-portrayed feedback from the Analysis Module and Impact Assessment Module on the short-and longer-term consequences of their own allocations (Falk, K, 1998.).

2.3.4 The Impact Assessment Module

The Impact Assessment Module provides information about the consequences of alternative land use allocations and policies using the best available land information and impact assessment

models. Models of environmental, aesthetic, and economic impacts relevant to the selected pilot project site will be incorporated, such as models concerning loss of farmland, visual alterations, and costs of community services (Falk, K, 1998.).

2.3.5 The Public Access Module

The Public Access Module coordinates County information and technology infrastructures, and act as an interface and umbrella under which versions of all other modules reside. Depending upon the ability to integrate this module with overall County information access plans, it will be the point-of-contact for individual citizens to independently become engaged and involved in the land use future of Dane County -- obtaining information about the present, participating in the process, and understanding and visualizing the short- and longer-term consequences of their own value-driven choices, as well as the consequences of land use decisions and policies that may be proposed by others (Falk, K, 1998.).

2.4 PRIVATE LAND USE RESTRICTIONS

2.4.1 Defeasible Fees

In defeasible fee estates, the grantor gives land to the grantee, subject to certain conditions. For example, A might convey a parcel of land to B, provided that it would be used for school purposes (Boyce, et al. 2003). The effect of the defeasible fee is that it restricts the use of the property by the possessor. Failure to observe the conditions causes the property to revert to the grantor. Estates of this type are no longer favored in most jurisdictions, because they make the transfer of land cumbersome and do not take into account unforeseen situations. The limited scope of defeasible fees makes them of limited value.

2.4.2 Easements

Easements are rights to use the property of another for particular purposes. A common type of easement in current use is the affirmative grant to a telephone company to run its line across the property of a private land owner. Easements also are now used for public objectives, such as the preservation of open space and conservation. For example, an easement might preclude someone from building on a parcel of land, which leaves the property open and thereby preserves a park for the public as a whole (Gorman, 2002).

2.4.3 Equitable Servitudes

Equitable servitudes are land-use restrictions enforceable in a court of Equity. They are created by the language of the promise in the form of a Covenant (agreement) between two individuals (Merill, 2002). For example, suppose A owns a parcel of land on the edge of a city that A subdivides the parcel into ten lots, numbered 1 to 10. A then records a declaration of restrictions, limiting each of the ten lots to use solely for family dwelling, providing that only a single-family house may be built on each lot. A sells the lots to ten people, and each deed contains a reference to the declaration of restrictions by record book and page number, coupled with a provision that the person purchasing the lot and all successive purchasers of the lot are bound by the restrictions.

2.4.4 Restrictive Covenants

Restrictive covenants are provisions in a deed limiting the use of the property and prohibiting certain uses (Merill, 2002). They are similar in effect to equitable servitudes, but restrictive covenants run with the land because the restrictions are contained in the deed. Restrictive

covenants are typically used by land developers to establish minimum house sizes, setback lines, and aesthetic requirements thought to enhance the neighborhood. The legal differences between equitable servitudes and restrictive covenants are less important today, as courts have merged the terms into one general concept.

2.4.5 Nuisance

Nuisance is an unreasonable, unwarranted, or illegal use by an individual of his or her own property that in some way injures the rights of others (Scheberle, 2004). A nuisance action ordinarily arises between two neighboring landowners or is brought by a government attorney. The person initiating the nuisance action seeks to control or limit the use of the land that is creating the nuisance. Nuisance is based on the principle that no one has the right to use property in a manner such as to injure a neighbor (Patty, 2011).

A public nuisance extends further than a private nuisance, since it adversely affects the health, morals, safety, welfare, comfort, or convenience of the general public. Statutes in many states precisely define what constitutes a public nuisance. Common examples are water and Air Pollution, the storage of explosives under dangerous conditions, houses of prostitution, the emission of bad odors or loud noises, and the obstruction of public ways.

2.4.6 Eminent Domain

Eminent Domain is the right or power of a unit of government or a designated private individual to take private property for public use, following the payment of a fair amount of money to the owner of the property. The Fifth Amendment to the U.S. Constitution provides, "[N]or shall private property be taken for public use, without just compensation." This statement is

commonly referred to as the Takings Clause. The theory behind eminent domain is that the local government can exercise such power to promote the general welfare in areas of public concern, such as health, safety, or morals.

Eminent domain may be exercised by numerous local government bodies, including drainage, levee, or flood control agencies; highway or road authorities; and housing authorities. For example, if a city wishes to build a new bridge, and the land it needs is occupied by 60 houses, it may use its eminent domain power to take the 60 houses, remove the buildings, and build the bridge. The government must make just compensation to the affected property owners, who are entitled to the fair market value of the property. The power of eminent domain is exercised through condemnation proceedings (Aaron, 2004). These proceedings establish the right to take the property by the government or designated private individual (usually Public Utilities) and the amount of compensation to be paid for the property.

2.4.7 Historic Districts

Since the 1950s more attention has been paid to the preservation of historic districts. Purchase or condemnation by the government for historic preservation purposes is valid. More important, acts establishing historic districts have been upheld as promoting the public welfare. State and local preservation laws have been bolstered by the federal National Historic Preservation Act of 1966, which provides a procedure for registering buildings as historic landmarks. Apart from establishing a national register of historic sites, the act provided for the protection and restoration of historic sites and districts (Utah State Historic Preservation Office, 2008).

2.5 ASSESSING LAND USE PLANNING IMPACTS

2.5.1 Socio-Economic Impacts

Land is one of three major factors of production in classical economics (along with labor and capital) and an essential input for housing and food production. Thus, land use is the backbone of agricultural economies and it provides substantial economic and social benefits. Land use change is necessary and essential for economic development and social progress (Refer to Appendix E).

Land use change, however, does not come without costs. Conversion of farmland and forests to urban development reduces the amount of lands available for food and timber production. Soil erosion, salinization, desertification, and other soil degradations associated with intensive agriculture and deforestation reduce the quality of land resources and future agricultural productivity (Lubowski et al., 2006).

As urbanization intensifies, agricultural and nonagricultural land use conflicts become more severe. This may lead to an increase in local ordinances designed to force farmers to pay for some of the negative impacts generated by agriculture. As the nearest input suppliers close because of insufficient demand for farm inputs, a farmer may have to pay more for inputs or spend more time to obtain equipment repairs (Lynch and Carpenter, 2003). Competition for labor from non-agricultural sectors may raise farmers' labour costs. When the total amount of farmland falls below a critical mass, the local agricultural economy may collapse as all agricultural supporting sectors disappear.

Urbanization has changed rural communities in many places. In some rural areas, urban sprawl has encroached to such an extent that the community itself has been lost. In other areas, the lack

of opportunities has turned once-viable communities into ghost towns. Urban sprawl intensifies income segregation and economic disparities between urban and suburban communities (Wu, 2006).

Suburbanization brings urban and rural people and problems together. Most land areas are rural, most watersheds are in rural places, and most of the atmosphere exists above rural space. Urbanites and agencies have legitimate concerns about the use and condition of rural natural resources, just as rural populations have legitimate concerns about urban-based pressures on the natural world. These shared interests in the natural environment have important economic, social, and political implications, which may profoundly impact society in the future.

In response to the increasing urbanization, many local governments have imposed strict land use control. Some of the efforts have been quite successful in slowing down development. For example, Wu and Cho (2007) found that local land use regulations reduced land development by 10 percent in the five western states between 1982 and 1997. Two recent Harvard University studies found that land use regulation reduces housing affordability in the Greater Boston Area (Glaeser and Ward 2006; Glaeser and Gyourko, 2002).

In sum, land use change provides many economic and social benefits, but comes at a substantial economic cost to society. Land conservation is a critical element in achieving long-term economic growth and sustainable development. Land use policy, however, must strike a balance between private property rights and the public interest.

2.5.2 Environmental Impacts

Land–use change is arguably the most pervasive socioeconomic force driving changes and degradation of ecosystems. Deforestation, urban development, agriculture, and other human activities have substantially altered the Earth’s landscape. Such disturbance of the land affects important ecosystem processes and services, which can have wide–ranging and long–term consequences (Refer to Appendix E).

Urban development has been linked to many environmental problems, including air pollution, water pollution, and loss of wildlife habitat. Urban runoff often contains nutrients, sediment and toxic contaminants, and can cause not only water pollution but also large variation in stream flow and temperatures. Habitat destruction, fragmentation, and alteration associated with urban development have been identified as the leading causes of biodiversity decline and species extinctions (Czech, Krausman and Devers, 2000; Soulé, 1991). Urban development and intensive agriculture in coastal areas and further inland are a major threat to the health, productivity, and biodiversity of the marine environment throughout the world.

2.6 CONCEPTUALIZATION OF DEVELOPMENT

Economic development is the increase in the standard of living in a nation's population with sustained growth from a simple, low-income economy to a modern, high-income economy. Also, if the local quality of life could be improved, economic development would be enhanced. Its scope includes the process and policies by which a nation improves the economic, political, and social well-being of its people (Steven, 2003).

To summarize, as noted in Anand's article (1993), we can view the relationship between human development and economic development in three different explanations. First, increase in average income leading to improvement in health and nutrition (known as Capability Expansion through Economic Growth). Second, it is believed that social outcomes can only be improved by reducing income poverty (known as Capability Expansion through Poverty Reduction). Thirdly, (known as Capability Expansion through Social Services), defines the improvement of social outcomes with essential services such as education, health care, and clean drinking water.

2.7 LAWS IN LAND USE PLANNING

The Municipal Land-use Regulation begins with a planning process that ultimately results in a comprehensive or master plan followed by ordinances. These ordinances involve the exercise of the municipality's Police Power through zoning, regulation of subdivision developments, street plans, plans for public facilities, and building regulations. Many states provide for the creation of an official map for a municipality. The planning process is designed to enable a locality to plan for the construction of schools, streets, water and sewage facilities, fire and police protection, and other public amenities, and the private use of land is controlled by zoning and subdivision ordinances enacted in compliance with the plan.

Planned communities often impose a number of restrictions on their members. These are typically contained in the real estate deed, which becomes a contract between the property buyer and the community. Purchasers are bound by these restrictions whether or not they read or understood them. The restrictions may cover a wide range of architectural and aesthetic limitations, and are believed to increase the value of property in the community. Unwary residents may find the limitations extreme.

Since the 1970s more emphasis has been placed on regional and statewide planning. These planning initiatives have often been based on environmental concerns. Regional planning has become attractive to urban areas that cross state lines. Instead of dealing with two or three competing and conflicting local plans, neighboring municipalities can refer to a regional plan that offers one comprehensive vision and one set of regulations.

Zoning is the regulation and restriction of real property by a local government. It is the most common form of land-use regulation, as municipalities rely on it to control and direct the development of property within their borders, according to present and potential uses of the property. Zoning involves the division of territory based on the character of land and structures and their fitness for particular uses. Consideration is given to conserving the value of property and encouraging the most appropriate use of land throughout a particular locality.

A municipality's power to enact zoning regulations is derived from the state in an exercise of its police power. Police power is the inherent power of the government to act for the welfare of those within its jurisdiction. The power to impose zoning restrictions is conferred on a municipality by a state enabling statute.

Zoning laws are intended to promote the health, safety, welfare, convenience, morals, and prosperity of the community at large, and are meant to enhance the General Welfare rather than to improve the economic interests of any particular property owner. They are designed to stabilize neighborhoods and preserve the character of the community by guiding its future growth.

The essential purpose of zoning is to segregate residential, commercial, and industrial districts from one another. Within these three main types of districts there may be additional restrictions as to population density and building height. The use of property within a particular district is for the most part uniform. For example, if a district is zoned for industrial use, residential buildings are not normally permitted there. However, if a residential building predates the zoning plan, it is permitted to remain. This exception is called a nonconforming use.

Municipalities exercise wide discretion in fixing the boundaries of commercial and industrial districts. A number of ordinances have been enacted to protect residential zones from encroachment by gasoline stations, public parking facilities, businesses selling intoxicating liquors, and factories that produce smoke or odors.

When enacting zoning ordinances, a municipality takes many factors into consideration. The most significant are the density of the population; the site and physical attributes of the land involved; traffic and transportation; the fitness of the land for the permitted use; the character of neighborhoods in the community; the existing uses and zoning of neighboring property; the effect of the permitted use on land in the surrounding area; any potential decrease in property values; the gain to the public at large weighed against economic hardships imposed on individual property owners; and the amount of time that the property has remained unimproved, reviewed in the context of land development in the area as a whole.

Exclusionary zoning is the practice of using the zoning power to develop the parochial interests of a particular municipality at the expense of surrounding regions. Its purpose is to advance economic and social Segregation. Exclusionary zoning involves using zoning to take advantage of the benefits of regional development without being forced to bear the burdens of such

development, as well as using zoning to maintain particular municipalities as enclaves of affluence or social homogeneity. Both practices have been strongly condemned in the courts, since they violate the principle that municipal zoning ordinances should advance the general welfare.

Exclusionary zoning takes various forms, such as requirements setting a minimum plot size or house size, the prohibition of multifamily housing, and the prohibition of mobile homes.

A municipality has a legitimate interest in ensuring that residential development proceeds in an orderly and planned manner and that the burdens on municipal services do not increase faster than the ability of services to expand. It must also preserve exceptional environmental and historical features. Increasingly, however, exclusionary techniques have come under fire as unfair ways of preventing the creation of economically, racially, and socially diverse communities.

The relevance of land use planning laws such as Cap 84 in Ghana has helped to control physical developments. The state through this law has achieved higher standards in development control and orderly development in most parts of the country. Also, the Law provides a development framework which specifies the roles to be played at the National, Regional and Metropolitan/Municipal and District Assemblies. This framework facilitates the enforcement of the planning Law at all levels throughout the country.

2.8 LAND USE PLANNING IN THE INDUSTRIALIZED COUNTRIES

In cities of the developed world urbanization traditionally exhibited a concentration of human activities and settlements around the downtown area, the so-called in-migration. In-migration

refers to migration from former colonies and similar places. The fact that many immigrants settle in impoverished city centres led to the notion of the "peripheralization of the core", which simply describes that people who used to be at the periphery of the former empires now live right in the centre.

Both Bocquier and the UN see more people flocking to cities, but Bocquier sees many of them likely to leave upon discovering that there's no work for them and no place to live.

World's population over the twentieth century is described in the 2005 Revision of the UN World Urbanization Prospects report. This publication gives signals to countries about the trend of urbanization in order to plan their land use to avoid sprawl and its associated negative effects. Population projection is a crucial factor to reckon with in land use planning as people require space in every activity they undertake. Therefore land use planning is an effective intervention to deal with population dynamics in order to protect cities environment. The World's Urban-Rural continuum is shown in Figure 2.1.

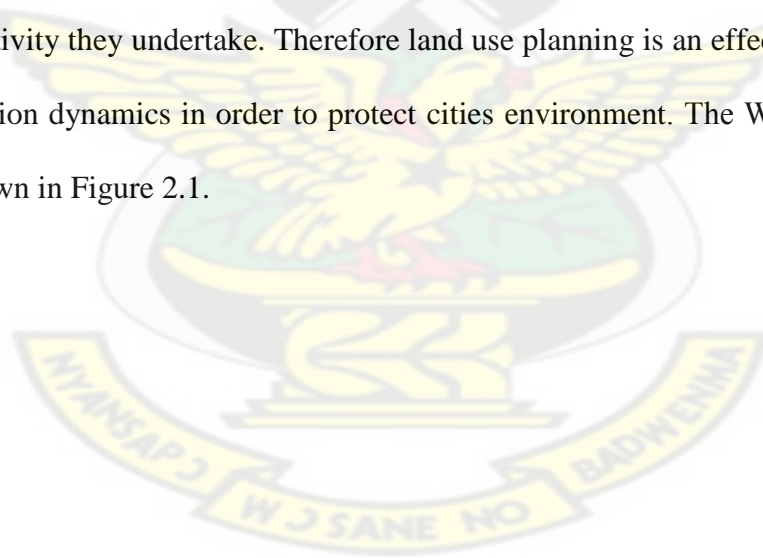
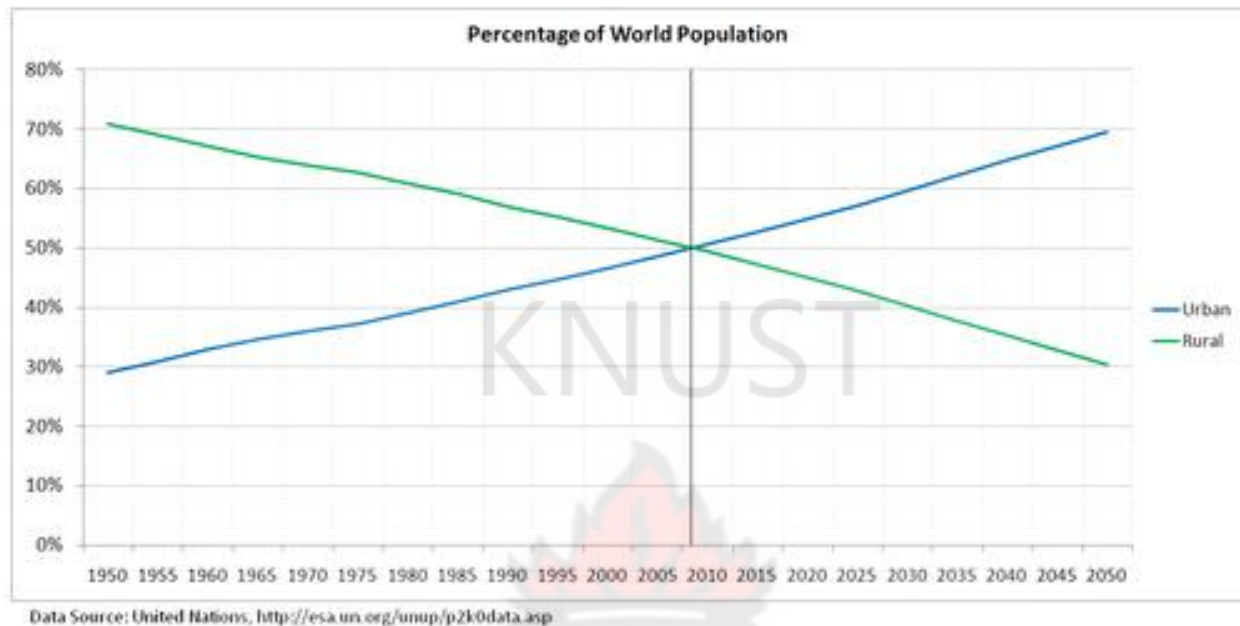


Figure 2.1 World Urban-Rural Continuum



2.9 LAND USE PLANNING IN DEVELOPING COUNTRIES

The transformation of Africa from a basically rural society, towards a mainly urban one, through the process of concentration of large numbers of people in large cities has been an ongoing phenomenon that has come to characterize Africa. The emerging community practices in land use planning and management of urban settlements in Africa's cities are a result of urbanization and the diminished capacity of the state and its administration to provide services and to manage urban development.

The altering of political and socio-economic environment in urbanized Africa since the mid 1980s has resulted in the adoption of market-oriented policies, which have made the role of the state very different from the one it had during the previous periods, when it had the formal authority to provide housing, services and infrastructure. In this transformed role, the

state is no longer the major provider of services and infrastructure in housing and in urban planning. These transformations have increased the role of local actors: groups of people, CBOs, residents and other groups in the civil society in urban land use. Although there are a large number of actors in housing and service provision and land use planning, there is still an unclear interrelation between official and unofficial planning systems.

At the turn of the millennium, Africa's urban areas were driven mostly by not formal practices in such important areas as land use (Stren and Halfani, 2001:474). The significance of land developments in Africa invites close attention by researchers and policy makers to attempt to explain how African urban maintenance is made in order to improve generally worsening standards of living. It is only recently that major large business companies and bilateral development organizations have turned their attention to the quickly growing cities in Africa (UNCHS, 2001). It is clear that this tendency reflects concerns about land use in some of the poorest part of the world.

In most African countries, the capacity of public establishments to guide and support land use has decreased extremely over the last three to four decades. Houses are primarily supplied through illegal occupation of land or subdivision of land in conflict with planning procedures, and building of houses without authorization to do so and in violation of building codes. Not only the poor members of society build houses outside the law, in recent years, middle and high standard housing regions have also been managed informally, chiefly based on subdivision of land having no official permission, both public and private. There, as in low-income communities, infrastructure is in poor state or absent. Informal establishment of new regions that appear to have emerged in defiance of the law may at present (Mighty Students, 2010).

Land markets in urban Africa have not been well studied. This is perhaps because African governments believe that they are the major source of urban land through planning schemes, or because governments do not generally recognize sale of bare land, and therefore believe that land market transactions do not exist. However, there is considerable evidence that most landowners in urban Africa obtain land by way of purchasing it from recognized owners, be they in the planned or in the unplanned sector.

Some studies give insights into some aspects of the land markets in urban Africa, taking the case of Dar es Salaam in Tanzania as an example. This fact is based on the results of a study carried out in Dar es Salaam in 1994. The findings elucidate on the question of land markets in urban Africa. It is recommended that the government should help land markets to come out in the open and to operate efficiently since land buying was found to be a common practice. If this was to be the case, dividends would accrue to both the transactors in land, who would have a more reliable and efficient market to work into, and to the government which would have better information to manage urban land, including a possibility of reaping higher revenue (United Republic of Tanzania, 1998).

UN-Habitat informs us that almost all of the projected urban growth in Africa over the next two decades will take the form of slum growth, because this is what the evidence from previous years demonstrate (African Centre for Cities, 2010). Malaria control is an essential pre-requisite for a healthy rural community anywhere in the world. Sustainable development of rural communities in sub-Saharan Africa has been hampered by infestations such as the tsetse fly, causing sleeping sickness in humans and domestic animals, and the black-fly causing river blindness.

There are new and promising biological methods of eradicating tsetse fly infestations, and the black-fly has been eliminated in large parts of West Africa by concentrated efforts of an international consortium led by the World Bank, in close collaboration with the Governments that are directly concerned. Such disease control measures now provide unique opportunities for national planning agencies, supported by international institutions and donor countries, to carry out integrated approaches to land resources planning in these hitherto sparsely populated areas.

In Ghana the new decentralized planning and decision making system which was promulgated in the late 1980's is now being strengthened and operationalized. Essentially, the system is designed to restructure the political and public administrative machinery of Ghana for development and decision making at both the national and local levels. The system is however defined by the combined provisions of four main pieces of legislation (laws), namely the Civil Service Law of 1993, Act 327, the Local Government Act of 1993, Act 462, the National Development Planning Commission Act of 1994, Act 479, and the National Development Planning (Systems) Act of 1994, Act 480. At the District level, however, the co-ordination and overall responsibility rests with the various District Assemblies. Besides there are a variety of non-governmental agencies also involved in the decision making process as far as human settlement development is concerned.

The Land Use Planning and Management Project (LUPMP) in Ghana is a three year initiative (2007-2010). It is an integral part of the broader Land Administration Project (LAP) which has been implemented by the Ministry of Lands, Forestry and Mines since 2003. LUPMP is funded by the Government of Ghana and the Nordic Development Fund (TCPD, 2007).

The project's overall objective is to develop a coherent, streamlined and sustainable land use planning and management system which is decentralized and based on consultative and

participatory approaches in order to manage effectively human settlements development. LUPMP is, effectively, an ambitious attempt to reform and update Ghana's land use planning and management system (TCPD, 2007).

The Town and Country Planning Department (TCPD) was established in 1945 and charged with the responsibility of planning and management of growth and development of cities, towns and villages in the country. It therefore seeks to promote sustainable human settlements development based on principles of efficiency, orderliness, safety and healthy growth of communities. Prior to 1993, responsibility for planning was with the Minister responsible for Town and Country Planning (The Town and Country Planning Act of 1958 (Act 30). This modified the provision of the Town and Country Planning (Gold Coast), CAP 84 which had established a Town and Country Planning Board, responsible for the orderly and progressive development of land, towns and other areas whether rural or urban, and the preservation and improvement of amenities in these areas.

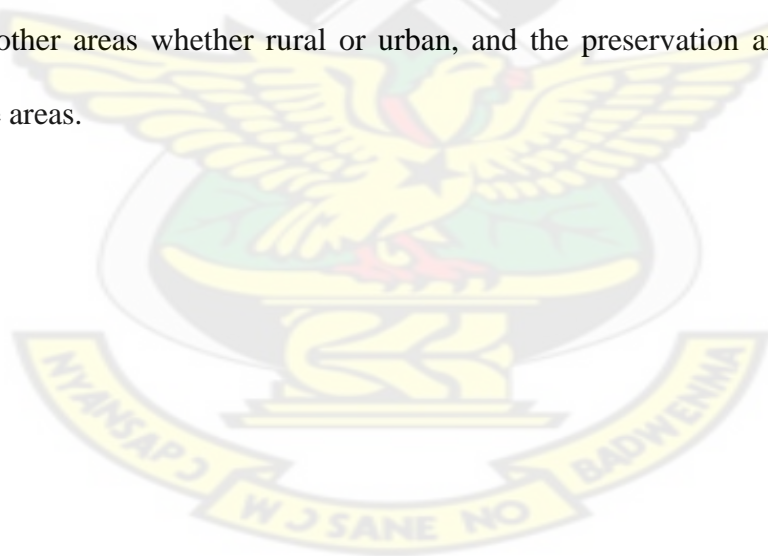
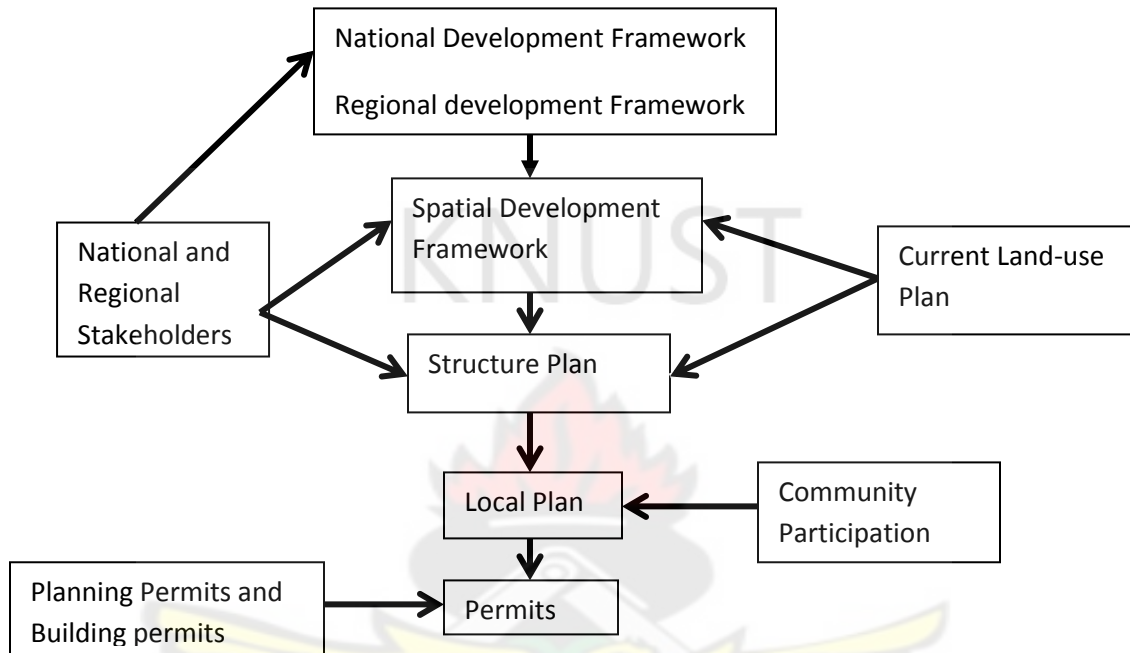


Figure 2.2 National Spatial Development Framework



Source: Town and Country Planning Department Headquarters, Accra

It can be observed from the diagram that, the National and Regional development frameworks are determined with the assistance of stakeholders that would assist in formulating appropriate frameworks for both National and Regional physical development in the country. The structure plan is also drawn with the help of key stakeholders within each region. The structure plan determines how local or sector plans would fit into the overall development of the Region. However, the local plans are drawn with the assistance of the community through the participatory approach in physical planning. Upon completion of the local plan, then prospective developers can apply for both planning permits and building permits as demonstrated above.

2.10 DRIVERS IN LAND USE PLANNING

Land use planning is based on drivers which involve safety, aesthetics, harmony, economy and convenience. Safety is ensuring that the people are protected from all forms of disasters that are injurious to their health. Aesthetics on the other hand involves locating facilities like sanitary sites at the appropriate places in order not to mar the beauty of the neighbourhood.

Harmony is the process of ensuring that conflicting land uses are avoided in order to avoid nuisance like noise and air pollution. Economy on the other hand implies the prevention of high cost as a result of implementing land use planning. That is the benefits of the plan should exceed its cost as well as reduce waste land which can be very expensive.

The final driver in land use planning is convenience which involves the ease with which one can move from one location to another destination to access a service. The implication of this principle is that the land use plan should enable the people living in the planned area to access services without encountering much difficulties or inconvenience.

These drivers are the variables against which data collection, analysis and synthesis hovers which feature prominently in the subsequent chapters.

2.11 CONCEPTUAL FRAMEWORK OF LAND USE PLANNING AND SOCIO-ECONOMIC DEVELOPMENT.

This section defines the area of jurisdiction of the researcher and seeks to indicate the various problems, intervention areas and major outcomes if land use planning is improved. This model of conceptual framework is based on both the objective and problem tree concepts in development planning.

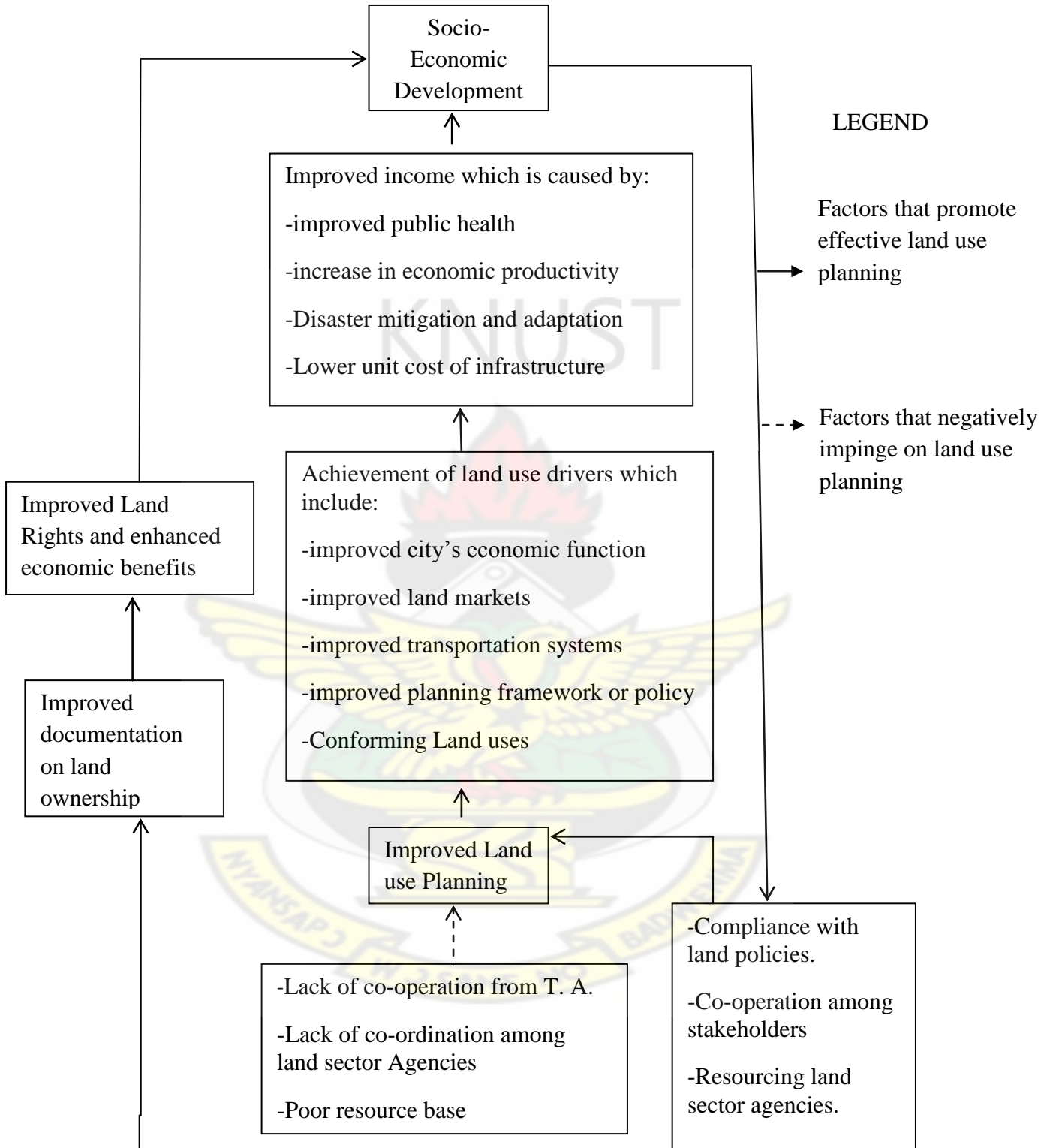
In Figure 2.3, it can be observed that there are some factors that impinge negatively on improving upon land use planning. Some of these factors are lack of co-operation from Traditional Authorities, lack of co-ordination among land sector Agencies and Poor resource base to support the activities of institutions directly involved in land use planning. However, there are some factors that enhance the achievement of improved land use planning. Among these factors are: Compliance with land policies: co-operation among stakeholders, compliance with land policies and resourcing land sector agencies.

Improved Land use Planning leads to Achievement of land use drivers which include: improved city's economic function, improved land markets, improved transportation systems, improved planning framework or policy and Conforming Land uses, These would also lead to improved income, which is caused by: improved public health, increase in economic productivity, Disaster mitigation and adaptation and Lower unit cost of infrastructure. Thereby result in socio-economic development.

Compliance with land policies, co-operation among stakeholders and resourcing land sector agencies would lead to improved documentation on land ownership. This would also result in Improved Land Rights and enhanced economic benefits thereby attaining socio-economic development.

A detailed analysis of conceptual framework matrix of good governance in land administration is shown in appendix 1 as further explanation to this section. Key headings under this matrix are: objectives of good governance in land administration, implications of poor governance in land administration, land policy contextual questions and indicators.

Figure 2.3 Conceptual Framework of Land Use Planning and Socio-Economic Development



Source: Author's construct, March 2011

CHAPTER THREE: PROFILE OF STUDY AREA AND ANALYSIS OF SUVEYED INSTITUTIONAL DATA

3.1 INTRODUCTION

The location of the study areas spatially is indicated in this section. The spatial dimensions and neighbouring districts are shown to provide information about the geographical background of the study areas. The demographic characteristics of both areas of research are also explained. The built environment and the spatial location of various settlements are highlighted to give information about settlement patterns. The nature of land use planning systems, land ownership, challenges of land use planning are being discussed in this chapter to give insight into land use planning issues from which deductions can be drawn.

3.2 LOCATION AND SIZE

Sunyani Municipal Assembly is one of the twenty-two administrative districts in the Brong Ahafo Region of Ghana. It lies between Latitudes $7^{\circ} 20'N$ and $7^{\circ} 05'N$ and Longitudes $2^{\circ} 30'W$ and $2^{\circ} 10'W$ and shares boundaries with Sunyani West District to the North, Dormaa District to the West, Asutifi District to the South and Tano North District to the East. There are effective economic and social interactions with the neighbouring districts which promote resource flow among these districts.

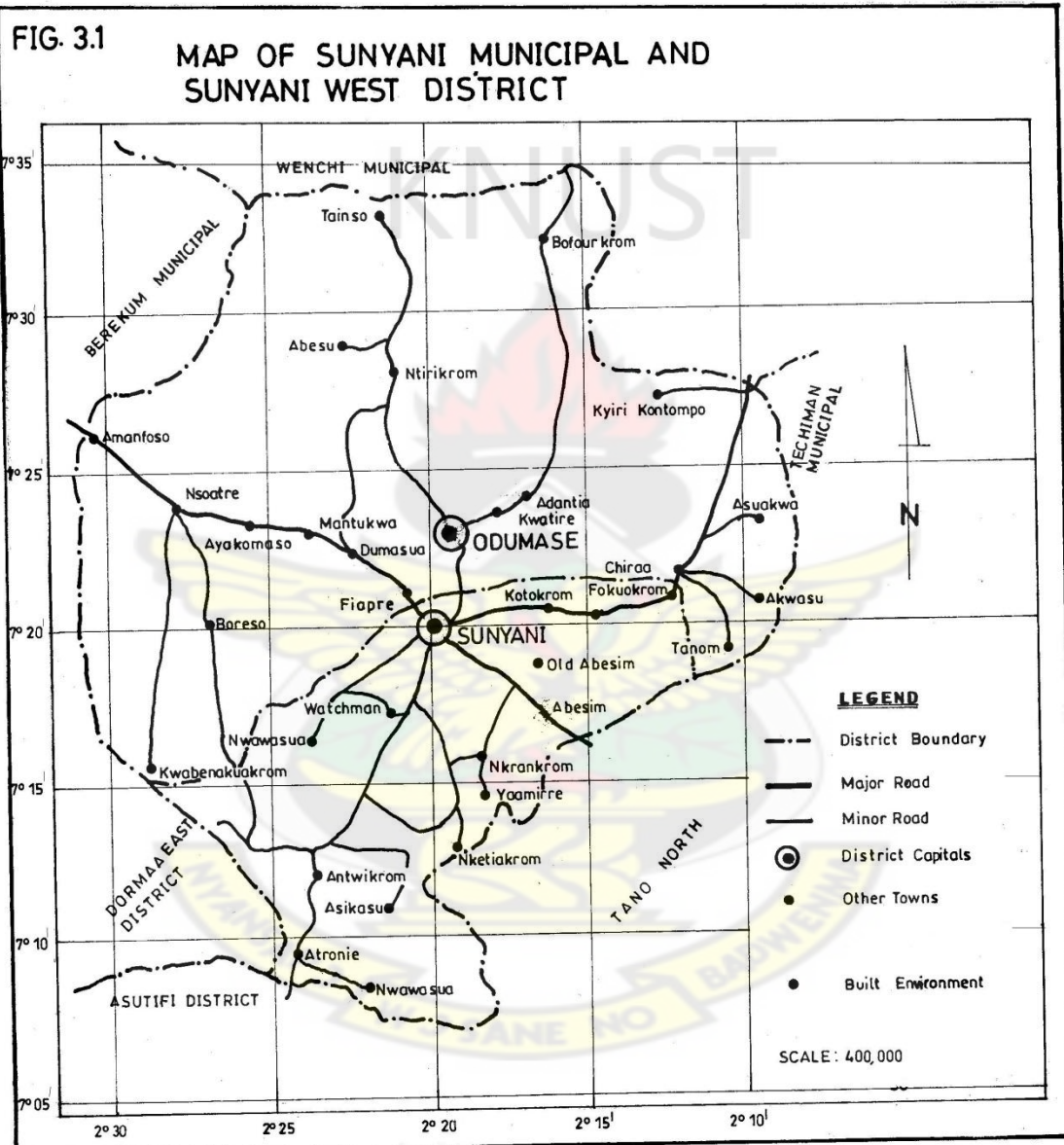
The municipality has a total land area of 829.3 square kilometres (320.1square miles). Sunyani also serves as the Regional Capital for Brong Ahafo. One third of the total land area is not inhabited or cultivated which provides arable lands for future investment in crop farming.

The Sunyani West District lies between latitude 7° 19'N and 7° 35'N and longitudes 2° 08' W and 2° 31' W. It shares boundaries with Wenchi Municipality to the North East, Tain District to the North, Berekum and Dormaa East to the West, Sunyani Municipal to the South East and to the Eastern boundaries of the District are Tano North and Ofinso North District. Sunyani West District has a total land area of 1,658.7 square kilometers (SWDA, 2010).

The location of both Sunyani Municipality and Odumasi (capital of Sunyani West District) are indicated in Figure 3.1.

Figure 3.1 Sunyani Municipal and Sunyani West District Map

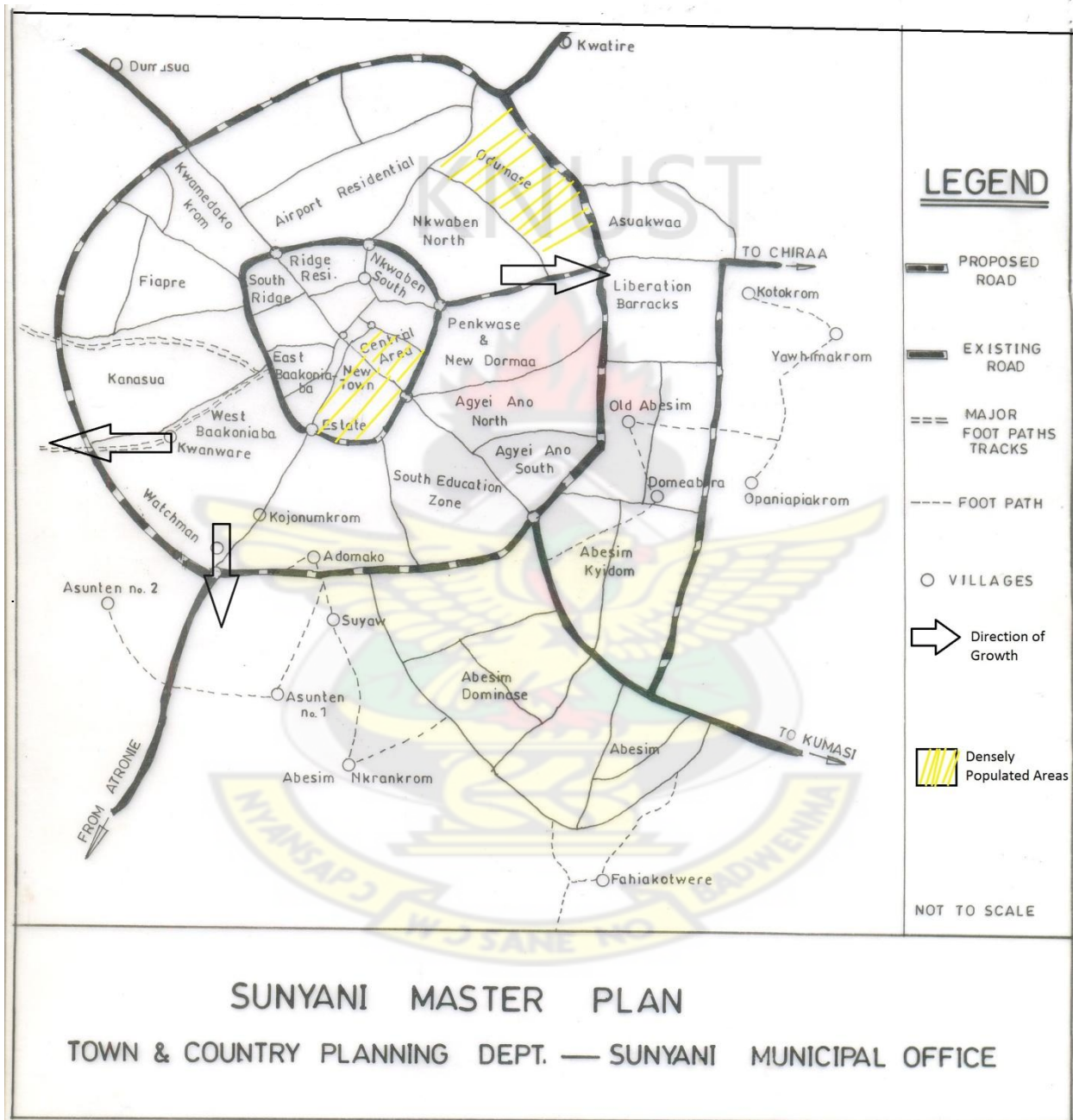




Source: Sunyani Municipal Assembly

The master plan of Sunyani Municipality is shown in Figure 3.2. The legend explains the map into details.

Figure 3.2: Master Plan of Sunyani Municipality



Source: Sunyani Municipal Assembly

3.3 RELIEF AND DRAINAGE

The Sunyani Municipality and Sunyani West districts lie within the middle belt of Ghana with heights from 229 meters to 376 meters above sea level. The topography of the municipality is fairly flat thus suitable for large scale agricultural mechanization. Cost of constructing houses and roads is relatively minimal due to the nature of the topography.

The drainage is basically dendritic with several streams and rivers, notably Tano, Amoma, Kankam, Benu, Yaya and Bisi. Most of the water bodies are seasonal (SMA, 2010). This often creates water shortage in the municipality during the dry season for both domestic and agricultural purposes. There is therefore the need to develop water infrastructure to avoid overdependence on these sources of water for human use.

3.4 CLIMATE AND VEGETATION

The study areas fall within the wet Semi-Equatorial Climatic Zone of Ghana. The monthly temperatures vary between 23°C and 33°C with the lowest around August and the highest being observed around March and April. The relative humidities are high averaging between 75 and 80 percent during the rainy seasons and 70 and 80 percent during the dry seasons of the year which is ideal for luxurious vegetative growth (SMA, 2010).

The average rainfall for Sunyani Municipality and Sunyani West District between 2000 and 2009 is 88.987cm. These areas experience double maxima rainfall pattern. The main rainy season is between March and September with the minor between October to December. This offers two farming seasons in a year which supports agricultural production in the Municipality and the District. However, the rainfall pattern is changing over the years as a result of deforestation and depletion of water bodies resulting from human activities (SMA, 2010).

The study areas fall largely within the Moist – Semi Deciduous Forest Vegetation Zone. Most of the primary vegetation can be found in patches around the north-west, east and southern parts. These include the Yaya and the Amoma forest reserves. This vegetation zone also contains most of the valuable timber species such as Wawa Odum and Mahogany. As indicated by the characteristics of the vegetation cover, tree crops such as cocoa and citrus thrive well in this zone. As a result of lumbering and farming practices, most of the forest areas have been degraded. Re-afforestation is therefore being undertaken in the forest reserves to reverse the trend (SMA, 2010).

3.5 GEOLOGY AND MINERAL DEPOSITS

The study areas are underlain by Precambrian Birrimian formations which are believed to be rich in mineral deposits. Associated with the Birrimian formations are extensive masses of granite. The Cape Coast Granite Complex is what pertain in the Municipal and the District Assemblies. The rich minerals deposit underlain in Precambrian Birimian and the Birimian presents a great potential for investment in mineral exploitation (SMA, 2010).

3.6 POPULATION SIZE AND GROWTH RATE

In 2000 the population of Sunyani municipality was 101,145. Currently, with a growth rate of 3.8 percent, the estimated population is 147,301. The growth rate of Sunyani compared with the regional population growth rate of 2.5 and the national growth rate of 2.7 percent indicates a high growth rate (Ghana Statistical Service, Sunyani, 2010). This has contributed to pressure on the available facilities. It is therefore required that development authorities intervene to reduce this pressure.

Table 3.1 Populations for Sunyani Municipal and Sunyani West District

Name of Locality	1984	Growth rate	2000	Growth rate	2010
Sunyani Municipal	-	-	101,145	3.8	147,301
Sunyani West	-	-	78,020	3.8	113,623
Sunyani (Combined)	98,183	3.5	179,165	3.8	260,924

Source: Ghana Statistical Service, Sunyani, 2010

Table 3.1 above, indicates an increase from 3.5 percent to 3.8 percent of growth rate. Comparing with the national rate of 2.7 percent brings to fore issues of population management to be dealt with. This trend presents serious development challenges to the municipality and the District, as the population growth does not match with the provision of social services and infrastructure development (SMA, 2010).

3.7 SPATIAL DISTRIBUTION AND DENSITY

The population density of the municipality is 122 persons per square kilometre (SMA Computation, 2010). In comparing this to the population density of the region which is 45.9/sq.km and that of the nation of 76/sq.km, the municipality is densely populated resulting in pressure on social facilities.

From socio-economic survey conducted, the densely populated areas in the municipality include Zongo, New Dormaa and Area 2 in that order. On the average these areas have 18 persons per house. Nkwabeng, Abesim and Nkrankrom constitute the medium densely populated areas with an average of 13 persons per house. The low density areas are Estate, South Ridge, Airport

Area, Atronie and Baakoniaba with an average of 8 persons per house. The densely populated areas are mostly in the low income group whereas the less dense areas are mostly in the high and medium income groups (SMA, 2010).

The distribution of population in the Sunyani West District is generally skewed. The Four Largest localities (Nsoatre, Chiraa, Odomase, and Fiapre) hold a significant proportion of the District's total population with 59.24 percent distributed among the other settlements (SWDA, 2010).

The concentration of population in the four major settlements has increased demands for utility services such as water, sanitary facilities, electricity and telephone services. Waste generation has also increased in the District especially in these four communities. Other major settlements in the District that are densely populated include: Asuakwa, Dumasua, Kwatire, Adantia, Tanom and Kobedi. The population density of the district is 68.8 persons per square kilometer (SWDA, 2010).

3.8 BUILT ENVIRONMENT

In Sunyani Municipality, the built environment experiences sheet and gully erosion on roads and residential areas. Settlements where erosion is more pronounced include Atronie, Abesim and Nkwabeng. These major settlements in the Municipal Assembly are been indicated on Sunyani Municipal Map. The direction of growth in the municipality is towards the West that is Atronie road, Asufufu, Adomako, Kwaware and Baakoniaba as indicated in figure 3.2. This may suggest the need to open up the area with social services and infrastructure development (SMA, 2010)

In Sunyani West District, the four largest localities are: Nsoatre, Chiraa, Odomase, and Fiapre. These settlements hold a significant proportion of the District's total population with 59.24 percent distributed among the other settlements. These major settlements in the District are shown in the figure 3.1 which is the Sunyani Municipal and Sunyani West District map.

3.9 ECONOMY OF THE STUDY AREAS

In Sunyani Municipality, agricultural activities including crop farming, animal husbandry and fishing constitute the highest proportion of workers in the municipality forming 45.9 percent, followed by Industry (carpentry, bricks and block laying, timber related industries, and construction workers), 14.7 percent. Service and Administration (Government workers, financial institutions, Communication workers, Hairdressers, and seamstresses), constitute 9.6 percent, Professional and Technical (Engineers, consultants and pharmacist), 9 percent, Commerce, 8.6 percent and whereas others such as head potters, truck pushers, mining form 1.4 percent (GSS, 2000).

In Sunyani West District agriculture is the major occupation of the people. The District has 57.6 percent of its active population engage in agricultural activities. This can be attributed to the relatively low cost of acquiring land for agricultural activities. Again the fertility of the soil in the District, as stated earlier the arable land is able to support the cultivation of a myriad of crops such as maize, cassava, yam and plantain. On the other hand, the potential of a successful agricultural activity continues to attract people from all over the country especially from the north to settle in remote areas of the District, hence increasing the need for water and sanitation facilities (SWDA, 2010).

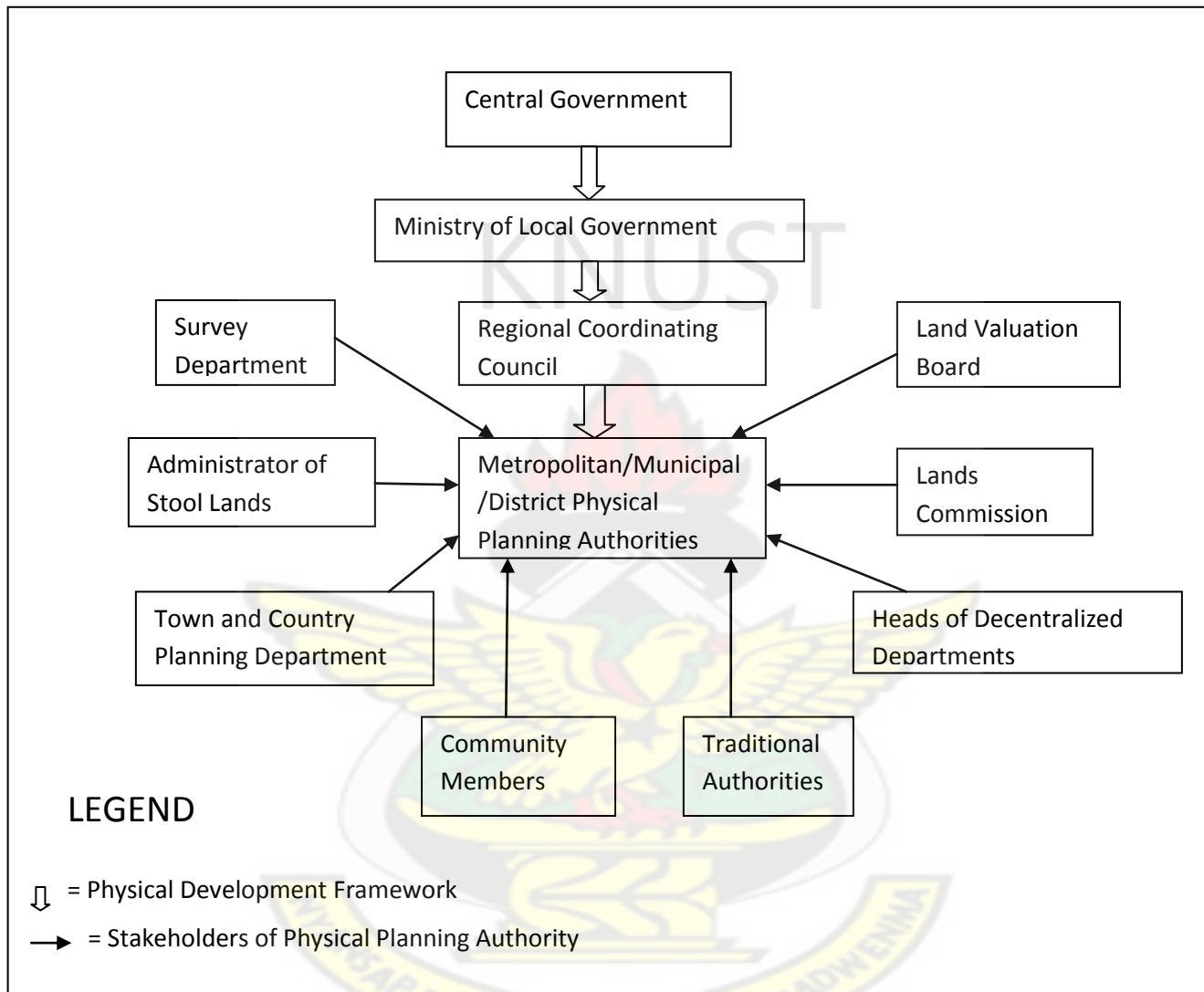
The manufacturing sector also employs a significant proportion of the work force, 10 percent in several small-scale businesses such as dressmakers, metal fabrication and spare parts dealing, carpentry and joiners, and brick making. Wholesale and retail trade on the other hand employs 13.8 percent of the workforce in District. The District attracts traders from other Districts in the Region, north and south of the country and even some from neighboring countries who trade mostly in her agricultural produce (SWDA, 2010).

The occupational background shows the nature of dominant economic activities and that has affected their living conditions.

3.10 INSTITUTIONAL SET-UP OF LAND USE PLANNING

From the interview conducted with the Town and Country Planning Department Officers who are the secretaries of the Statutory Planning Committees, it was identified that the land sector agencies (Survey Department, Administrator of Stool Lands, Land Valuation Board, Lands Commission, Town and Country Planning Department and Traditional Authorities) and the entire community members are involved in the planning process which makes it participatory. The institutional set-up of land use planning is shown in Figure 3.3.

Figure 3.3 Institutional and Administrative Set-Up of Land Use Planning



Source: Author's construct, March 2011.

3.11 LEGAL INSTRUMENTS THAT SUPPORT LAND USE PLANNING

The broad legal frameworks within which the Planning Authorities at the two assemblies operate are the Local Government Act 462 and Town Planning Act CAP 84. The planning law facilitates the process of administering the planning powers. The Planning Authority also grants

development permits to all prospective developers that have applied for development permits and places injunction on all unauthorized developments.

3.12 PROCESSES INVOLVED IN LAND USE PLANNING

From the interview conducted, it was observed that the process of land use planning is preceded by placing moratorium on the area earmarked for planning. The rationale for this intervention is to prevent any new development until the plan is completed for implementation. The information about moratorium placement is made by holding consultative meeting with the people who have stake in the land under consideration.

The first step in land use planning is to engage the Survey Department to come out with a base map of the area under consideration. The second stage is for the Town and Country Planning Department to come out with a settlement design which forms basis of the draft plan. The draft would be based on demographic projections so that the proposed plan would meet the need of the future population in relation to all kinds of land uses. After the draft plan, Technical Sub-Committee then meets to consider the plan and make the necessary inputs to refine the draft design. The draft plan is then submitted to the Statutory Planning Committee for comments and approval.

Community durbar is then organized to publicize the plan to the community members. The media especially the radio stations are used to broadcast the plan. After all these processes the plan is then handed over to the Survey Department for demarcation. Also in stool land areas copy of the layout is given to the Traditional Authority for retention and allocation of plots.

There is the need to come out with a comprehensive report explaining the plan and its distribution over the various land uses in terms of proportion and percentages. After going

through all the processes, the prospective developers can apply to their individual allocations, which can be leased and obtain permit to develop it according to the zoning.

3.13 CAUSES OF DELAYS IN GETTING LAYOUT APPROVED

From the interview conducted the processes involved can be delayed by the Survey Department as they are logistically constrained and as a result of inadequate staff they cannot decentralize effectively to meet the needs of all the 22 districts in the Region.

The activities of Survey Department has been commercialized therefore the willingness of the financier of the land use plan can either facilitate or delay the process for long. Also the nature of land ownership can as well delay the process as there are some cases of litigation over who owns land and has the right to dispose off land. The chiefs are cooperative, however, families resistance have led to delays and at worst preventing the plan implementation.

3.14 COLLABORATING INSTITUTIONS

The land sector agencies (Survey Department, Administrator of Stool Lands, Land Valuation Board, Lands Commission, Town and Country Planning Department and Traditional Authorities), families and individuals are the key stakeholders involved in the planning and decision making process of land use planning. In vested land areas especially Sunyani Township, The Lands Commission has been facilitating the process which has contributed in achieving the goals set in land use planning in the Municipality.

3.15 LAND OWNERSHIP SYSTEM

There are vested and stool land in both Sunyani Municipality and Sunyani West District. However, in Odumasi greater proportion of its land-take belongs to the stool. Table 3.2 indicates

that 13 square kilometers of lands was compulsorily vested in the state as an antidote to the civil war that occurred between the Brongs and the Ashantis in 1961(Lands Commission Secretariat, Sunyani). This led to the promulgation of LI 46 by Government of Ghana in 1961 to enforce this condition. The bearing point of this radius of 13 square kilometers was taken from Sunyani Town centre.

Table 3.2 Land Ownership System

Name of District	Total Land Area	Government Land	Stool Land
Sunyani Municipal	829.3 sq. km.	9.1 sq. km.	820.2
Sunyani West	1658.7 sq. km.	3.9 sq. km.	1654.8
Sunyani (Combined)	2488 sq. km.	13 sq. km.	2475

Source: Lands Commission Secretariat, 2011.

The stool land model of land ownership system has led to the perception that without the planning authority Traditional Authorities themselves can manage their land which has resulted in inappropriate planning in these communities especially Odumasi. The families also own land in trust for the chiefs. Thus in Stool Land Areas the chiefs are the custodians of the land.

3.16 DEMARCATION IN LAYOUT AREAS

It was identified that demarcation of plots on the physical development plans in the two areas were different. In the Sunyani Municipality it was observed that after the plan has been approved the demarcation is done for the whole sector layout before allocation is made to individuals for development. However, in Odumasi the demarcation is done on piece-meal basis. That is due to

limited demand for plots coupled with inability of the traditional authority to pay for entire sector layout. They normally engage the Survey Department's surveyors to do demarcations on block basis. This practice has not augured well for effective planning resulting in distortions of plans as quack surveyors are engaged.

3.17 CHALLENGES IN LAND USE PLANNING

From the interview conducted, it was observed that in the vested land areas there are no problems in land use planning as Lands Commission foots all bills relating to planning human settlements. However in the stool Land areas the situation is different as Traditional Authorities cannot effectively foot the bills involved. Some of the chiefs are also in disagreement with some of the terms and conditions given by the Planning Authority. The engagement of quack surveyors has led to the sale of plots without giving authentic documents.

The problem of financing preparation of layouts can easily be resolved if the chiefs surrender their lands to Lands Commission to undertake this activity. However, personal reasons to the chiefs would let them avoid this option. The Assemblies could have used their powers to control some of these malpractices but due to inadequate logistics and personnel the Assemblies cannot effectively control physical developments that are done without the Assembly's permit.

The above situation is prevalent in Odumasi which is dominated by stool land. The non-recognition of the Planning Authority by the Traditional Authority would continue to mar the beauty of the settlement until this trend is reversed since land use planning thrives in an environment where all stakeholders especially Traditional Authorities have agreed to all the modus operandus in plan preparation. The constitution of Ghana provides for private ownership of land, however, the state controls its development. Therefore if owners of the land are

unwilling to release it for planning purposes, objectives of land use planning would remain a mirage.

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CHAPTER FOUR: ANALYSIS OF SURVEYED DATA ON EFFECTS OF LAND USE PLANNING ON SOCIO-ECONOMIC DEVELOPMENT

4.1 INTRODUCTION

Land use planning impacts tremendously on social and economic development in diverse ways, this section seeks to analyze the dynamics of land use planning in both Sunyani Municipality and Odumasi in Sunyani West District and how it has contributed to social and economic development. The extent to which land use planning has impinged on social and economic development is manifested in the discussions embodied in the subsequent paragraphs from which inferences can be drawn for scientific judgment.

Table 4.1 indicates the various landlords that were selected for the study which can be extrapolated as the determination of the sample size was done by the use of research methodology.

Table 4.1 Sunyani Municipal and Sunyani West District Landlords

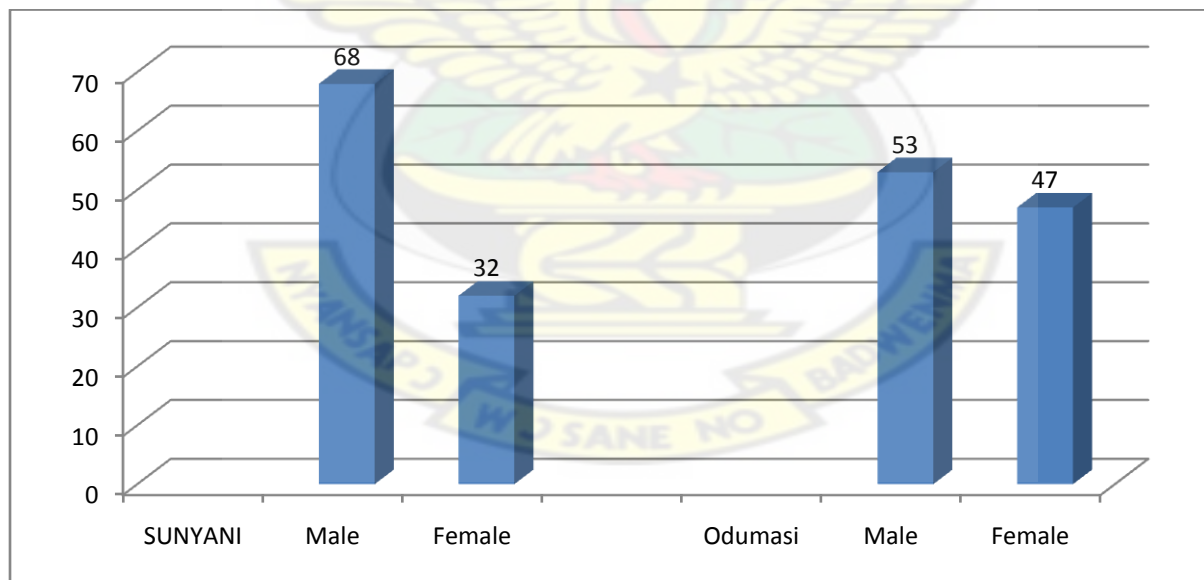
Location	Sample Frame	Sample Size	
	Number of Houses	Selected	Percentage
Sunyani Municipal(Sunyani)	3116	84	68
Sunyani West District(Odumasi)	400	40	32
Total	3516	124	100

Source: Socio-Economic Field survey, 2011

4.2 DEMOGRAPHIC CHARACTERISTICS OF LANDLORDS

Gender of landlords became one of the topical issues to consider for the analysis as gender has recently been considered as a prelude to all social and economic development endeavours. Gender is a way of assessing women vis-à-vis men participation in global development interventions in reducing poverty. Narrowing this global conceptualization to the research area, it was identified that women have done well in providing shelter to accommodate their families. The dynamics of the two study areas is depicted in Figure 4.1. In Sunyani Municipality, 68 percent as against 32 percent of the houses surveyed had been constructed by men and females respectively. However, the situation was quite different in Odumasi as the percentage of men against females in terms of housing construction was 53 percent is to 47 percent respectively.

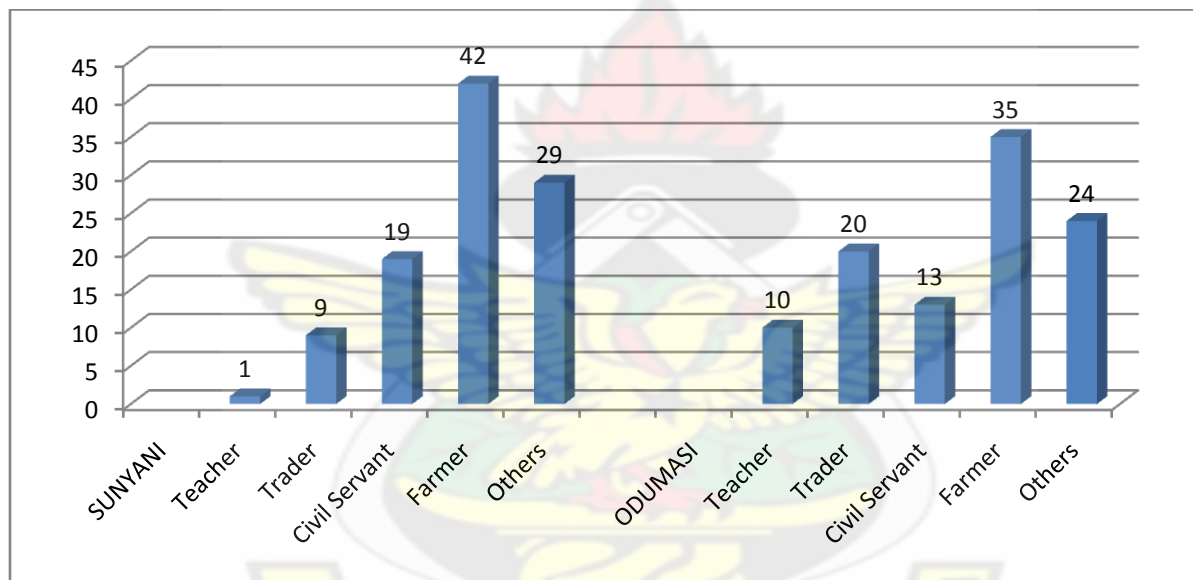
Figure 4.1 Gender of landlords



Source: Author's Field survey, March 2011

An inquiry into the occupational background of landlords gave a true reflection of the economy of both study areas as agriculture is the backbone of their economy. In Figure 4.2, farmers have built more houses in both study areas followed by other workers. The other workers include people who depend on skills apart from what has been stated. From the interview conducted the other workers were dominated by indigenes that have migrated to western countries. The contribution of teachers, traders and civil servants were also significant in housing construction.

Figure 4.2 Occupational Background of Landlords



Source: Author's Field survey, March 2011

Educational Level of landlords indicates that, in Sunyani Municipality 46 percent of them have not received any form of formal education as compared to that of Odumasi where only 25 percent of them are uneducated. This is shown in Table 4.3.

Table 4.3 Educational Level of Landlords

EDUCATIONALLEVEL	SUNYANI	ODUMASI
Uneducated	46%	25%
Basic	14%	33%
Secondary	14%	12%
Tertiary	26%	30%
Total	100	100

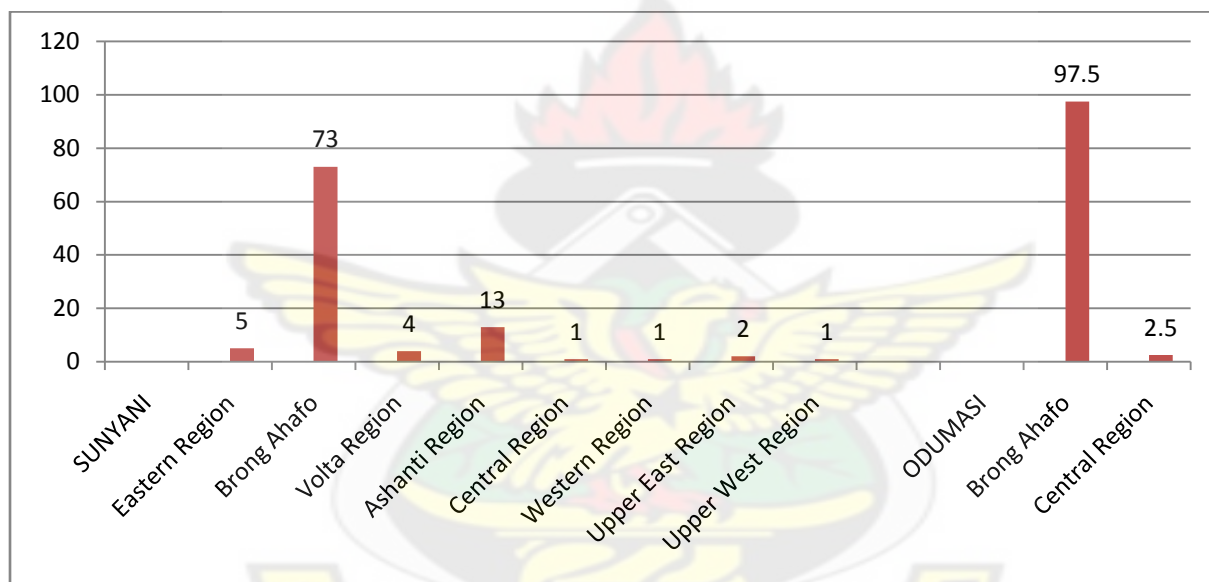
Source: Author's Field survey, March 2011

The implication of this observation is that there is high illiteracy among landlords in the Municipality. The uneducated ones among them may not appreciate some of the benefits they can derive from their property. This group of landlords may be ignorant about the implications of their actions on the environment and other negative consequences it can cause in flouting building regulations. This situation would not auger well for the goals and objectives formulated under the land use plan. Without literacy among landlords they will not be willing to value their properties and derive other benefits from it. Thus there will be reduction in the number of registered properties which land planning process aims to accomplish.

If any intervention is to be instituted both study areas must benefit from it so that the standard set by Odumasi would not be compromised but rather strengthened so that landlords would be more enlightened to unearth the hidden capabilities inherent in them to promote the development of these communities.

Studies into the regions of origin of landlords indicated that, there is homogeneity in terms of regional background of landlords in Odumasi, as many as 97.5 percent of the landlords interviewed originated from Brong Ahafo Region. However, in Sunyani Municipality there was heterogeneity among the various regions in the country, as indigenes from other seven regions have built houses in the Municipality, although the Brong Ahafo indigenes dominated. This description is shown in Figure 4.4.

Figure 4.4 Regions of Origin of Landlords



Source: Author's Field survey, March 2011

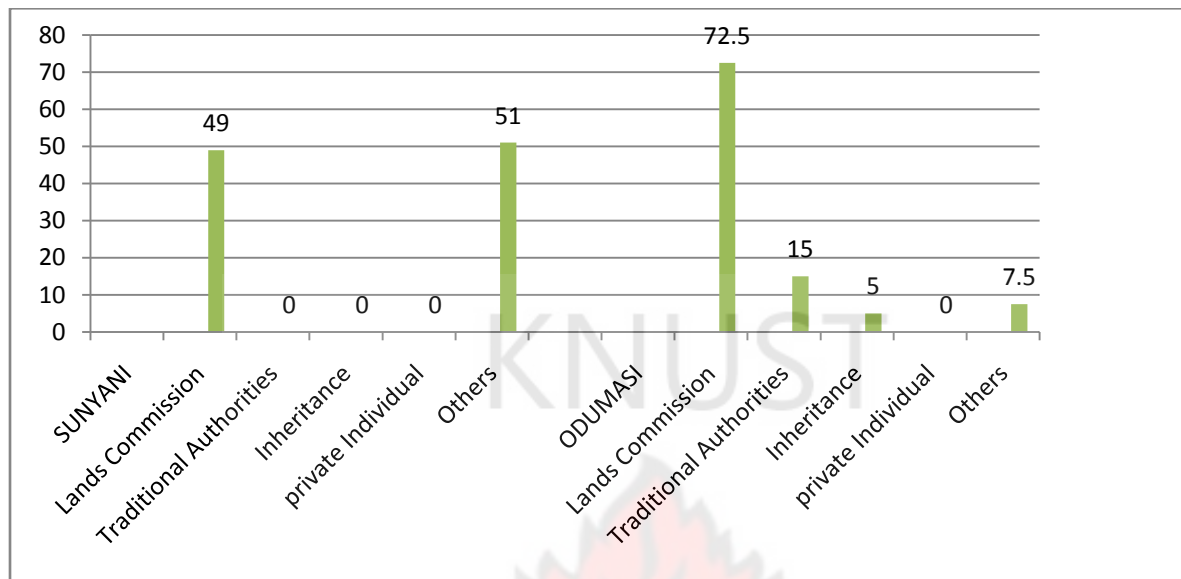
The implication of this observation is that Sunyani as a Regional Capital exhibits characteristics of an urban area which regional heterogeneity is a critical component. This buttresses its status as a Regional Capital. The effective blend of cultures enlightens especially the indigenes about other cultures and opens their horizon about other people. Also heterogeneity promotes social networks through which one can associate with others from different environment. This promotes social and economic development as information about other people is available.

4.3 LAND OWNERSHIP CHARACTERISTICS

All the landlords interviewed indicated that their plots are located within layout areas and had an approved site plan in support of their properties. Also an investigation into where their plots were acquired indicates that, in Sunyani Municipality since the Town is a vested land area, allocation of land for all forms of physical development is the sole responsibility of Lands Commission. The 49 percent are landlords who acquired their plots after the establishment of Lands Commission, but the other 51 percent acquired their plots from the then “Council” which used to allocate plots to prospective developers. The implication of this is that in Sunyani the Traditional Authority cannot allocate land in the vested land areas. Here the Laws governing land market is strictly adhered to which avoids all forms of land litigation. In fact, this has also led to effective development control, land management and land use planning in the Municipality as the power to own land is vested in the state. This power vested in the state is discharged by Lands Commission.

Odumasi, on the other hand, had a greater proportion of its land that is 72.5 percent being allocated to the landlords interviewed, since Odumasi has stool land areas the Traditional Authority reserves the right to allocate land for development. The stool-vested type of land ownership in Odumasi has not augured well for land use planning as the Traditional Authority are at times unwilling to surrender their land to the Planning Authority. In Odumasi there are landlords who acquired their plots through inheritance and others (land compensation for giving family land for land use planning). Figure 4.5 shows the nature of land market.

Figure 4.5 Nature of Land Market



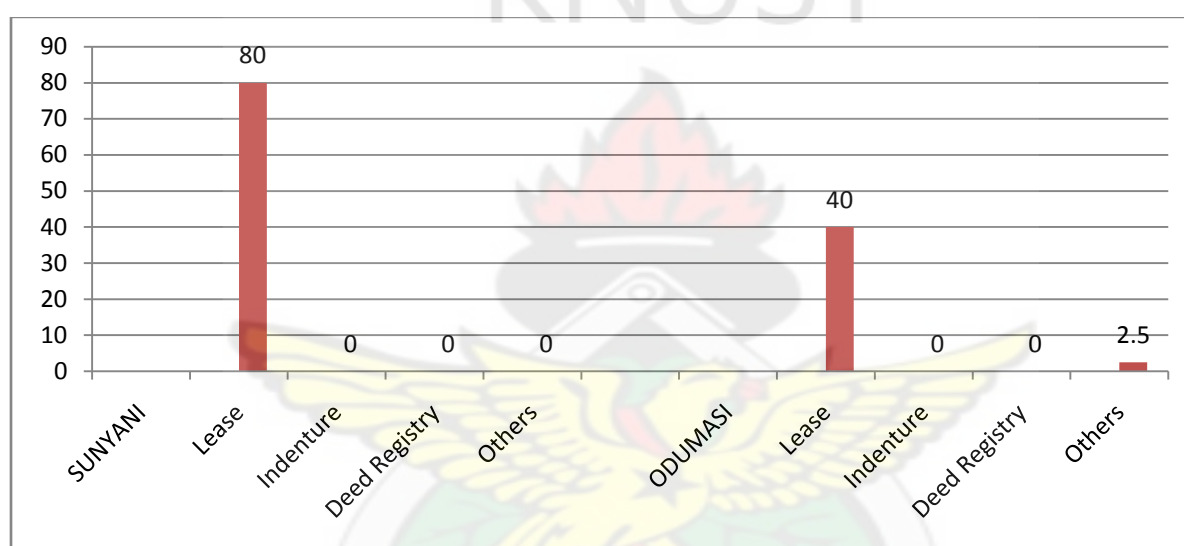
Source: Author's Field survey, March 2011

4.3.1 Benefits of Documents on Plots

Figure 4.6 demonstrates the percentage of the landlords that have documents on their plots that serve as potential collateral for economic benefits. From the figure it can be observed that 80 percent of the landlords interviewed had lease on their plots. Although lease is collateral, it was identified that 10 percent of those who own leases had used their document for loans that have improved their financial situation significantly. Some said they have used the loans to extend their houses for renting while others said they had used their loans to undertake investment such as extension of their houses that had earned them rents. According to them, they have used this document to improve upon their income hence improving upon social and economic development. The other 90 percent had prepared their leases as a means of having security of ownership on their property.

In the case of Odumasi, the situation was quite different as only 40 percent of the landlords had leases on their plots and none of these landlords had ever used this document for a loan before. Thus they own their leases for the purpose of security of ownership. They attributed their inability to prepare leases to high cost and bureaucracy involved in preparing the document. The above explanation is demonstrated in Figure 4.6.

Figure 4.6 Documents on Plots



Source: Author's Field survey, March 2011

4.3.2 Cost of Processing Plot Documents

From the socio-economic survey conducted, it was identified that cost of the transactions involved in processing a lease on a residential plot is GH¢500. These fees generally contribute to the revenue of the District Economy which can help financing development projects that would - help to improve upon the living conditions of the people thereby promoting socio-economic development.

Also in stool land areas especially some portions of Odumasi, if more leases are prepared it would form the basis of measuring the disbursement of royalties to the Traditional Authority. Thus the more landlords prepare leases the more the size of royalties to The Stool to embark on development activities. Therefore as few landlords have leases it would adversely affect the revenue accruing from royalties to the Traditional Council.

4.3.3 Cost of Plots

In undertaking the study it became necessary to investigate into the land values in the two study areas which are determined by the net present value of plots in these areas. Since net present value must be compared with the original price at which the item was bought, it became imperative to find out the prices at which the plots were bought. The original prices at which these plots were bought became difficult to ascertain as most of them could not quote it.

An interview with the Regional Lands Officer indicated that a leased plot can be acquired at about GH¢3,000 from a private individual who wants to sell his plot, but an allocation of plot by Lands Commission cost GH¢800. Obviously Land Commission allocations are relatively cheaper and this practice has led to whom you know syndrome as several applications are received. This render plot allocation processes illegitimate in addressing the needs of applicants in the order they have filed their application.

The present value of plot in Odumasi is GH¢2000, if it is bought from a private individual, but Lands Commission allocation is GH¢600. This gives information about the present value of land in both study areas which informs prospective developers about the land values in the two study areas.

4.4 DEVELOPMENT PERMITS OF LANDLORDS

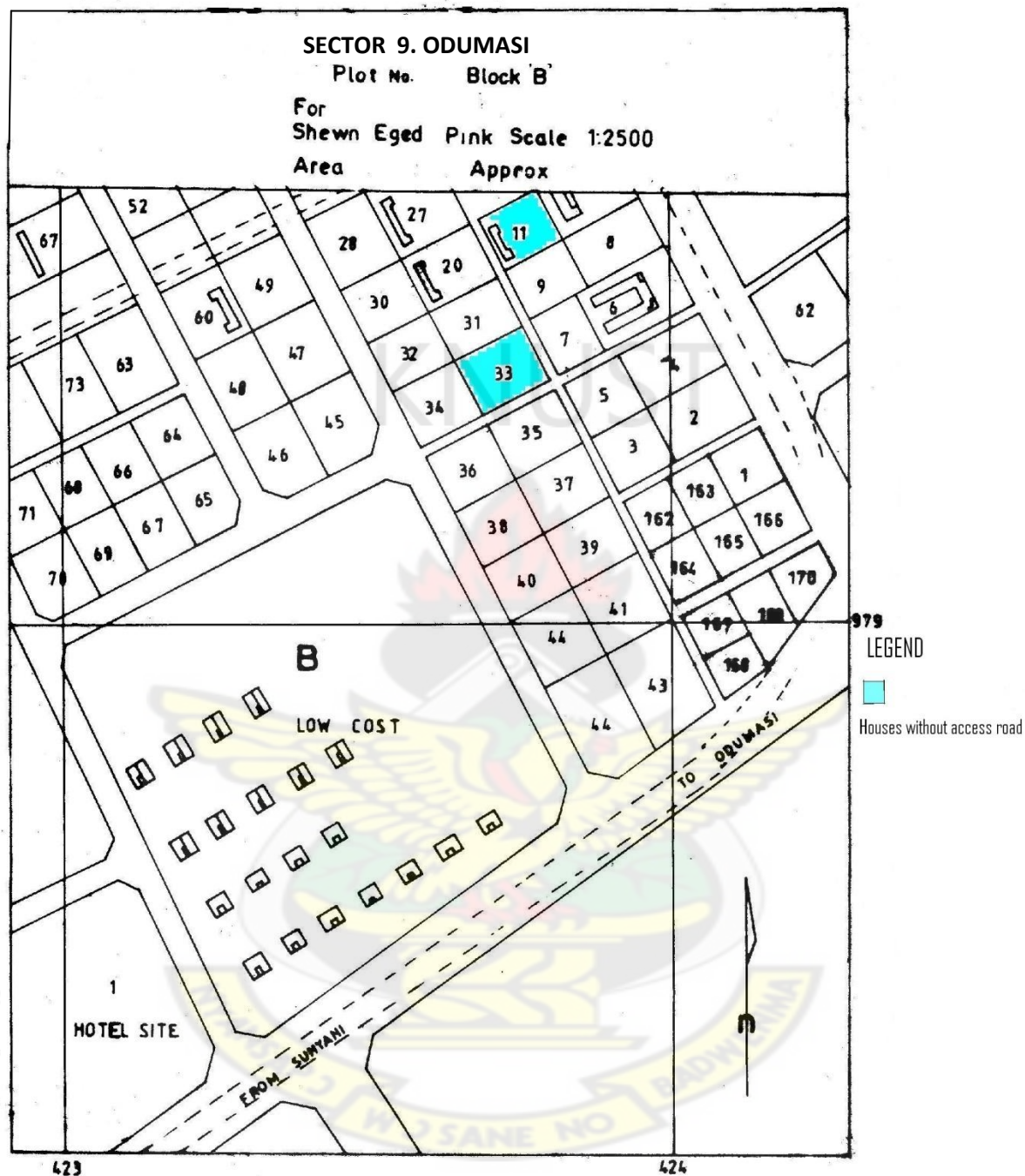
The development permit which is an authorization by local Planning Authority to undertake any form of physical development is a pre-requisite of land use planning as it is one of the plan implementation strategies used to control and monitor physical development. From the field survey, it was identified that, 96 percent of the landlords in Sunyani Municipality obtained development permits before constructing their building.

The significance of this high percentage of landlords obtaining permits before building is its positive contribution to the internal revenue mobilization of Municipal Assembly. The financial resource mobilized from this source is one of the major sources of the Assembly's revenue. The revenue being mobilized by the Assembly enables it to embark on development projects and programmes which ultimately improves the socio-economic conditions of the people.

In Odumasi the situation was different as 55 percent of the landlords interviewed did not obtain development permit before constructing their houses. The spatial implications are that: physical development can easily deviate from the order in which they have been planned on the layout. Also unauthorized developments lead to construction in right of ways of access roads as it can be seen in Figure 4.6. The shaded plots 11 and 33 did not have any access roads although the area had been planned to provide access roads.

Development without permits can easily lead to slum development and its negative implications on the environment. Movement of both people and vehicles cannot easily be done thereby leading to waste of precious time that could have been used in production. Figure 4.7 shows some houses that do not have access to road as result of unauthorized development.

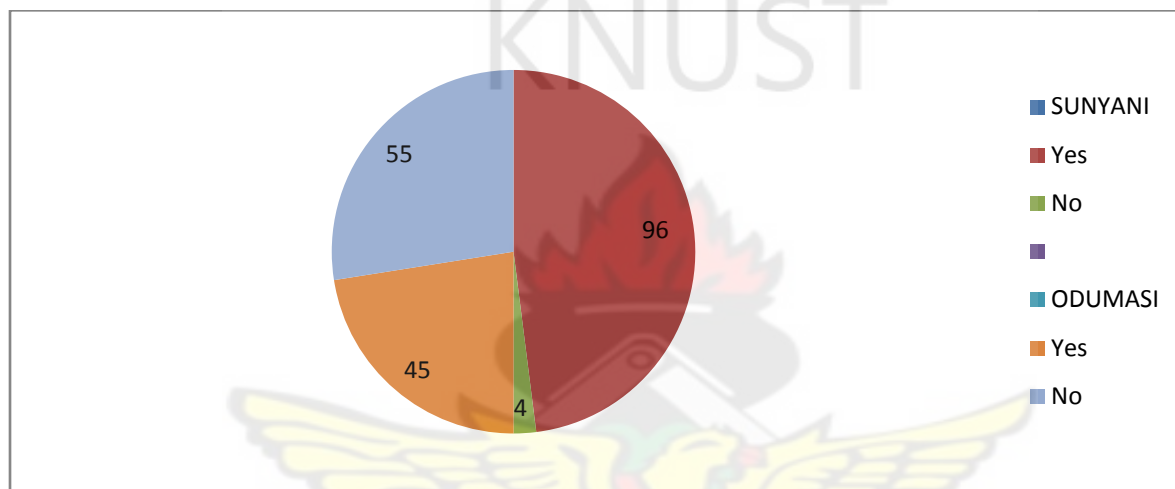
Figure 4.7: Site Plan Showing some Houses Without Access Roads



Source: District Town and Country Planning Office-Odumasi

This practice greatly undermines the ability of the Assembly to mobilize revenue to undertake development projects and programmes. This calls for immediate action by the Planning Authority to effectively monitor physical development as a measure to broaden the revenue base of the Assembly. The development permits obtained by landlords is shown in Figure 4.8.

Figure 4.8 Development Permits of Landlords



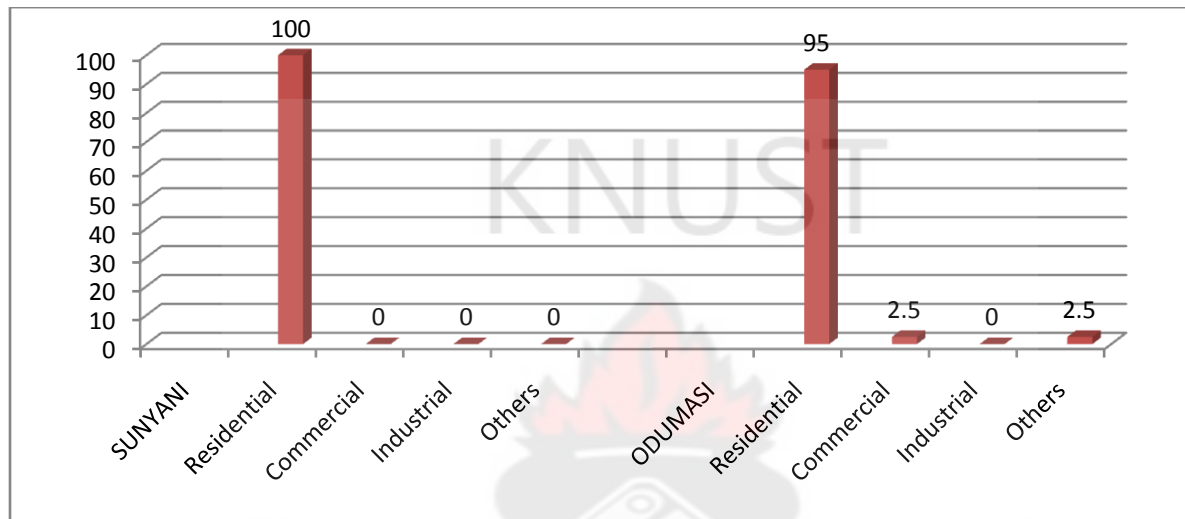
Source: Author's Field survey, March 2011

4.5 USES OF PLOTS OF LANDLORDS

All the landlords interviewed in Sunyani Municipality were residential land owners as the simple random sampling technique adopted stipulates that if landlords are not ready to engage the researcher in an interview the next available interviewee should be interviewed to facilitate the research process. In Odumasi, on the other hand, 95 percent of the landlords interviewed were residential land owners whereas 2.5 percent were commercial landlords and others (educational) had 2.5 percent. Although no industrial activity owner was interviewed, it was observed that none of the landlords interviewed complained of noise coming from an industry in the vicinity.

The implication is that in both study areas light industrial areas have been sited in appropriate places to avoid disturbances to the inhabitants. The above description is shown in Figure 4.9.

Figure 4.9 Uses of Plots of Landlords

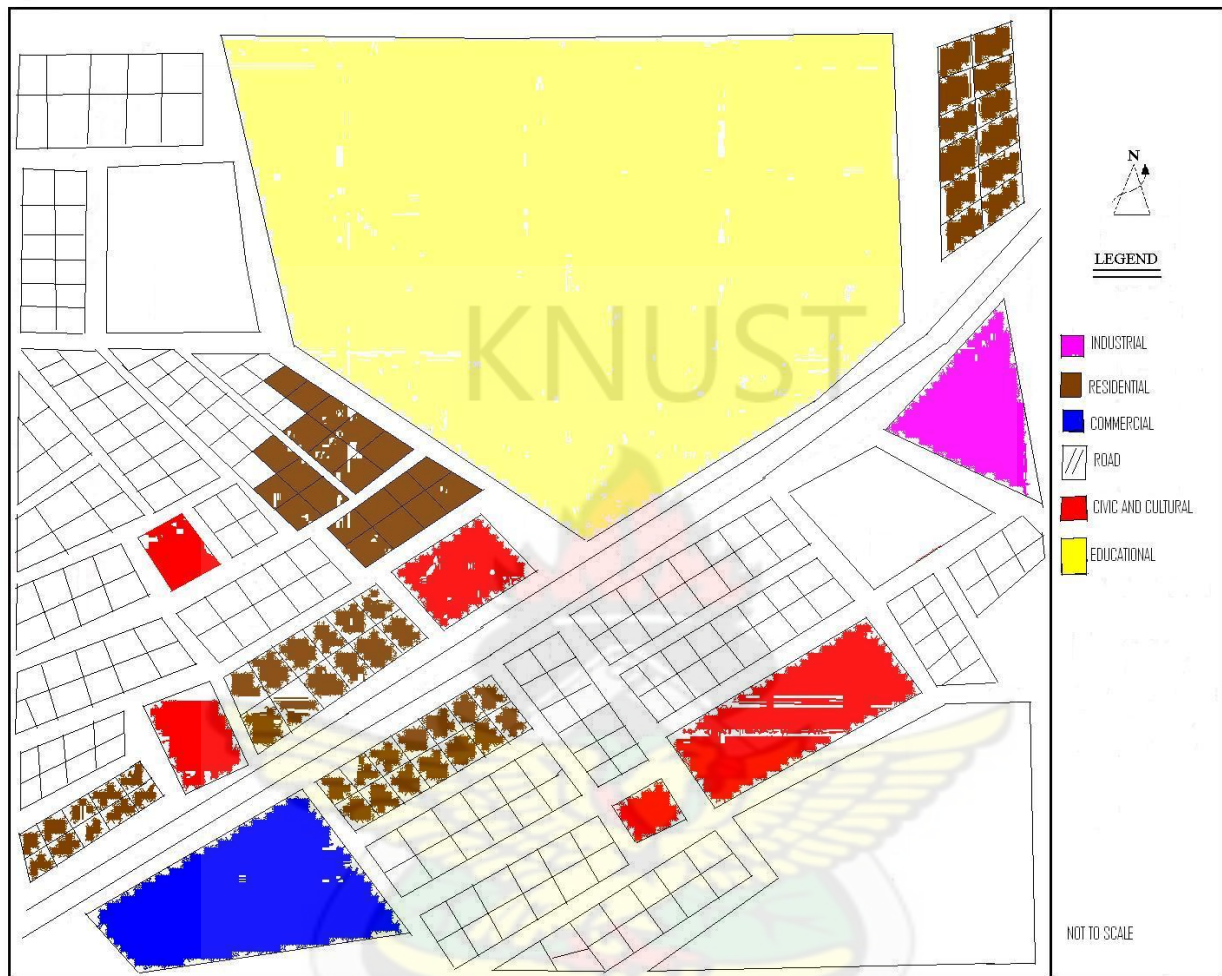


Source: Author's Field survey, March 2011

The various uses to which land can be zoned are Educational, Industrial, Civic and Cultural (Health Land Uses, Durbar Grounds, Palace, Offices and Sports Land Uses), Roads, Commercial and Residential. Land use planning encompasses most of the land uses stipulated above but in any land use plan the residential land use dominate. The spatial implications are that landlords should be the focus in most land use research studies to obtain information about how effective entire inhabitants can access other land uses and their spatial implications on them.

The spatial dimensions of land uses are indicated in Figure 4.10. The figure is an example of a sector layout design to provide access to almost all land uses to promote spatial efficiency in terms of distribution of various land uses which enhances socio-economic development.

Figure 4.10 Sketch of Land Use Plan



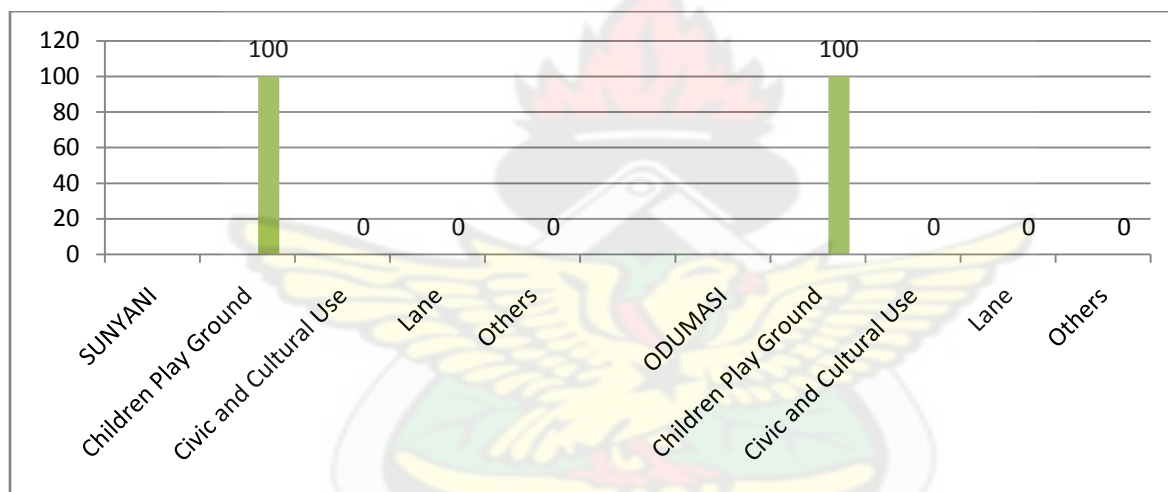
Source: Author's Field survey, March 2011

The legend of figure 4.10 shows fair distribution of all the land uses which is the case in both study areas, however, due to ineffective development control most physical developments do not conform to the plan thereby leading to encroachments on individuals plots and right of ways of access roads. This situation leads to inability in accessing infrastructure and emergency services. There were reported cases of this in the Author's Field survey, March 2011 in both Sunyani and Odumasi.

4.5.1 Access to Other Land Uses

The spatial dimensions of land uses are Educational, Industrial, Civic and Cultural, Roads, Commercial and Residential. In both study areas it was identified that none of the two towns had children play ground. This does not augur well for children as they need to socialize with other kids and be exposed to all forms of games to ensure effective development of their talents.. This description is shown in Figure 4.11.

Figure 4.11 Accesses to Other Land Uses



Source: Author's Field survey, March 2011

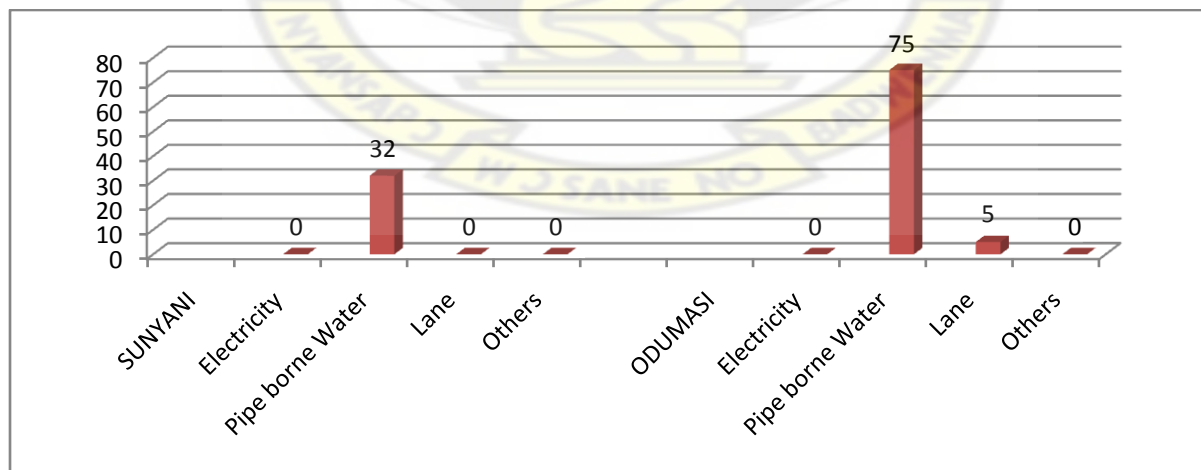
Children play ground also serve the purpose of amusement centre for both the kids and adults when fun games are being organized in these places to entertain the general public. Trees are also planted in these places to provide shade which promotes aesthetics and harmony between trees and other land uses that may not involve plants.

4.6 ACCESS TO INFRASTRUCTURE

After the interview it was identified that in Sunyani Municipality 32 percent of the respondent's houses were not connected with infrastructure facility such as water. However, each of the respondents had access to other infrastructural facilities such as electricity, lane or roads and others. This implies that relatively there is high access to basic infrastructure such as water in the Municipality than that of Odumasi, as much as 75 percent of the landlord's houses are not connected with pipe borne water although they could tap it from the main pipe line. In both cases the reasons assigned for not being able to access it was attributed to financial constraints. Although there was no physical hindrance in accessing the facility they did not have enough money to pay for its connection.

In Odumasi, 2 percent of the respondents did not have access to a lane connecting directly to their houses. This poses danger to landlords in times of emergency to safeguard both their properties and inhabitants life. The above description is shown in Figure 4.12.

Figure 4.12 Access to Infrastructure



Source: Author's Field survey, March 2011

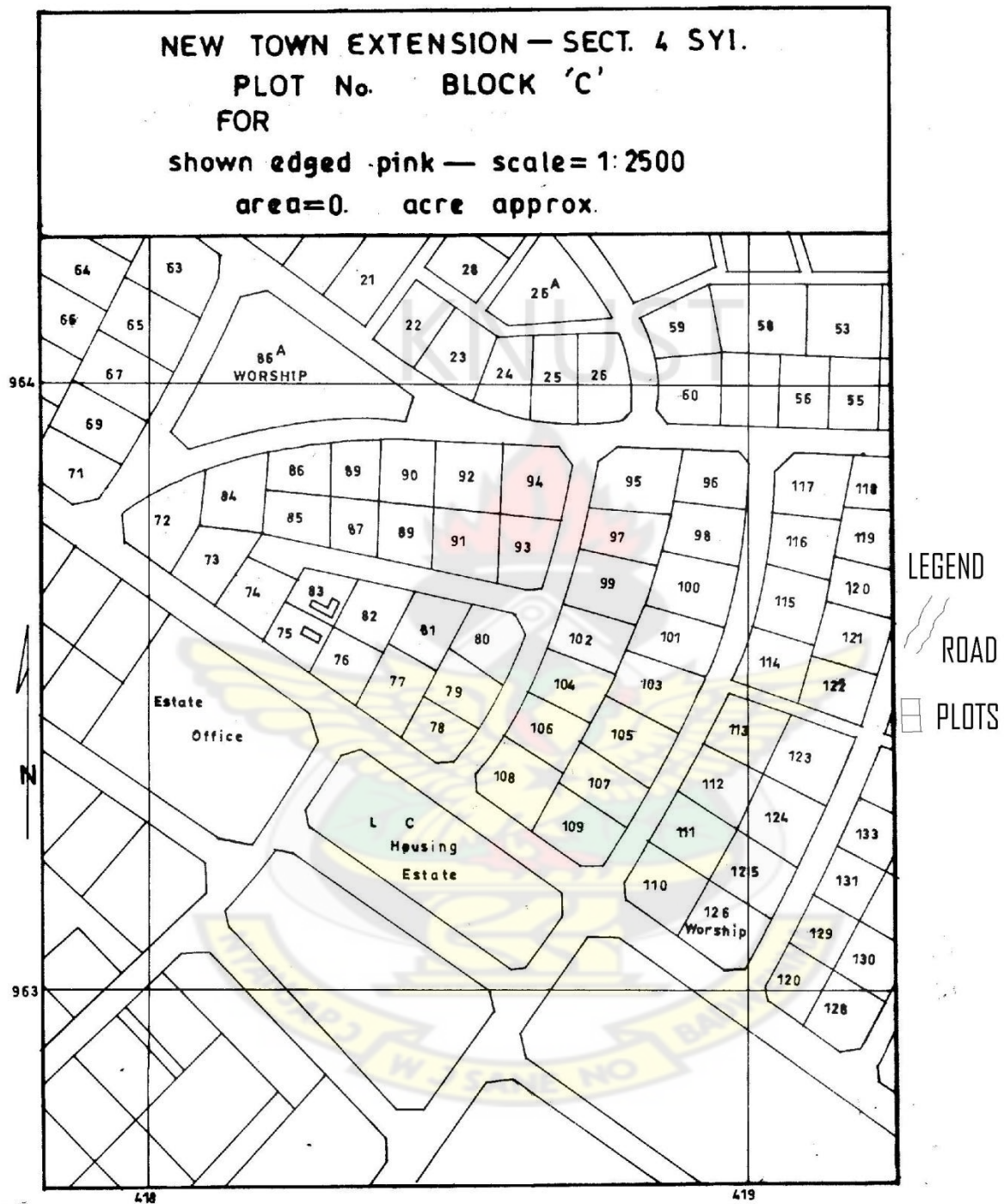
The assessment of the infrastructure is done by landlords through an application attached with an appropriate site plan to the responsible authority to get an approval to tap it. Access to infrastructure as indicated in Figure 4.10 are shown in Figure 4.13 for Sunyani and Odumasi, but an applicant from Odumasi should use a site plan from the town's layout.

The alignment of these infrastructural facilities follows the various routes on the layouts that provide basic access to all landlords. The layout shows the various land uses including access roads through which the infrastructure facilities (pipe borne water, electricity, road and drains) are distributed. The agencies involved in the management of these infrastructural facilities are given copies of the layout to guide in providing these services to the people to enhance socio-economic development as infrastructure forms the basis of all development endeavours.

The site plan shown in Figure 4.13 indicates some of the land uses pertaining to that segment of the entire layout of the settlement. The site plan was calved out of the layout which forms the broader physical development plan to promote mobility of people and vehicles. Access to infrastructure provides comfort in living homes enables small and medium enterprises within the residential neighbourhood to flourish as the energies they need to produce are readily available. This provides easy access to basic necessities in life to avoid walking long distances to buy them.

The Planning Authority in charge of development control facilitates the roles of the agencies involved in providing the infrastructural facilities. That is an uncontrolled physical development provides a difficult environment within which the infrastructure is aligned along roads. Figure 4.13 explains the above discussions in relation to infrastructure access.

Figure 4.13 Site Plan Showing Access to Infrastructure

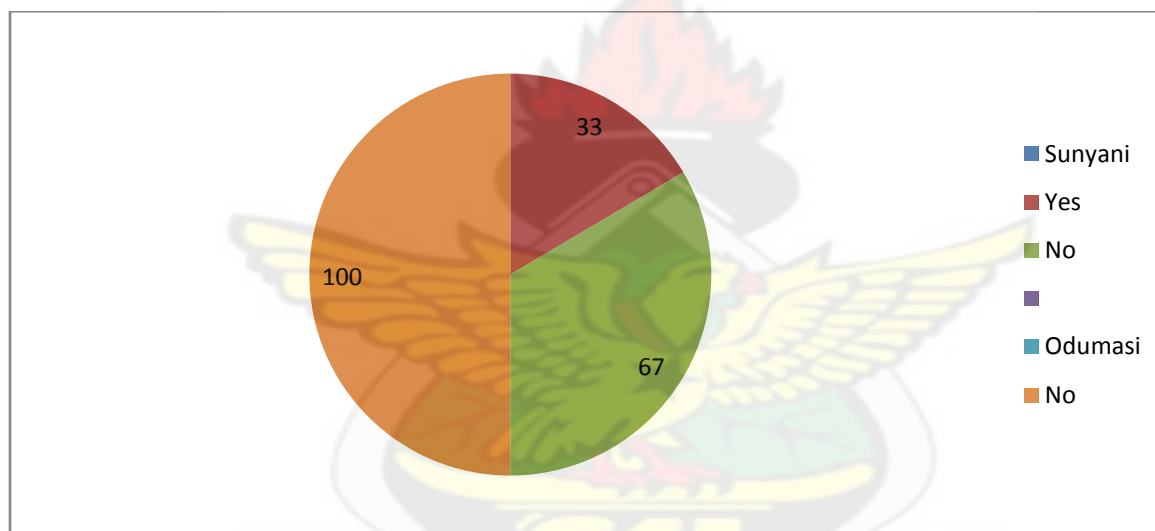


Source: Municipal Town and Country Planning Office-Sunyani

4.6.1 Access to Environmental Infrastructure

Environmental infrastructure involving drainage and sanitary sites are health related issues that need to be considered in land use planning. In Odumasi the respondents disclosed that none of them had access to properly constructed drains. However, in Sunyani it was observed that 33 percent of the landlords had access to drains which helps to improve upon their environmental situation. This description is shown in Figure 4.14.

Figure 4.14 Access to Environmental Infrastructure



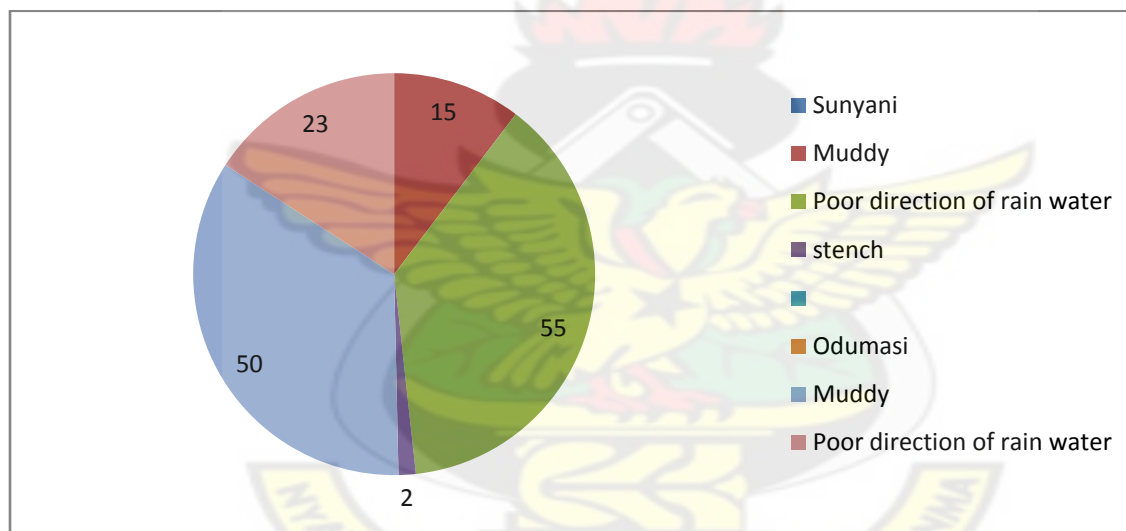
Source: Author's Field survey, March 2011

Inaccessibility to these environmental infrastructures cause environmental dangers such as flooding, stagnant waters and erosion which can create gullies in residential areas which impedes the movement of both human beings and vehicles. This environment destroys the aesthetics of cities which tend to promote diseases among the inhabitants. It also breeds mosquitoes which results in malaria among the populace.

4.7 ENVIRONMENTAL PROBLEMS IN THE COMMUNITY

From figure 4.14 above, 50 percent of the landlords in Odumasi who did not have access to drains complained of muddy grounds when there is heavy rainfall and 23 percent of this number complained of poor direction of rain water. The situation in Sunyani was different as only 15 percent of them complained of muddy grounds when there is heavy rainfall, however, 55 percent of the landlords complained of poor direction of rain water. This description is shown in Figure 4.15.

Figure 4.15 Environmental Problems in the Community



Source: Author's Field survey, March 2011

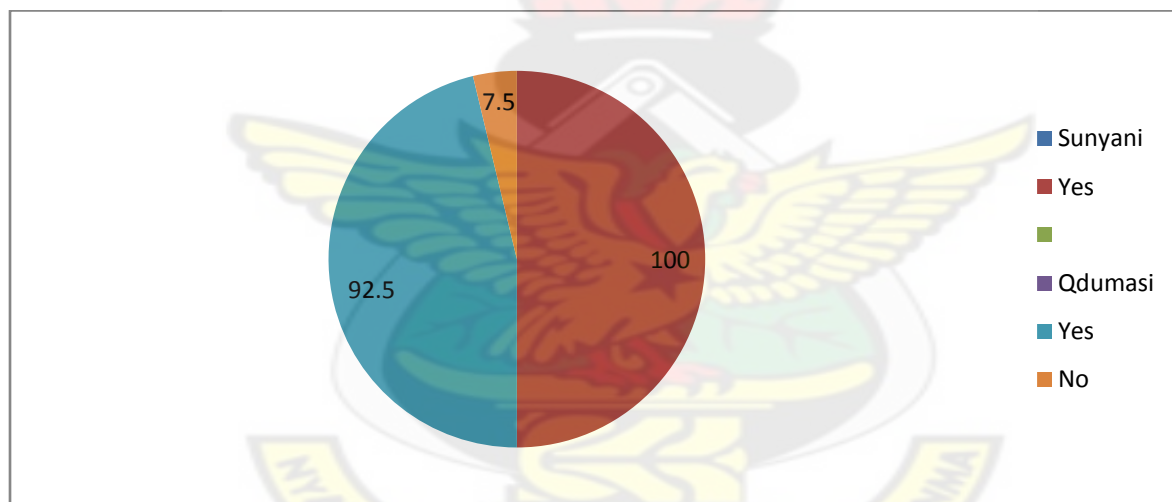
The dominant environmental problem faced in both study areas is poor direction of rain water which has led to erosion in most undulating communities. Erosion hinders the movement of both human beings and vehicles. This increases the time needed by one to move from one place to another in the same community. These hours of time lost could have been used for production that could have increased the gross domestic product of the study areas.

In Sunyani, there was reported case of stench from a Kumasi Ventilated Improved Pit (KVIP) in a public school. Air pollution is a nostril disturbance that can cause catarrh and headache.

4.8 ACCESS TO EMERGENCY SERVICES

From the field survey, it was observed that 7.5 percent of the landlords could not access emergency services as their houses had no access road through which fire tender or any vehicle could ply directly to these houses in case of disaster. Sunyani did not experience any of these problems. Figure 4.16 explains this situation clearly.

Figure 4.16 Access to Emergency Services



Source: Author's Field survey, March 2011

Emergency services need urgent actions but what facilitates it is an effective road network therefore roads must be protected from all forms of encroachment. The field survey indicated that some houses in Odumasi did not have access to emergency services which put them in risky condition in case there is outbreak of fire or reported case of serious sickness. Although the sick person can be carried, it would require an improvised means to carry out such an action,

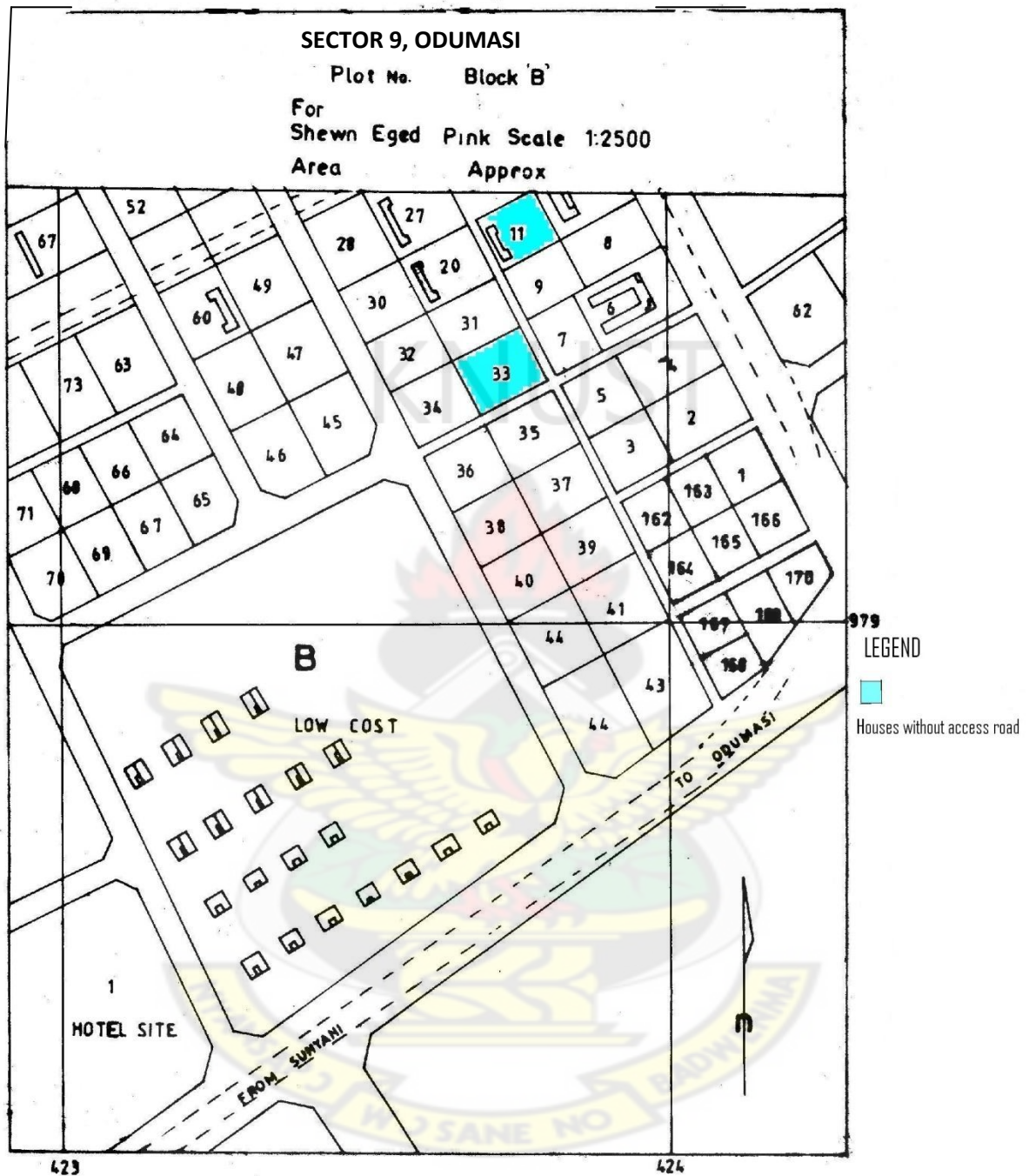
therefore access roads should not be sacrificed as it is the panacea to all forms of movements to address matters of urgent nature and effective spatial integration into entire city system. The essence of road network is to facilitate the functionality of human settlement system to promote easy access and reduce the entire travel time spent per a trip to transact business and to once place of work.

The encroachment on roads stem from unauthorized development as a result of the inadequate resource base (personnel and logistics) of the District's Development Authority. Actions of the prospective developers have several implications on the accessibility to all forms of emergency services that promote their well being and safety. Safety is one of the drivers in land use planning which must not be ignored in spatial development.

As already stated all the respondents in Sunyani had access to emergency services. This implies that development control is effective in Sunyani than Odumasi. The evidence to this is indicated in the earlier analysis which indicated that 96 percent of the respondents in Sunyani had building permits as against 45 percent of the respondents in Odumasi having development permits. Thus high rate of unauthorized physical developments is the root cause of trespassing into right of ways of roads thereby resulting in lack of access to emergency services and destroying the functionality of the cities.

Some of the respondents in Odumasi that is 7.5 percent of them did not have access to emergency services. Figure 4.15 illustrates example of plots of this case. The shaded plots are some of the plots of the case in point.

Figure 4.17 Site Plan Showing some Houses Without Access Roads

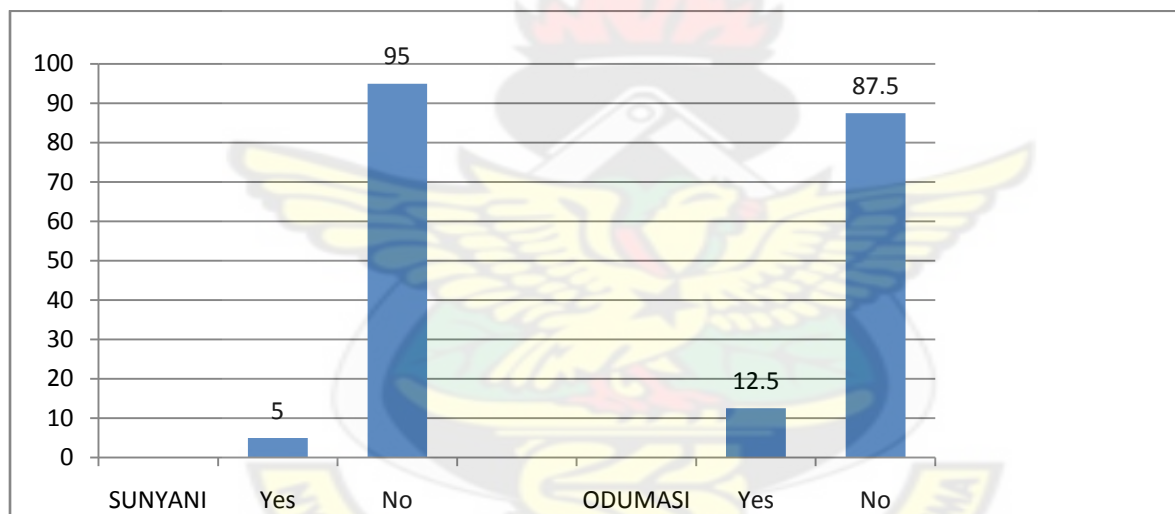


Source: District Town and Country Planning Office-Odumasi

4.9 ENCROACHMENT ON LANDLORDS PLOTS

The analysis indicated that Odumasi and Sunyani had encroachment on plots percentages of 12.5 and 5 percent respectively. As encroachment cases are conflicts that need to be resolved, it takes landlords precious time to resolve these conflicts which could have been used for production. Although none of these cases had been reported to the law court, the respondents complained it takes precious time to resolve the conflicts. Figure 4.14 shows further explanation of this situation.

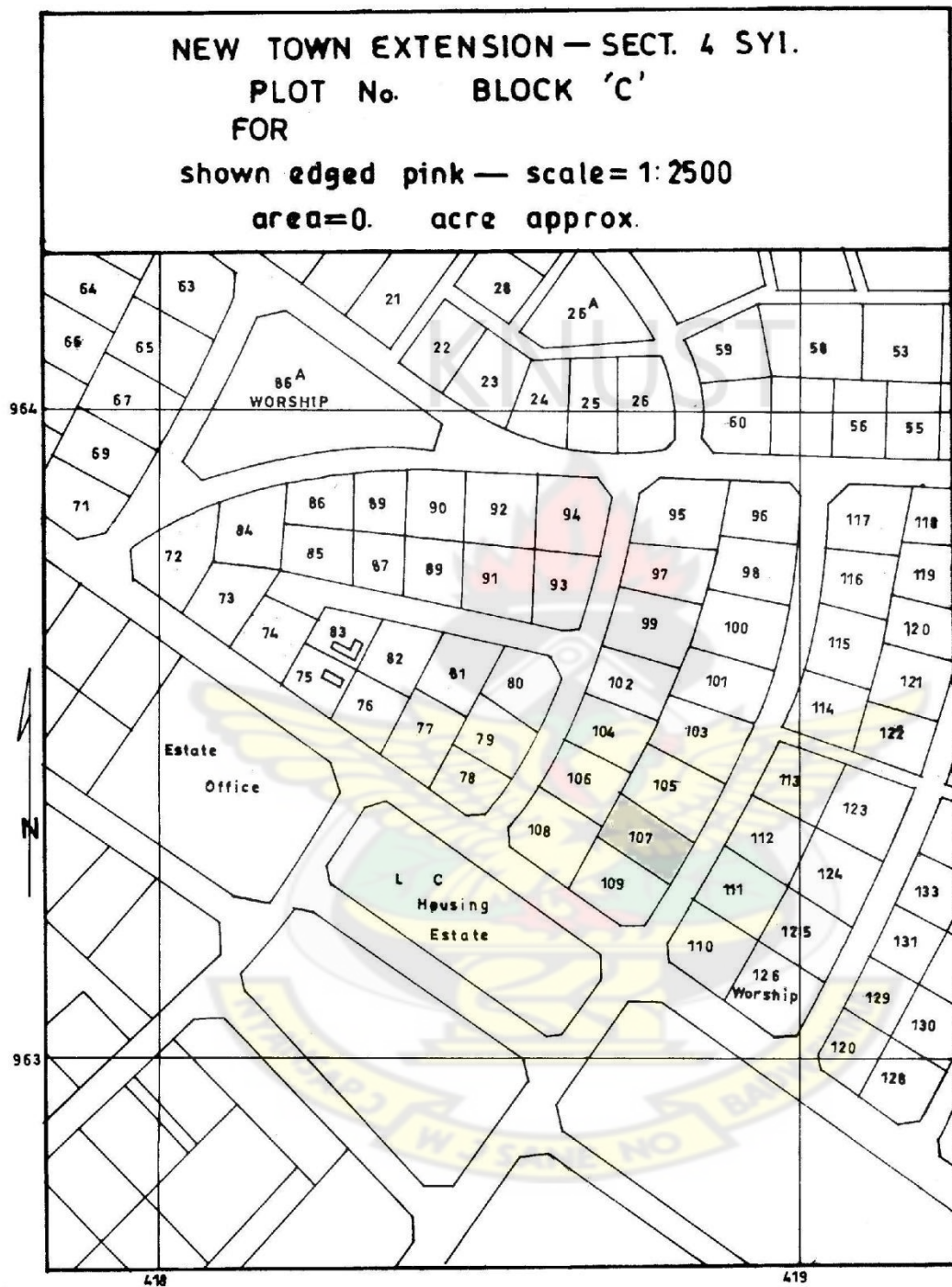
Figure 4.18 Encroachment on Landlords Plots



Source: Author's Field survey, March 2011

The encroachment on landlords' plots by other developers were reported by some respondents in both study areas per the statistics given in Figure 4.16. Although this was prevalent in Odumasi, Figure 4.19 illustrates the case of Sunyani as indicated in the shaded plot.

Figure 4.19 Site Plan Showing an encroached Plot



Source: Municipal Town and Country Planning Office-Sunyani

CHAPTER FIVE: SUMMARY OF FINDINGS, RECOMMENDATIONS AND CONCLUSIONS

5.1 INTRODUCTION

Outcome of the analysis informs decisions and interventions that would necessitate policy recommendations to improve upon the situational analysis. From the analysis it is apparent that certain key issues must be brought to fore so that they can be addressed based on evidence gathered from the empirical data. The findings covers Land use Planning Process, Land use Planning Impacts and Application of Planning Laws.

5.2 SUMMARY OF FINDINGS

The main objective of the research is how land use planning can effectively be used to promote socio-economic development in the study areas. This serves the basis through which these critical findings can be responded to give focus to the research.

5.2.1 Land use Planning Process

The nature of land ownership can delay land use planning process as there is some cases of litigation over who owns land and has the right to dispose off land.

The stool-vested model of land ownership system has led to the perception that without the planning authority they can do it thereby resulting in poor planning in Odumasi.

In Odumasi, the demarcation is done on piece-meal basis. That is due to low demand for plots coupled with inability of the traditional authority to pay for entire sector layout they normally engage the surveyors to do demarcations on block basis.

The stool-vested type of land ownership in Odumasi has not augured well for land use planning as the Traditional Authority are at times unwilling to surrender their land to the Planning Authority as the burden of sponsoring this activity is beyond their budget

5.2.2 Land use Planning Effects

There is high illiteracy among landlords in the Municipality which denies them of some the benefits that they can derive from their property.

Landlords attributed their inability to prepare leases to high cost and bureaucracy involved in preparing the document.

From the field survey it was found that, Land Commission allocations are relatively cheaper this has led to the practice of whom you know syndrome which is unfair in the plot allocation process.

In both study areas it was observed that none of the two towns had children play ground as children play ground should be an integral part of land use plan.

In Odumasi 2 percent of the respondents did not have access to a lane connecting directly to their buildings.

In Odumasi the respondents disclosed that none of them had access to properly constructed drains. From the field survey, 50 percent of this number who did not have access to drains complained of muddy grounds when there is heavy rainfall and 23 percent of this number complained of poor direction of rain water.

It was identified that 7.5 percent of the landlords could not access emergency services in Odumasi as their houses had no access road through which fire tender or any vehicle could ply directly to these houses in case of disaster

5.2.3 Application of Planning Laws

The Assemblies could not use their powers to control some of the malpractices associated with putting up a house due to inadequate logistics and personnel.

In Odumasi it was identified that, 55 percent of the landlords interviewed did not obtain development permit before constructing their houses.

The analysis indicated that Odumasi and Sunyani had encroachment on plots percentages of 12.5 and 5 percent respectively

5.3 RECOMMENDATIONS

The main findings of the study brought to fore a number of critical issues that affect land use planning negatively. The findings further brought to light the need to embark on some laudable policy recommendation measures. Recommendations are being suggested to address these inhibiting issues under the following headings:

Land use Planning Process

The Traditional Authorities, families and individuals who claim to own land should have common forum through which consensus can be reached in terms of what compensation is due each group to pave way for successful land use planning. This would go a long way to reconcile all differences emanating from each stakeholder which is a potential threat to land use planning which is a pre-requisite of sustainable and descent built environment for human living.

The Traditional Authorities who are the custodians of land in the stool land areas should be ready to recognize the importance of the Planning Authority and how they can contribute in building their towns devoid of all forms of slums and haphazard physical development. Thus Traditional Authorities should recognize that one of their prime roles is sustainable town's development which must be vigorously pursued in consultation with District/Municipal Planning Authority.

In implementing the land use plan, the Traditional Authority should always engage Survey Department to demarcate all plots to ensure that the plan conforms to what is on the ground. Thus all forms of quack surveying should be disengaged to avoid deviation from the laudable goal set under the land use plan.

The vested land areas in both study areas should be clearly demarcated so that Lands Commission and the Traditional Authorities would know their jurisdiction in land management to avoid power struggle as to who owns what. The satisfaction of this condition would enhance effective land use planning.

Land use Planning Effects

The landlords in the study areas, especially those who have no form of formal education should always consult the land sector agencies for advice about their rights and purposes that documents on their property can serve them. Thus documents like lease, indenture and deed registry are forms of collateral that impact positively on the income of landlords.

The Land Administration Project (LAP) should be fully implemented nationwide to eliminate the bureaucracy involved in processing documents on landlord's plots. As this project provides a one stop-shop in processing land documents it would reduce inconveniences involved in getting landlords plots registered.

There should be fairness in land market as applications submitted to Lands Commission are not considered in the series through which they are being submitted by applicants. Thus allocation of plots should be devoid of whom you know syndrome but rather the order in which their applications were submitted. This would reduce all forms of fraudulent deals that occur at Lands Commission Secretariat.

The Planning Authorities in both study areas should earmark sites for children play ground (CPG) in their future land use plans to enable them to socialize and develop their talents through games. This site can also serve as a source of revenue for the Assembly as the rich in every society patronize it.

Complaints of developments in the right of ways of roads should be demolished to enable all landlords have access to emergency services. This measure would go a long way to protect landlord's properties and the lives of their inhabitants.

The District/Municipal Assembly in the area should invest in drains construction to help control the direction of rain water to protect the surroundings of landlords. Solving the problem of absence of drains/gutters would eliminate the problem of stagnant waters and mud that breeds mosquitoes and its negative impact on the health and productivity levels.

Application of Planning Laws

The District/Municipal Assembly in the study area should resource the Development Control Unit in terms of logistics to effectively monitor all forms of physical development that would conform to the land use plan. The extent to which the powers to control development can be exercised depends on the ability of the Planning Authority to resource their Development Control Unit to make them mobile and accessible to all sites in major towns.

The District/Municipal Assembly should embark on radio sensitization programmes to ensure that the prospective developers are kept informed about the importance of having development permits before building a house. Without this form of education prospective developers would continue to violate the building regulations.

The bureaucracy involved in obtaining building permits should be reduced drastically to eliminate all forms of frustrations that prospective developers undergo in applying for development permits. Reforms in the building code would facilitate the process of acquiring permits which encourages developers to acquire permits before building a structure.

The power of the Assembly to demolish should not only be restricted to buildings only but temporary structures without permits should be marked and removed to protect lanes in the study area from unwanted encroachment which can impede accessibility.

5.4 CONCLUSION

Unguided individual action often leads to resource exploitation, social waste, and a shifting of costs to other members of society. In the search for answers, it has been found that Land use is based on the functional dimension of land for different human purposes or economic activities. Typical categories of land use are dwellings, industrial use, transport, recreational use or nature protection areas (United Nations, European Commission, International Monetary Fund, Organization for Economic Co-operation and Development, World Bank, 2005). Land resource planning has been designed to promote orderly development of the nation's land resources, minimize problems and conflicts associated with private land use, foster optimum development of the land resource base and maximize public satisfaction and safety in the use of land resources.

In carrying out the research it became necessary to test and prove hypothesis. The hypothesis underlying the research is:

H0= Land use planning impacts positively on social and economic development. Variables in support of this ideal situation are:

- Easy access to emergency services
- Facilitates process of preparing documents on land
- Reduction in conflicting land uses
- Easy access to infrastructure
- Improved environmental condition
- Improved health conditions

H1= Land use planning impacts negatively on socio-economic development. Variable in support of this assertion is:

- Implementation of land use plans causes some destruction to the ecosystem.

The variables in support of the null hypothesis (H0) far outweighs the variables in support of the alternative hypothesis (H1). The test of the hypothesis is shown in Appendix D.

The emerging community practices in land use planning and management of urban settlements in Africa's cities are a result of urbanization and the diminished capacity of the state and its administration to provide services and to manage urban development therefore the adoption of the policy recommendations would improve this situation specifically in the study areas and Ghana at large. From the study it is clear that the problem of land use planning is mainly attributable to inability of the Planning Authorities to effectively control physical development

thereby thwarting the intentions of promoting sustainable cities development devoid of slum environment.

Since the 1970s more emphasis has been placed on regional and statewide planning. These planning initiatives have often been based on environmental concerns. Regional planning has become attractive to urban areas that cross state lines. Instead of dealing with two or three competing and conflicting local plans, neighboring municipalities can refer to a regional plan that offers one comprehensive vision and one set of regulations. The present approach of disjointed and uncoordinated land use practices cannot be expected to provide the desired outcome of sustainable city development, for land use management to flourish and more importantly to create convenient and conducive environment for present and future generations.



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LIST OF APPENDICES

APPENDIX A: Landlords Questionnaire

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

COLLEGE OF ARCHITECTURE AND PLANNING

DEPARTMENT OF PLANNING

PROJECT TOPIC: Dynamics of land use planning and its effects on socio-economic development. Case study of Sunyani Municipality and Odumasi the Brong Ahafo Region.

The researcher is a student from KNUST, reading MSc. In Development Planning and management, researching into the above stated topic. This questionnaire has been designed for data collection and academic purposes only.

The confidentiality of the respondent is assured.

SECTION A: DEMOGRAPHIC DATA OF LANDLORDS

1. Sex a. Male b. Female 2. Plot no..... 3. Town..... 4. Sector.....
5. Area.....
6. Occupation a. Teacher b. Trader c. Civil Servant d. Farmer e. Others.....
7. Level of education a. Uneducated b. Basic c. Secondary d. Tertiary
8. Hometown..... 9. Region.....

SECTION B: SOCIO-ECONOMIC DATA OF LANDLORDS

1. Is your plot located in a layout area? a. Yes b. No
2. Do you have an approved site plan? a. Yes b. No
3. Where did you buy your plot? a. Lands commission b. Traditional Authority c. Inheritance d. Private individual e. Others.....
4. What form of document do you have on your land? a. Lease b. indenture c. Deed Registry

5. If you do not have any document on your land, what has accounted for this? a. High cost of processing the documents b. Bureaucracy c. Inconsequential
6. If yes in what ways can you use this document for your personal development? a. Security for Loans b. Security of ownership c. Others.....
7. How much did you pay for processing title document?.....
8. How much did you buy your plot?
9. What are some of the land uses that you do not have access to? a. Children Play Ground b. Civic and Cultural c. Lane d. Others.....
10. What is the use of your plot? a. Residential b. Commercial c. Industrial d. Others
11. Do you have permit for that use? a. Yes b. No
12. Do you have access to all the environmental infrastructure (Drainage, skips, house to house collection of refuse)? a. Yes b. No
13. If no name some of them that you do not have access to? a. Drainage b. Sanitary Site c. Others.....
14. What are some of the negative effects of the absence of these infrastructural facilities? a. Air pollution b. Mosquito bites c. Stench d. Flooding e. Others.....
15. What are some of the environmental problems faced in living in this community?
16. Can you access emergency services like fire service tender in case there is fire outbreak in your property? a. Yes b. No
17. If no give reasons a. No access road b. Unavailability of the Service c. Others.....
18. What are some of the infrastructural facilities you do not have access to? a. Electricity b. Pipe borne water. c. Lane d. Others.....
19. What are the major causes of your inability to tap infrastructural facilities? a. High cost of accessing the facility b. improper location of buildings c. Others.....
20. Has anybody encroached on your plot before? a. Yes b. No
21. If yes what accounted for the encroachment? a. improper demarcation b. use of quark surveyors c. Others.....
22. How did you resolve this conflict? a. Court b. Town Planning Office c. Traditional Authorities d. Others.....

APPENDIX B: Institutional Questionnaire

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

COLLEGE OF ARCHITECTURE AND PLANNING

DEPARTMENT OF PLANNING

PROJECT TOPIC: Dynamics of land use planning and its effects on socio-economic development. Case study of Sunyani Municipality and Odumasi in the Brong Ahafo Region.

The researcher is a student from KNUST, reading MSc. In Development Planning and management, researching into the above stated topic. This questionnaire has been designed for data collection and academic purposes only.

INSTITUTIONAL QUESTIONNAIRE

SECTION A: Background of interviewee

- a. Name of Assembly.....
- b. Position of the interviewee.....
- c. Department.....

SECTION B: Land use planning system in the study area

1. Who are the stakeholders involved in the preparation of layout? a. Land sector agencies b. chiefs c. community members d. Others
2. What are some of the legal instruments that support the preparation of layout? a. Act 462 CAP 84 c. Others.....
3. Do you place any moratorium on areas earmarked for preparation of layout? a. Yes b. No
- 4 .What are the processes involved in preparing layout?.....
.....
.....
5. Which institutions have influence to obstruct the process for long time? a. Survey Department b. Town Planning Department c. Others

6. What are some of the major causes of this delay in performing their assigned duties? a. Financial constraints b. inadequate logistics c. Inadequate staff d. Others.....
7. What are some of the problems encountered in dealing with Traditional Authorities in the preparation and implementation of layout? a. Demand for Compensation b. Litigation c. Resistance to Planning. d Others.....
8. Who owns land for preparation of layout? a. Chiefs b. Government c. Family d. Others
9. In what way has land ownership affected preparation of layout? a. Positively b. Negatively
10. If negative assign reasons.....
11. How do you reconcile differences pertaining to farmers on the land earmarked for layout? a. Cash Compensation b. Plot compensation c. No compensation
12. How is demarcation done to ensure that the layout conforms to what is on the ground? a. Demarcating all the plots on the layout b. Demarcating one block before the other
13. Has physical demarcation affected implementation negatively? a. Yes b. No
14. At what level do you get your layout approved? a. Municipal Level b. Regional Level c. National Level
15. What are some of the challenges involved in getting layout approved? a. Bureaucracy b. Demands by higher Authorities before approval c. Others.....

Appendix C: Conceptual Framework Matrix of Land Use Planning

OBJECTIVES OF GOOD GOVERNANCE IN LAND ADMINISTRATION	IMPLICATIONS OF POOR GOVERNANCE IN LAND ADMINISTRATION	LAND POLICY CONTEXTUAL QUESTIONS	INDICATORS
<p>1. Land policy is in line with principles of fairness and equity</p> <ul style="list-style-type: none"> • There is clear policy for the recognition of land tenure for all types of land, including: <ul style="list-style-type: none"> o Private rights (including lease, usufruct, qualified title etc) o Commons o Customary rights (including the definition of the holder of the allodial right) o Public land (public use, protection, future use/land bank) o Religious land 	<p>Encroachment, exclusion, informal modes of service delivery, corruption, illiquidity of assets, limited land markets, tenure insecurity, inaccurate and unreliable records.</p>	<p>Is land policy reform conducted in a participatory manner that contributes to a common vision with clear benchmarks?</p> <p>Does the land policy recognize all tenure regimes in the country?</p> <p>Does land policy address the issues of (historical) equity and alternative means of providing access to land?</p> <p>Is there discrimination or restrictions based on gender, ethnicity, race, etc?</p> <p>Are any restrictions on transferability temporary and justified by external policy objectives?</p> <p>Are there restrictions on the rental markets?</p> <p>Is there policy to protect against unjust evictions?</p>	<p>% of property registered in the name of a Female</p>

<p>2. A variety of accepted and socially legitimate rights is legally recognized and can be recorded</p> <ul style="list-style-type: none"> • Real property has legal recognition • There is a continuum of land rights that have legal recognition and can be upgraded incrementally to real property rights • There is broad community understanding of rights and associated processes to recognize these rights. • The system to register/record rights has effective mechanisms to ensure that recorded rights reflect the actual situation on the ground (such as adverse possession/prescription) • There are no undue constraints on the ability to register/record a change in rights (particularly for peri urban areas): <ul style="list-style-type: none"> o Uncertainty in administrative boundaries o Land classification systems and difficulty in changing land 	<p>Informal settlements, tenure insecurity, limited investment in property, encroachment</p> <p>Encroachment, exclusion, informal modes of service delivery, corruption, limited land markets, tenure insecurity</p> <p>Informality, limited land markets, reduced government revenue.</p> <p>Speculation, idle land, unproductive use of land, informal settlement, social unrest</p> <p>Informality, increased processing time, corruption/rent seeking by officials, limited land markets</p> <p>Lack of clarity of rights, overlaps/gaps in rights, increased disputes, fuzzy boundaries</p>	<p>Is there legal recognition for all tenure regimes in the country?</p> <p>Are mechanisms available to make transitions between the tenure regimes?</p> <p>Is there a clear statement available of the evidence required to prove rights</p> <p>Does uncertainty in administrative boundaries create uncertainty in rights?</p> <p>Does uncertainty in the boundaries of land classes create tenure uncertainty?</p> <p>Is the need to prove compliance with land use requirements a barrier to the registration/recording of rights?</p> <p>Is the need to provide building permits a barrier to the registration/recording of rights?</p> <p>Do tax clearance certificates need to be presented in order to register/record rights?</p> <p>Is an administrative approval (by</p>	<p>% of country over which land rights have been registered</p> <p># properties registered for the first time in the past year (excluding the subdivision/consolidation of existing registered property) as a % of estimated # informal properties.</p> <p>Registered transactions as a % of registered Properties</p> <p># days required to register an average Transfer</p> <p># steps required to register an average Transfer</p> <p>% of country covered by cadastral maps</p> <p>Average time taken to produce a copy of a cadastral map in response to a request (if available)</p>
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<p>classification.</p> <ul style="list-style-type: none"> o The need to demonstrate compliance with land use planning/zoning requirements o The need to comply with construction codes/obtain building approvals o The need to obtain tax clearance certificates • The boundaries of tenure regimes are defined in a way that is verifiable at low cost. 		<p>customary chief, commune head, mayor, governor etc) required prior to registration/recording of a right?</p> <p>Are maps and geodetic coordinates freely available?</p>	
<p>3. Land management instruments (land use planning etc.) justified by externalities and undertaken efficiently and transparently</p> <ul style="list-style-type: none"> • Land tenure provides a basis for efficient and effective registration, exchange and trade of resource, development and other tradable land use rights • Rights related to the use of land resources are clearly defined and enforced under statutory and customary laws and practices • Planning development control measures are justified 	<p>Inability to capitalize on land to support development</p> <p>Uncontrolled urban development associated with poor quality buildings and living environments</p> <p>Under capitalization of land markets and unsustainable development practices.</p>	<p>Is there a law and well developed process for land –use conversions (eg rural to urban use)?</p> <p>Is there a clear process for considering land development applications?</p> <p>Is there a clear process for registering land use rights for mining, water use, fishing and forest harvesting?</p> <p>The land rights system permits certainty in trading with clear benefits to local communities</p>	<p>Average time taken to effect change in rezoning land.</p> <p>Public system for tracking stages in the development approval process</p> <p>Public system for tracking for stages in mining and mineral extraction approvals</p> <p>Water rights can be traded independently of land rights</p>

<p>by external effects, determined in a transparent and participatory way and are in line with enforcement capacity.</p> <ul style="list-style-type: none"> • Legal systems provide for the fair, equitable, efficient and transparent trading of land use rights related to conservation, sustainable use of resources and development 	<p>Lack of clarity on land-use rights leading to disputes and low levels of Development</p>		
<p>4. Land administration institutions have clear mandates and operate transparently, cost-effectively, and sustainably</p> <p>The assignment of institutional roles and responsibilities is clear and unambiguous:</p> <ul style="list-style-type: none"> o At a national level o At the various levels of administration o At both formal and community levels. o For state and private sectors <ul style="list-style-type: none"> • There are standards in the civil service for professional and personal integrity and a system to enforce these standards and/or a system of incentives for ethical 	<p>Tenure insecurity, increased disputes, increased administrative corruption and state capture</p> <p>Corruption, uncertainty by users, limited ability to appeal</p>	<p>Is there a clear statement of institutional roles and responsibilities for land administration functions?</p> <p>Is there any overlap in the systems to register/record rights in land?</p> <p>Are service standards and a clear schedule of fees available and displayed in land offices?</p> <p>Are updated SOPs/manuals available and in use in land offices?</p>	<p>Customer perception of corruption in the land Sector</p> <p>Customer perception of quality of services.</p> <p>Total official fees and taxes (measured separately) for the registration of a transfer as a % of property value</p> <p>Ratio of revenue to expenditure for the provision of land administration services (national, state or municipality levels).</p>

<p>behavior.</p> <ul style="list-style-type: none"> • Land administration mechanisms are transparent and predictable and there are clear service standards – promises on time, cost, quality for key processes • The land administration system is accessible and affordable for customers • The land administration system is sustainable from the stand point of: <ul style="list-style-type: none"> o Finances o Technology o Capacity/HR o Participation 	<p>User uncertainty, difficulty in preparing operational procedures/manuals, brokers/fixers, lack of public trust/participation, limited land market, slow delivery, high cost</p> <p>Customers unwillingness to pay, inability to pay, non-participation</p> <p>System not sustainable, system Inefficiencies</p>	<p>Does an effective administrative system exist for appeals to correct information in the land registry/records systems?</p>	
<p>5. Information provided by the land administration system is reliable, sufficient, and accessible at reasonable cost</p> <p>Land information is readily accessible and sufficiently detailed (for both public and private rights)</p> <p>The cost of access to information and certified extracts from the land records do not unduly inhibit public</p>	<p>Lack of public trust, lack of oversight/illegal alteration of records, lack of relevant information, poor data management.</p> <p>High cost and difficulty in access limits public participation</p>	<p>Is policy in place to enable access to records without needing to prove an interest in the property?</p>	<p>Average time taken to produce certified extract from records in response to a request (if available).</p> <p>Average cost to obtain a certified extract from the registry (if available)</p>

access, including access location (decentralization).			
6. Management, acquisition and disposal of public land follow clear procedures and is applied transparently <ul style="list-style-type: none"> • There is a complete inventory of public land assets (both textual and spatial) and public land is used for public purposes (including public use, protection/reserve, future use/land bank). • There are transparent processes to allocate (dispose of) or privatize public land • There is due process for expropriation and fair and just compensation, and resettlement 	<p>Illegal allocation/disposal or use, Encroachment</p> <p>Illegal allocation/disposal or use.</p> <p>Social unrest, court disputes, constraints on investment in infrastructure.</p>	<p>Is public land disposed of under an open, tender process?</p> <p>Is there an independent valuation procedure for expropriation?</p> <p>Is there an independent appeals process for valuation in the case of expropriation?</p>	<p>% of public land that is recorded in an Inventory</p> <p>% of public land that is charted on maps or recorded in the cadastre</p> <p>% market price obtained for the leasing of public land (if available)</p> <p>% market price obtained for the sale of public land (if available)</p> <p>% market price paid for expropriated land</p>
7. Property valuation serves public and market needs and property taxation is clear and efficient in support of policy <ul style="list-style-type: none"> • Information on market prices is readily available and transaction fees and taxes are set and administered in a manner that 	<p>Uncertain market prices, difficulty in valuing property, constrained land markets, increased land disputes.</p>	<p>Are valuation/rating lists publicly available</p>	<p>% of appeals that result in a reduction in the assessed value</p> <p>Property tax collection efficiency (% tax collected to tax assessed)</p>

<p>encourages the declaration of market prices.</p> <ul style="list-style-type: none"> • Property valuations for rating/taxing purposes are prepared in an objective, transparent and uniform manner with appropriate and effective processes for objection or appeal. • Property taxes and fees are collected in an effective and equitable manner 	<p>Inequities in ad valorem taxes and fees, high level of objections/appeals, increased land disputes.</p> <p>Loss of revenue, rent-seeking, inequitable property tax burden.</p>		
<p>8. Judicial and non-judicial institutions are accessible with clear mandates and resolve disputes fairly and expeditiously</p> <ul style="list-style-type: none"> • There are efficient community, administrative and judicial mechanisms to resolve land disputes 	<p>Overloaded courts, dispute resolution indeterminate, social unrest, limited protection for the vulnerable</p>	<p>Is the responsibility to resolve the different types of disputes clearly defined?</p> <p>Do parties have access to institutions that are empowered to manage conflicts expeditiously and transparently?</p> <p>Are appeal mechanisms available and accessible</p>	<p>% of court cases that are land related.</p> <p>Average time taken to resolve court disputes.</p> <p>Customer perception of the efficiency of dispute resolution mechanisms.</p>

Source: Author's construct March, 2011.

Appendix D: Test of Hypothesis

The null hypothesis (H_0) underlying this study is land use planning impacts positively on socio-economic development.

The alternative hypothesis (H_1) is land use planning impacts negatively on socio-economic development.

Observed Frequencies (o)

Study Area	Have Permit	Have no Permit	Total
Odumasi	18	22	40
Sunyani	81	3	84
Total	99	25	124

Expected Frequencies (E) Under H_0

Study Area	Have Permit	Have no Permit	Total
Odumasi	20	20	40
Sunyani	80	4	84
Total	100	24	124

Thus $\chi^2 = \frac{(18-20)^2}{20} + \frac{(22-20)^2}{20} + \frac{(81-80)^2}{80} + \frac{(3-4)^2}{4} = 0.437$

20 20 80 4

Degree of freedom “Y” is given by: $Y = (2-1)(2-1) = 1$

At 5% (0.05) confidence level, the tabular value is 3.4.

Thus we cannot reject H_0 . Therefore the conclusion is that Land Use planning has positive impact on socio-economic development in the study area.

The benefits of using permits as variable in testing hypothesis includes:

- Generation of revenue to the Assembly.
- Adequate internal facilities in proposed structures.
- Avoidance of encroachment.
- Availability of environmental impact assessment for projects that require them.

APPENDIX E: Indicators for Measuring Land Use Impacts

ECONOMIC	SOCIAL	ENVIRONMENTAL
<ul style="list-style-type: none"> ➤ Property values ➤ Cost to provide public services ➤ Economic development and productivity 	<ul style="list-style-type: none"> ➤ Relative accessibility for different groups of people ➤ Integration of Communities ➤ Public health ➤ Aesthetics 	<ul style="list-style-type: none"> ➤ Pollution and emission ➤ Flooding ➤ Drainage ➤ Green-space and Wildlife habitat

Source: Author's construct March, 2011.