Dissertation By

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GEOGRAPHY, IBADAN

The impact of planning legislations and housing standards on the health of Ibadan city residents

AUGUST, 1995.

THE IMPACT OF PLANNING LEGISLATIONS AND HOUSING STANDARDS ON THE HEALTH OF IBADAN CITY RESIDENTS

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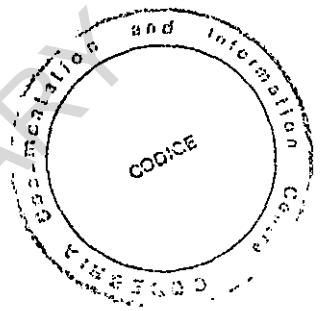

A DISSERTATION SUBMITTED TO THE CENTRE FOR URBAN AND REGIONAL PLANNING, FACULTY OF THE SOCIAL SCIENCES IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF URBAN AND REGIONAL PLANNING (MURP) OF THE UNIVERSITY OF IBADAN, IBADAN, NIGERIA

AUGUST, 1995.

CERTIFICATION

I certify that this project was carried out by Mr. A.A. Obabiyi of the Centre for Urban and Regional Planning, Faculty of the Social Sciences, University of Ibadan, Ibadan, Nigeria.

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DEDICATION

This work is dedicated to the Glory of God for His mercies, to the memory of my late Grand-Mother Mrs. Swebat Okunola, to my parents, Mr. and Mrs. Azeez Obabiyi, to my darling wife Mrs. C.O. Obabiyi, and to my children, Dapo, Deola, Titi, Jibola and Anu.

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ABSTRACT

This study examines the health implications of non - compliance of planning regulations and housing standards on the residents in the city of Ibadan. To achieve this aim, a number of objectives were set forth which include: a review of the existing physical planning legislations including building standards in Nigeria in general and Oyo state in particular, an exmination of the extent to which the buildings in the three density areas of Ibadan (Low, Medium and High) conform to the existing building standards and planning regulations; an examination of the effect of deviations of these houses from normal housing standards on the various health attributes of the inhabitants and a suggestion of how the planning regulations can be made more responsive to the health attributes and aspiration of the study area.

Two hundred and five questionnaires were randomly administered proportionally in some selected localities in each of the three residential districts. Some other secondary information were also obtained from the five local planning authorities, the fire service stations, and few randomly selected hospitals all in the city of Ibadan. Further, three hypotheses were tested about the effect of non-compliance of planning regulations and housing standards on the health of Ibadan residents.

The study discovered that malaria was prevalent in all the residential districts; the housing and environmental conditions were generally deplorable leading to various health problems in the city. It was also found out that level of compliance by developers to planning regulations and housing standards was very low.

Based on the findings, it is recommended that government should embark on the devlopment of services and urban infrastructure and environmental improvement in the poor neighbourhoods and that planning regulations and housing standards should be made more meaningful to the generality of residents by organising seminars and lectures, as well as jingles over the air on benefits derivable from the compliance with planning regulations.

CHAPTER ONE

BACKGROUND TO THE STUDY AND STATEMENT OF RESEARCH PROBLEM

1.1 INTRODUCTION

The problem of housing and urban development are common features of all urbanising societies (Okunnu, 1978). However, the situation of urban housing in Nigeria is that of acute deficiency both in quantity and quality of dwelling units. As a result of these serious deficiencies in existing housing stock, a large proportion of the total population of urban dwellers in Nigeria live in housing at densities and environmental condition which present a serious hazard to health and safety (Igwe, 1987).

The relationship between housing quality and indices of health and welfare has also been found to be of a less spurious nature than many people would want to believe. For example, incidents of certain diseases related to the harmful housing environment have been found to be common among residents of slums in Nigerian cities (Okediji, 1975; Jagun, 1987).

This situation therefore calls for the enforcement of the existing legislation and building standards for the improvement of the urban housing in Nigeria; and if these legislations are found to be deficient, another set of legislative arrangements should be put in place to upgrade the standard of urban centres and the health status of people.

Legislation as defined by Ola (1979) is a system of rules of social control aimed at achieving certain goals relating to the environment and securing obedience to them. The essence of legislation, therefore, is to safeguard public health standards and ensure a reasonable planning of the land, the town and city and regulate harmony in the interaction of the inhabitants (Ndilila, 1991). Perhaps the only major urban and regional planning laws that can be said to have had a far reaching impact on the structure and growth of contemporary cities in Nigeria and that of the health and welfare of the people is that which are given by Cap. 155 of the Nigerian Town and Country Planning Ordinance (No. 4 of 1946) which was an ordinance to "make provision for the re-planning, improvement and development of different parts of Nigeria" by means of planning schemes and planning authorities. This Ordinance which was based on the British Town and Country Planning Acts of 1932 forms the legislative basis of all laws governing urban and regional planning in Nigeria.

The scope and powers of the 1946 Law are very comprehensive, so that both the Federal and State governments can initiate planning schemes under the provisions of the law. For instance, Section 3 of the law states that the principal aims of planning schemes are generally to control the development and use of the land involved to secure proper sanitation, amenity and convenience, to preserve places of natural beauty of interest, and

generally to protect the existing urban and rural amenities. As observed by Agbola (1992), the relative comprehensive nature of this 1946 Law made its provisions to be retained in the Town and Country Planning Law, Cap. 123 of the Laws of Western Nigeria 1959 and this was also adopted in 1976 by the Oyo State Government. Other laws and codes of physical planning like the building adoptive bye-laws order 1960; the general development (roads) law Cap. 54, and building lines regulation (Cap. 14) form points of the legislative procedures meant for protecting the Nigeria physical environment and her people.

Ozo (1987) noted that Nigeria does not seem to have one legally defined minimum housing standard, but in the sense of an enforceable code, such a minimum could be found in the Nigerian Town Planning Act of 1959; and Building Adoptive Bye-laws which provide useful guides for defining housing minimum standard. Building codes and housing standards required by law generally involve building in permanent materials aimed at meeting safety requirements as well as serving as protection against climatic elements. In Nigeria, building materials of durable nature appear to be the only requirement in terms of construction materials. For walls, mud blocks or bricks are the minimum requirements. However, cement block are generally agreed to be more desirable. For floors, the minimum standard requires cement finishing to avoid damping, while for windows, wood is accepted. One of the most important elements of the superstructure of a building is the roofing; its type and

quality determine to a large extent the safety, shelter efficiency, lighting, and thermal comfort of the house. Standard housing is therefore expected to meet the following four conditions. These include:

(a) Providing shelter from elements and from intruders;

(b) Providing security from the dangers of fire and building collapse;

(c) Providing conditions which promote good health; and

(d) Providing adequate space and privacy (Oram, 1979).

The situation of buildings in Ibadan is that most of them lack basic amenities like modern toilet facilities and pipe borne water (Ayeni and Adesina, 1987). These characteristics are very well reflected in the nature and density of the houses. The situation is such that the traditional core area is densely packed, with narrow winding roads, separating the houses. The new layout of the periphery, on the other hand, are better arranged, with wide and well planned roads (Adebayo, 1991).

Since the vital role of buildings is to ensure the protection of man from the adverse effect of the physical environment, it should therefore be done, not only by erecting a shelter, but by ensuring that as much as possible, comfort is provided inside. It is impossible to attain a perfect hygenic environment without giving consideration to the standard set for housing in the building regulation.

Because of the influence of residential environment on the standards of health and comfort, building legislation should ensure that standard becomes an obligatory point of contention for the acceptability of building plans and proposals from architects and planners (Ndilila, 1991).

This study therefore looks at the non-compliance of people to Town Planning Legislations, Building standards and the characteristics of buildings in the light of their effects and impact on the people's health using the city of Ibadan as a case study.

1.2 AIM AND OBJECTIVES

1.2.1 Aim

The aim of this study is to examine the impact of non-compliance to physical planning legislations and housing standards on the health of the people in Ibadan city.

1.2.2 Objectives

To accomplish this aim, the following objectives are adopted. These include:

(a) a review of the existing physical planning legislations including building standards in Nigeria in general and Oyo State in particular;

(b) an examination of the extent to which the buildings in the three density areas of Ibadan (low, medium and high) comform to the existing building standards and planning regulations;

(c) an examination of the effect of deviations of these houses from normal housing standards on the various health attributes of the inhabitants; and

(d) a suggestion of how the planning regulations can be made to be more responsive to the health attributes and aspiration of the study area.

The above objectives will be achieved by testing the following hypotheses:

1. There is significant difference in housing conditions and health status of residents in the three residential districts (high, medium and low) of Ibadan.
2. Incidences of building collapse, flood and fire disasters are more likely in districts where planning regulations and housing standards are not complied with and
3. High incidence of diseases are experienced by residents in sub-standard housing without planning approval.

1.3 METHODOLOGY

The data for this study was obtained through intensive literature search, the conventional secondary and primary sources of data, and field observations. Personal discussions and interviews were held with the various planning authorities, hospitals and fire service stations within the study area.

1.3.1 Secondary Data

The secondary data was based on the information gathered or collected from the existing physical planning legislations, articles from journals of professional bodies especially that of Nigerian Institute of Town Planners and Nigerian Institute of Building. Also, information were sourced from some government departments like Town Planning Authorities, Fire service stations and randomly selected hospitals in the study area. Reasons for sourcing information from these government departments mentioned above are that, for the fire service department, their main duties are to protect lives and properties in the city in case of occurrence of building collapse, flood and fire disasters. The record of occurrences and location of these disasters in the city are usually available in the department. In the case of Town Planning Authorities they have records of plans registered and the types of contravention usually committed by developers in their area of jurisdiction, and ways of enforcing development control. The hospitals on the other hand keep register of their patients. Record concerning home location, sex, age and types of ailments of patients are equally kept. The list of all the hospitals registered in Ibadan as at 1994 is shown in Appendix 1.

Other secondary data that were employed include the existing Ibadan map showing the spatial distribution of the three density areas and the spatial representation of the 100

wards or localities on the map of the study area. Additional relevant information were also sourced from thesis, dissertations, books, reports, journals, seminar papers and other published materals on city structures and health matters.

1.3.2 Primary Data

The primary data for the research was obtained from a comprehensive questionnaire survey. The questionnaire was divided into three parts. The first part contain questions on the socio-economic characteristics of the households, the second part contain questions on the quality of housing of the respondents. This is otherwise captioned in this study as housing standards (A list of the attributes of a standard housing is shown in Appendix 2). The third part of the questionnaire consists of questions relating to the health history of the respondents, accessibility to health facilities, and occurrence of environmental disasters in their area.

The questionnaire survey was based on the 1991 National Population Commission (NPC) sub-division system of Ibadan municipality. The NPC has divided the entire city of Ibadan into 100 localities (see Appendix 3) and grouped them under three major residential districts, namely: High, Medium and Low (see Table 1). The boundary of each residential locality is demarcated by using features such as streams, foot-paths, roads etc.

Since it is difficult to achieve a total coverage of the entire Ibadan Municipality in the questionnaire administration, a sample frame of 30% of the 100 localities were randomly sampled. In selecting the 30 localities to be randomly sampled from the three major residential districts, a simple percentage ratio was used to arrive at the number of localities for survey in each district. The proportional distribution of localities in the three major residental districts of Ibadan city are as follows: High - 37; Medium - 46 and Low - 17 localities each. The calculation is shown below:

High density district $\frac{37}{100} \times \frac{30}{1} = 11$

Medium density district $\frac{46}{100} \times \frac{30}{1} = 14$

Low density district $\frac{17}{100} \times \frac{30}{1} = 5$

Therefore, 11, 14 and 5 localities were randomly selected from the high, medium, and low residential districts respectively (see Table 1).

The number of buildings in each of the above 30 localities as enumerated for the census in 1991 by the NPC was used. It is from this localities that the buildings surveyed were picked using the table of random numbers.

Table 1: Residential Localities to be Surveyed

Residential District	Localities
High Density	Oje, Bere, Yemetu, Nalende, Kudeti, Itamaya, Oke-Oluokun, Agbeni, Elekuro, Agugu, Mapo.
Medium Density	Iwo Road, Sabo, Bashorun, Oke-Ado, Apata, Mokola, Yejide, Sango, Challenge, Felele, Eleyele, Orogun, Olopometa, Odo-Ona.
Low Density	University of Ibadan, Iyaganku, Old Bodija, New Bodija, Oluyole Layout.

Source: Field Survey, 1995.

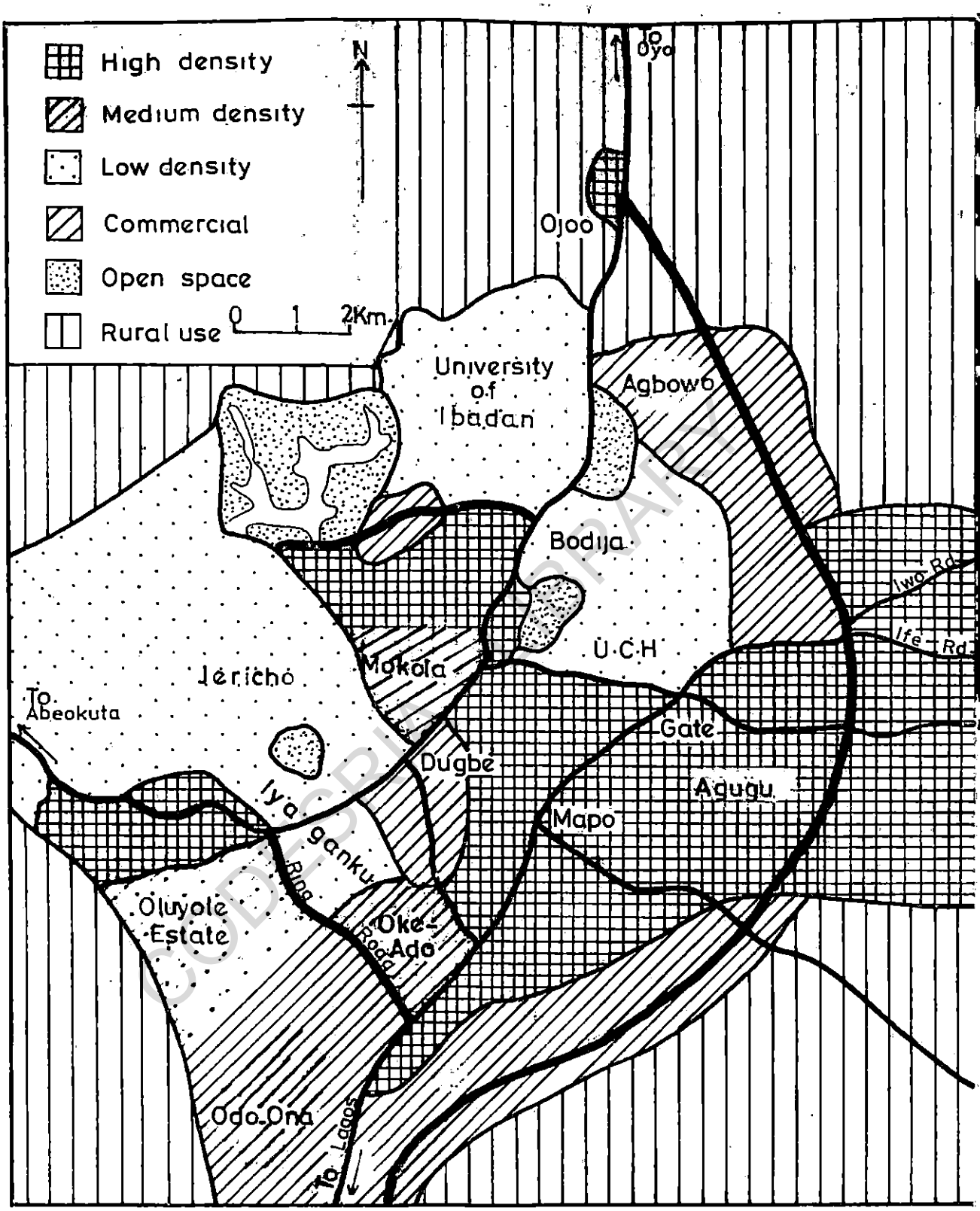

Fig.3.Textured Map of Ibadan City Showing the three Residental Density Districts Source :- Climate and Human Settlements Adebayo Edited (1991) Page 23

Table 2: Distribution of Houses in the Selected Residential Localities of the Three Residential District

DISTRCT	LOCALITY	NO. OF HOUSES PER LOCALITY	SAMPLE SIZE
High	Oje	681	6
	Bere	675	6
	Yemetu	1,066	10
	Nalende	1,063	9
	Kudeti	865	8
	Itamaya	614	6
	Oke-Oluokun	1,199	11
	Agbeni	665	6
	Elekuro	1,495	13
	Agugu,	954	8
	Mapo	387	3
	Sub-Total	9,664	86
Medium	Iwo Road	1,216	11
	Sabo	507	5
	Bashorun	415	3
	Oke-Ado	814	7
	Apata	695	6
	Mokola	682	6
	Yejide	659	6
	Sango	1,612	14
	Challenge	614	6
	Felele	1,207	11
	Eleyele	418	4
	Orogun	948	8
	Olopometa	653	6
	Odo-Ona.	650	6
	Sub-Total	11,090	99
Low	University of Ibadan	232	2
	Iyaganku	230	2
	Old Bodija	540	5
	New Bodija	520	5
	Oluyole Estate	659	6
	Sub-Total	2,181	20
	Grand Total	22,935	205

Source: National Population Commission (1991).

Because it is difficult to achieve a total coverage of the entire Ibadan Municipality in the questionnaire administration, a sample size of 205 questionaires were administered in the three residential districts. There are a total of 22,935 houses in the 30 localities picked. Out of this, the high, medium and low density residential districts have 9,664; 11,090 and 2,181 houses respectively. The proportion of number of houses surveyed in each residential district was worked out using a simple percentage ratio. The result is as stated below:

High density district	9664	x	205	=	86
	22935		1		
Medium density district	11090	x	205	=	99
	22935		1		
Low density district	2181	x	205	=	20
	22935		1		

Therefore, 86 questionnaires were administered in the high density residential district, 99 for the medium density district and 20 for the low density residential district. In order to know the number of houses to be surveyed in each locality selected, the same simple percentage ratio is used as above and the result is shown in Table 2.

Only one household was interviewed in each house and the first household head met was the one interviewed.

1.3.3 Method of Data Analysis

The data collected was analysed by the use of simple statistical technique such as frequency tabulation and percentages. Where illustrations were necessary, cartographic and pictorial representation like maps and pictures were employed. The hypotheses were tested using only chi-square statistical technique.

1.4 THE STUDY AREA

The study intends to use the city of Ibadan as the study area because of the city's unplanned rapid growth and escalating urban problems (Figure 1 and Plate 1).

Ibadan which is the capital of Oyo State is the largest indigenous African city (Mabogunje, 1968). Founded in 1829 as a war camp in the frontier region between the forest and savanna belts in the south-western part of Nigeria. It is located approximately on longitude 3° 54' East of the greenwhich meridian and latitude 7° 23' North of the equator.

In 1976, Ibadan was broken into 46 wards and in 1991, with the creation of more states and local government areas in the federation, came the emergence of five local government areas in the city (Figure 2). These include Ibadan North, Ibadan North-West, Ibadan North-East, Ibadan South-East and Ibadan South-West. The total population of the

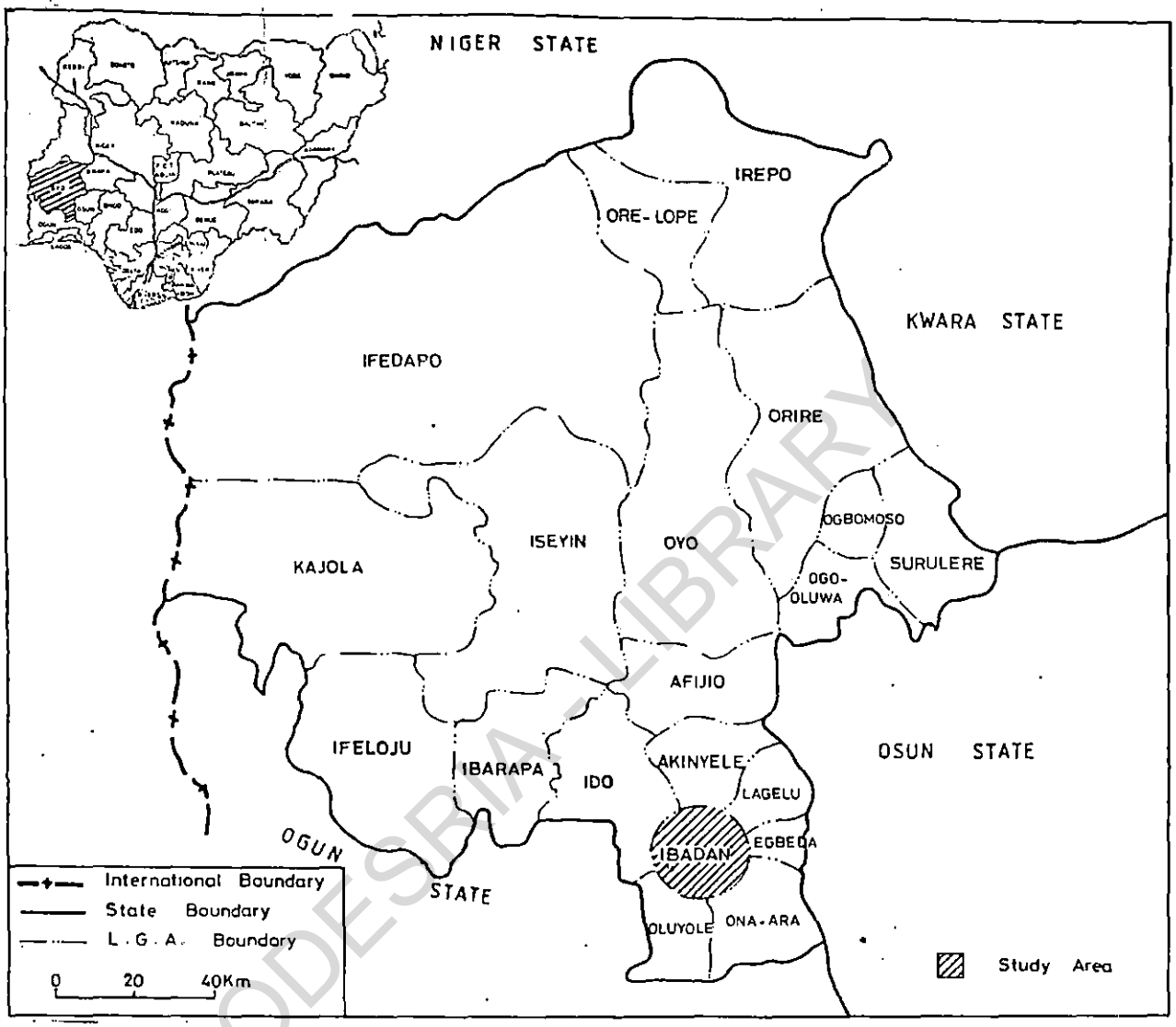

FIG.1 : MAP OF OYO STATE SHOWING THE STUDY AREA, IBADAN.

Source:- Ministry of Lands Housing and Physical Planning Ibadan

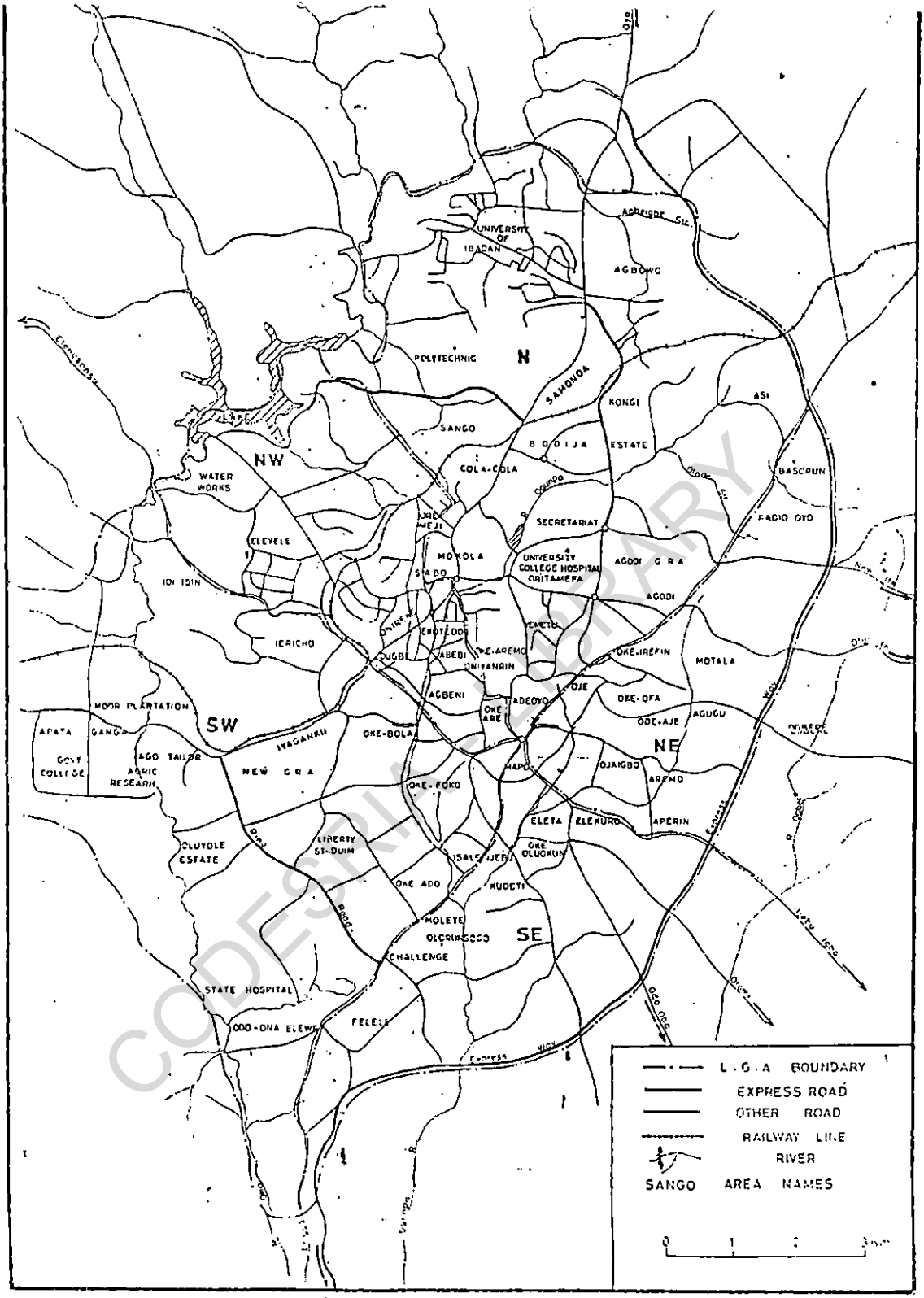

Fig. 2: MAP OF IBADAN SHOWING THE FIVE LOCAL GOVERNMENT AREAS

Source: Ministry of Lands Housing and Physical Planning Ibadan.

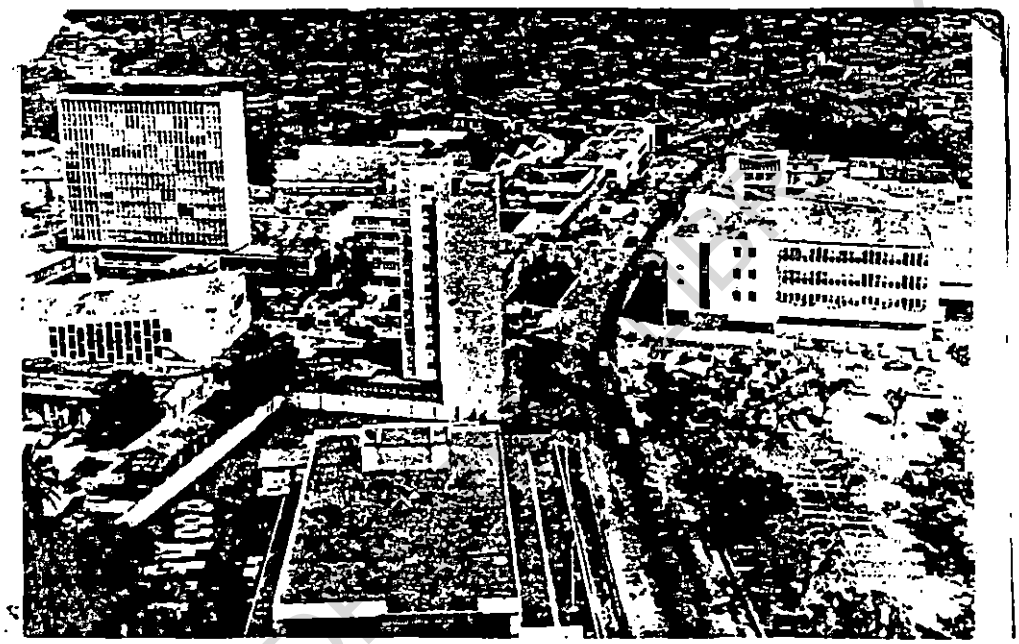

PLATE 1 An Aerial View of Ibadan, Capital City of Oyo State

city according to the 1991 National Census provisional figures is 1,222,570. This study covers all these five local government areas of the city where residential quality as well as population density vary from one area to another.

1.5 JUSTIFICATION FOR THE STUDY

Despite the laudable objectives of landuse regulations as a means of regulating the growth of a town in a planned and orderly manner, it is regrettable that most cities are characterised by slums, traffic congestion and overcrowded and substandard housing.

While the aim of these landuse controls is to prevent health problems arising from overcrowding, damp houses, lack of ventilation, no drains or drains which overflowed due to inadequate cesspits and fouling of streets with garbage and excreta, the situation is such that the core of most of our cities is often extremely crowded and decaying, while the surburbs which are supposed to be better than the core areas in terms of planning, housing standards, and environmental sanitation are also sprawling. This kind of an environment is considered as inimical to health, because of the opportunity it offers for the transmission of disease, whether the disease is airborne, conveyed by contact or transmitted by an insect vector (Macpherson, 1979).

As observed by Ola (1977), the urban complex is tending to become too large, inefficient, and dehumanised. Most towns have lost their original dignity, social cohesion, economic viability, and administrative efficiency.

The city of Ibadan which is the main focus of this study is a peculiar example of a city that lacks the enforcement of landuse control measures. This is because most of the buildings in the central parts of the city and some sections of the suburbs are built either without planning authority's approval or with total disregards to town planning regulations. For example, majority of these houses have not been sited at the required safe distance from the edge of the roads and rivers. These has caused some accidents in the past as a result of crashing of motor vehicles into houses located too close to the road, claiming some lives (Ola, 1977). In the same vein, there had been a reported cases of flood disasters in Ibadan in 1924, 1958, 1963, 1968 and 1977 which all led to the destruction of buildings and loss of properties worth millions of naira. Perhaps, the worst of these flood disasters was that of 1978, when the Ogunpa river in Ibadan overflowed its banks, following a heavy downpour of rain. The episode took over 100 lives and the loss of property worth millions of naira was reported.

All the buildings damaged in the above mentioned incidents were those built near the Ogunpa river without planning permission (Ola, 1977). Akintola (1978) cited in Sada and

Oguntoyinbo edited, observed that the mean distance of buildings along Ogunpa river valley is about eleven metres to the river bank, whereas, the mean distance of floodable land is ninety metres. The World Bank (1988) being aware of the implication of the situation of buildings in Ibadan to the health of the residents has offered an assistance for the replanning of some parts of the city.

It is in the light of this fact that majority of the houses in the largest indigenous city in Africa, south of sahara were built without compliance to the planning regulation and building standards that has warranted the quest to find out whether there is impact this could have on the health of the people.

CHAPTER TWO

2.0 CONCEPTUAL FRAMEWORK AND LITERATURE REVIEW

2.1 CONCEPTUAL FRAMEWORK

Due to the multi-faceted nature of this study, three different concepts are employed to form a theoretical base for the research. These include the conceptual interpretation of legislation and standard, and disease ecological concept.

2.2 PLANNING LEGISLATION: A CONCEPTUAL INTERPRETATION

Legislation is a system of rules of social control aimed at achieving certain goals relating to the environment and securing obedience to them (Ola, 1977). But therefore, the main goal of legislation as control measures is to ensure that private decision makers act in a way that maximises the social or external benefits and minimises the social or external costs associated with their actions (Linn, 1983; Eneji, 1992). Legislation was first attempted through provisions written into statues, ordinances and franchises permitting the use of city streets. But this method of control proved to be clumsy and ineffective. Legislatures then changed to the creation of administrative agencies known as commissions, charging them with responsibility for the enforcement of controls (Sills, 1969). This led to the first view of legislation which is synonimous with independent legislative commissions.

Thus, legislation as observed by Agbola (1992) are a collection of interrelated para-legal and administrative techniques and instruments designed to safeguard, conserve, disburse and regulate the use of land or part thereof in the interest of the overall community. These instruments and techniques could be classified into both negative and positive tools. In the negative sense, the government's legislative power is used to restrain, or otherwise direct private landuse and development activities. Positive measures include provision of infrastructure, development financing and nationalisation of land. These tools, however, whether positive or negative, are aimed at ensuring compatible uses of land, controlling land crowding and bringing substandard non-comforming areas into line with a general plan. The existence of these legislative controls is, however, an inteference with the market allocation of land resources, yet this interference has been taken care of on the basis of the negative externality argument. That is, some uses of land such as, for example, industrial use might generate heavy traffic or pollute the environment so much as to cause a decline in the value of adjacent landuses such as residential. It is therefore important to separate such landuse activities from each other.

In addition to the negative externality arguments, there is need for the government to establish rules about how land would be used and this function could not be left to the market allocating process because the market cannot be trusted to produce a rational,

efficient landuse system (Dunkerlay et al, 1978, Agbola, 1992). Urban land, as a scarce resource, needs to be controlled in a way that will balance long and short term needs of the community and also equate the conflicting claims of different interest groups. It is not surprising therefore that even the most capitalist of all nations where the market system is expected to function without much inhibition have instituted an increasing array of control measures over the use of urban land.

Thus, Vagale (1969) cited in Agbola (1992) noted that the main objectives of development control is to regulate the growth of a town in a planned and orderly manner and to ensure that real estate developers or owners of landed property use their lands and buildings in comformity with approved town planning schemes or the master plan of the town.

For planning legislations or land use control measures to be of any use, it must be implemented consistently and decisively. The method of avenue for implementation is usually through the established planning administration put in place by the Federal, State or Local government. Planning administration is thus the organisational structure of the administrative machinery designed to plan, implement and monitor planning proposals, schemes and legislations aimed at creating a more satisfying environment. How well landuse control measures are implemented and monitored will depend on the internal

consistency of the planning administrative set up, the effective use of its internal and external authority relationships and its location and visibility within the hierarchy of government establishments (Agbola, 1992). More often than not, administrative structures are usually indicated in the enactment of planning legislations as legislations are as good as the authority charged for implementation.

2.3 THE CONCEPTUAL INTERPRETATION OF PLANNING STANDARDS

Over the years, physical planners have developed many sets of guidelines or standards to minimise the role of intuition in the practice of their profession. The attempt to establish space standards have deeper roots and they stem from a desire to rationalise the process of physical planning (Seelig, 1972; Busari, 1992).

According to Richman (1979), planning standards could be explained by two different approaches, namely: the specification standards approach, and the performance standard approach.

2.3.1 Specification Standards Approach

According to the Hygiene of Housing Committee (1948), the planning standards have been traditionally formulated as specification standards. Such standards have been used to enumerate the space and facility requirements for a given population. For example, planning the neighbourhood specifies that for a neighbourhood population of 1,000 persons,

a neighbourhood park of 1.5 acres should be provided; while for a neighbourhood population of 2,000 persons, a neighbourhood park of 2.0 acres should be provided.

Specification standards have also been utilised in association with subdivision regulations. Here, an indication is made of those elements which must be included in a residential development such as streets, utilities and dedicated open space. Finally, specification standards have been used in building codes to delineate the types of materials to be used in construction so as to guarantee structural soundness and quality.

In each of the above cases, it can be seen that specification standards have been used to regulate the inputs to the design process. Their purpose has been to specify the space, facility, and materials components of residential development without necessarily considering the overall package which is being created as a result of the individual standards, nor the variation which may be needed due to differences among populations or on the basis of local site characteristics. However, these standards do provide for developments which meet a minimum service level, and enforcement of compliance with such regulations is relatively simple.

2.3.2 Performance Standard Approach

According to American Socety of Planning Officials (1975), performance standards place the emphasis on defining a set of objectives which consider the total and state which

is to be achieved. Since each site functions in varying ways in terms of social, physical and ecological processes, there can be no single optimal procedure or standard for all. Instead, through recognition and definition of the manner in which a site is to perform, it is possible to set a reasonable levels at which its key functions should operate. The developer is required to meet these provisions, but is allowed considerable flexibility in design, leaving room for trade offs to achieve the proper effect, regardless of the type of use. In general, it can be said that performance standards approach regulates the outputs of the design process.

Performance standards have been used primarily as tools for encouraging developments which are compatible with their environmental surroundings. It is proposed that they can also have utility in developing residential environments which allow for socially compatible living. Towards this end, the concept of the social performance standard and what it entails is defined as follows:

If the characteristics of the physical ecology are the heart of an environmental performance standard, then the characteristics of the human ecology are the heart of a social performance standard. Human ecology could be defined in terms of the human needs and social functions which research has demonstrated are characteristic of the residential environment, including: network of friends and ethnic groups, organisations for civic

participation, opportunities for individual and group leisure pursuits, and perceptions and attitudes regarding safety.

Whereas, measures of the quality of an ecosysem range from the diversity of species to the degree to which water permeates into the ground or is carried off along with topsoil, measures of the quality of a social system could include: per cent of residents involved in community organisations, changes in housing investment characteristics, recreation participation rates and incidence of fire and crime.

These and other scales could be used to evaluate individual and group satisfactions with the residential environment. Clearly, each of these measures would represent a value-laden community judgement, and the importance attached to each scale would have to be established within a participatory framework. However, these measures provide the firm footing upon which to evaluate the manner in which each social function is performing. Development proposals would be evaluated in light of their contribution to achievement of residential satisfaction, rather than on whether specific elements have been included. In the case of newly developing areas, estimation procedures might be employed to infer the characteristics of anticipated residents, based on an analysis of similar environments designed for comparable population groups.

As an example of how these two approaches operate, as highlighted by Oregon State University Extension Services (1974), it is possible to review how they might apply in an ecologically sensitive setting. Whereas, a specification standard might set a permitted use list and specify the degree of slope beyond which no development could occur, the performance standard might state the following development, a site should still retain its natural drainage qualities, defined in terms of erosion and surface runoff at a level equivalent to that on the site prior to disturbance. Rather than detailing how this is to be achieved, it is left up to the developer to secure the proper mixture of steep slopes, impervious surfaces, open spaces, and control practices to ensure that the overall policy guide or public objective is met.

In choosing whether to employ the specification or performance standard approach, it should be recognised that each has certain strengths and weaknesses which should be considered in light of the planning context prior to deciding on the appropriate strategy. Richman (1979) as quoted from Oregon State University Extension Service (1974) enumerate the advantages and disadvantages of performance standards over the specification standards to include: the flexibility given to developers to achieve desired end states; the opportunity allowed to introduce incentives and impact analysis into the regulatory process, and the clear and defensible rationale provided to decision makers by the adopted policies

and objectives. Drawbacks to the use of performance standards involve difficulties of administration due to the lack of technical expertise of staffs or limits on data availability and measurement techniques, the potential for introduction of hidden costs and regulatory unpredictability, and legal uncertainty regarding court acceptance of the standards' legitimacy.

2.4 THE DISEASE ECOLOGICAL CONCEPT

The last of the three concepts adopted for this study is the ecological concept used by Pyle (1979), May (1958, 1961), Learmonth (1959) as cited in Akinyoyenu (1990), Oyewo (1992) and Akinwale (1994).

Disease ecology seems to relate the occurrence of particular diseases to the physical environment. It seeks to establish an association between diseases and the environment. The ecological approach according to Pyle (1979), refers to environmentally-oriented explanation that attempts to establish associative occurrence between disease and environment. According to the theory, the propagation and spread of diseases must include an examination of certain spatial elements that can best be accomplished by the understanding of the overlapping cycle of disease in time and space.

Disease ecological approach is considered as the interaction of man with his total environments. The concept states that an understanding of natural environmental condition

is an absolute pre-requisite to approaching the ecology of vector-borne diseases. While subscribing to the influence of environmental complexes, May (1958) introduced cultural behaviour as another variable to disease occurrence. According to her, three other contributing factors that are essential to disease propagation and transmission include: inorganic, organic and socio-cultural factors. The inorganic consists of climate, temperature, humidity and drainage variation which are favourbale to the development of particular parasites while organic refers to the responses of the issues to environmental complexes. The socio-cultural aspect refers to human behaviour and levels of economic development which make particular people susceptible than the others.

McGlashan (1979) also pointed out that in a bid to gain understanding into ecological complexes in relation to various aspects of the natural environment, aspects of climate cannot be separated from disease propagation, disease transmission or diffusion and disease study. In fact, the best understood disease ecological association is that which places emphasis on climate (Pyle, 1979). This explainswhile schistosomiasis predominates in the tropical regions of Africa, but the same could not be said of the dry part of West Africa where the disease finds it difficult to propagate in the first place. Similarly, Pyle (1979) indicated that certain types of anopheles mosquitoes are unable to survive in cold environments, or in areas without sufficient water or highland regions. Therefore, he

suggested malaria possibility and risk in relation to temperatures in July and January which tend to shift with the angle of the sun and seasonal changes.

The socio-cultural complexes to disease propagation and tranmission refer to human attitudes that tend to encourage diseases. This was the concept used by Prothero (1965), in conducting a research on migrants and malaria which is an excellent case study of human activity in relation to diseases. According to Prothero, not only the mastery of environmental traits is important to disease control, certain factors pose problem to effective prevention and eradication. These are resistance to change due to certain kinds of human behaviour, the resistance of the disease itself to control measures, the administrative inability to effect control and the general inaccessibility of either people or the disease to control measures. WHO (1987) also further subscribes to this behavioural aspect of disease transmission and control by recognising that even though improved water, sanitation and waste disposal facilities provide the environment for better health new behavioural patterns are needed if disease transmission is to be brought under control. The behavioural patterns are in form of personal hygiene, cleanliness within and outside the houses, proper food handling, having separate steads for animals as wellas imbibement of hygiene education.

From all that has been discussed earlier in this chapter, it could be seen that the two critical variables (environment and culture) fit accurately well into the theme of this research

because peoples' health are affected by the interaction of environmental and socio-cultural complexes.

Sanitary practices are recognised as a function of socio-cultural factors and as an effective means of diseases prevention. Getachew (1980) confirmed this view, by maintaining that development process involves the direct interrelationships of the social and economic fabrics of a society and sanitary development being an integral part of socio-economic development, invariably, where the level of economic development is low, the sanitary conditions are bound to be low and vice-versa.

This concept is useful because it will help us to understand why certain diseases are common where, and how to tackle them through an understanding of that particular environment. The concept would help the physical and health planners to come out with solutions on how to prevent disease propagation and transmission in our cities.

2.5 LITERATURE REVIEW

The beginning of the modern attitude to health and comfort in relation to building design and to town planning can conveniently be dated from 1842 when Edwin Chadwick's Report on sanitary condition of the labouring population of Great Britain was first published (Flinn, 1965; Macpherson, 1979). In his report, Chadwick asserted that disease and a poor expectation of life were associated with bad housing overcrowding, poor drainage and a

poor water supply, and that where these faults had been corrected the inhabitants showed an improvement both in health and in morals.

There are, of course, those who would maintain that the improvement in health that has been observed to accompany an improvement in housing in so many parts of the world was not causally related to it, except in the sense that they were both the products of the same forces; that is, increasing affluence and real advances in medical science. This observation, according to Macpherson (1979) seems not to be correct because it has been said by WHO (1964) that although only 20 per cent of the average American city is occupied by slums and only 33 per cent of its inhabitants live there, 35 per cent of the fires, 50 per cent of the disease, 45 per cent of the major crime, 66 per cent of the tuberculosis cases, 55 per cent of juvenile deliquency and 50 per cent of arrests occur in the slums and they cost 45 per cent of the total city expenditure. Unfortunately, as further observed by Macpherson (1979), given a closer look, such arguments are usually found difficult to sustain. For example, even if these figures are reliable, and it is difficult to see how they can be arrived at with any degree of accuracy, it would be just as plausible to claim that all the unhappy results cited arise not because housing in slums is substandard, but because most American slums have a high non-white population. This also is a quite unjustified and unacceptable conclusion.

The incontrovertible fact is that the improvement in health which accompanied improvements in housing and sanitation in Western Countries occurred long before most of the effective treatments for disease which exist today had been discovered. For example, it is only within the last few decades that drugs effective in the treatment of tuberculosis have been introduced, but the decline of the disease in the United Kingdom dates at least from the beginning of the 20th century (Mapherson, 1979).

Odongo (1979) also argued that overcrowding is generally regarded as a hazard to health and, in particular, encourages the spread of infectious diseases such as typhoid and tuberculosis. This is most pronounced in a residential situation in which the sleeping accommodation is congested and the ventilation facilities poor. Also, Abrams (1966) and Clinard (1966) (cited in Odongo, 1979), maintained that the theory that a filthy and decaying environment is indeed a health hazard to slum dwellers is widespread and argued that the theory is derived from the basic assumption that such an environment usually provides an appropriate breeding ground for a variety of infectious and contagious diseases such as cholera, dysentary and tuberculosis.

Clinard (1966) in a study of slums in India and Marris (1961) in Lagos (cited in Odongu, 1979) have independently observed that the often supposed poor health of slum dwellers is not exclusively a consequence of poor housing conditions as such poor health

could also be attributed to unbalanced diet, inadequate medical facilities and wilful disregard for personal hygiene. Mead and Wegelin (1975) have also reported in a Kuala Lumpur study that in contrast to re-housed families, squatter settlers tend to make less use of the available health facilities.

Apart from the various effects which bad housing and unhygienic environment would have on the people's health as indicated by the above acknowledged scholars, a lot have also been written by different people on planning standards and legislations as they affect the people's health, for example, Chu and Linneman (1993) observed that the professed goals of most types of local land use regulations are to enhance a community's allocative efficiency. That is, most such regulations aim to promote public health, safety and welfare by reducing negative externalities associated with land development. However, several studies have challenged the welfare - enhancing goals of landuse regulations. Specifically, it has been argued that local land use controls are born of either fiscal or exclusionary incentives. In the first case, land use regulations are used as policy tools through which neighbouring communities engage in fiscal competition for land uses that generate high revenue but demand low expenditures (Mills, 1978; White (1988). As Agbola (1992) noted, examining the impact of legislations on the morphology of Nigerian cities, the legislations made by the British in Nigeria were all meant to cater for the acceleration of the colonial

government business interests. For example, the 1863 Township Improvement Ordinance was geared at improving urban sanitation in Lagos alone. It was not a planning legislation but a health law and because the colonial government had few health inspectors, it did not have significant effect on the sanitary conditions of Lagos. However, the 1917 planning legislation that could have had overwhelming transformational effects on the Nigerian city form were not implemented. This legislation was an expanded version of the cantonment proclamation of 1904 and it was to deal with infrastructure, sanitation and urban form and structure (Agbola, 1992).

Ola (1977) expressing his own views on the essence of legislations, maintained that if development control is not enforced, landowners and estate developers will build anywhere and anyhow, causing the chaotic and disorderly growth of the town. They will encorach on adjoining properties, denying access, natural light, ventilation, and privacy to them. Fire hazards will increase and, in an emergency, a fire-brigade or an ambulance will not have access to the affected buildings.

However, New York city department of city planning (1975), and Reiss and Kwarther (1976) observed that New York City has adopted regulations incorporating a social performance standards approach in a programme which attempts to define the actual qualities which make apartment living desirable, rather than defining rigid building standards

which are indirectly meant to provide housing quality. Ozo (1987) also noted that building codes and housing standards required by law generally involve building in permanent materials aimed at meeting safety requirements as well as serving as protection against climatic elements.

According to Vagale et al (1971) in order to create an environment which has a quality of acceptable standards of health and efficiency and which enables the individual, the family and community to live, work and worship in a satisfactory manner, it is necessary to adhere to certain spatial standards. Space standards, therefore, serve as guidelines to town planners, architects, engineers and developers in the design and layout of residential development; industrial estates; shopping centres; recreational areas; public utilities; municipal services, education and health facilities as integral components of urban development.

As noted also by Vagale et al (1971) and Richman (1979), space standards provides criteria for evolution of urban systems and a yardstick to measure the acceptability of housing, industrial, educational, health, commercial and other types of development projects. Also, it serves as indicator to those elements that must be present in a given environment, and it has been used to enumerate the space and facility requirements for a given population within a communal set up.

2.6 HISTORICAL DEVELOPMENT OF PLANNING LEGISLATIONS IN NIGERIA

For almost a century, Nigeria was a colony of Britain. As a result of this, all legal systems in Nigeria were fashioned in line with the British until independence in 1960. Likewise, all the planning legislations or land use control measures ever enacted in Nigeria were all fashioned after the British Town and Country Planning Laws and the colonial administrative convenience.

Before the advent of the British, the land use control, under the customary law was vested on the Obas, Obis, and Emirs who were represented by chiefs who acted as administrators and trustees of the land which belong to the community. The chiefs gave permission (with the consent of the elders of the community) before a vacant land in his district could be developed. As remarked by Agbola (1992) the development and control of the total environment was the joint administrative responsibility of the entire community. However, this joint responsibility of land administration was not sufficient to prevent undesirable forms and structure of towns because the towns developed within the culture and traditions of their respective settings (Olaore, 1983, Agbola 1992).

2.6.1 The Early Years of Planning Legislations

The beginning of planning legislation in Nigeria could be said to start with the ceded of the settlement of Lagos (in what is today Nigeria to Great Britain in 1861. Two years

later, to authenticate her new territory, an attempt to control and regulate urban development was made in 1863 with the publication of Towns Improvement Ordinance (Milone and Green, 1967, Agbola 1992). The ordinance was enacted to control development and urban sanitation in Lagos alone.

Before the amalgamation of Southern and Northern Nigeria in 1914, there were also some legislative arrangements that were in existence in the country. In 1808 a board was set up, under the Public Health Ordinance for "the sanitary district of Lagos, with the title of "the Lagos Municipal Board of Health", while "Local Boards" could be created in other towns and districts. These boards replaced the former "Central Board of Health" and "Local Boards". These Boards had power to make regulations on certain sanitary matters, subject to the approval of the Governor. In 1909 the purely sanitary powers of the board were extended by an "Incorporation Ordinance (Adeniyi, 1978).

In 1911 "contonments" were set up by Proclamation (Cap. 37) in the Northern Provinces, and an amending law which discriminated between a "cantonment" a "Township" and a "Government Station". This law did not make it clear what the Township and government stations were or in what respect they differ from each other or a cantonment. Cantonments were placed under the Control of the Cantonment Magistrate. A general rate, without any fixed maximum, could be levied on all houses and no person, other than a

government employee, was allowed to reside without a permit. The duties of the Cantonment Magistrate included sanitary supervision, the regulation of streets, buildings and open spaces, fencing of lands, protection against fire, control of markets and similar matters.

2.6.2 The Township Ordinance (No. 29 of 1917)

The first major systematic attempt at physical planning in Nigeria was provided by the Township Ordinance of 1917. Its main purpse was "to establish the broad principle of municipal responsibility, graduated according to the importance of the community, and the measure of its ability to accept, and discharge satisfactorily, independent or quasi-independent powers". The ordinance appears to include other and distinct principles, such as that of segregation "between European rulers and governed Africans". The ordinance also seperated matters directly concerned with health and sanitation from those relating to development control, the construction of buildings, streets, etc and placed them within the responsibility of the Medical and Sanitary Department operating under the Public Health Ordinance. The enforcement of the Township Ordinance was made the responsibility of the Administrative and Public Works Department (Adniyi, 1978).

In order to remove the cofusing and contrdictory set-ups in the southern and northern provinces, the 1917 ordinance recognised three classes of townships, on the basis of

administrative and financial autonomy. The class and boundary of each township were set up under an order signed by the Governor and published in the official gazette. Neither the class nor the boundary of the township may be changed without the written permission of the Governor in a new order.

Lagos was declared a first class township with a town council which combined the functions specified in the Township Ordinace and the Public Health Ordinance. Thus, among its duties were the maintenance of public health, the maintenance of such amenities as its funds permitted, including the construction and maintenance of roads and streets.

The control of a second class township was vested in a "Local Authority" appointed by the Govenor and endowed with the ordinary powers of a corporation, except as regards the lease of land. The "Local Authority" was assisted by an "Advisory Board" and had powers of a town council. The local authority had an independent sources of revenue from rates and subscriptions and miscellaneous fees and dues. The second class townships were eighteen major towns all located on the rail lines, or serving as river or sea ports which had European populations.

The third class townships were under the control of the officer nominated by the Governor as local authority - usually the District Officer or Assistant District Officer of the division or district. There was no township funds, and all revenue collected was paid into

the treasury. Third class townships were mainly other centres which did not have major significance for the then colonial economy. The local authority (who had no Advisory Board) gave effect to the rules made by the Governor.

On a major features of the township ordinance was the major emphasis on guidelines for the physical layout of the towns and cities, particularly in the "European" and "Non-European" reservations. The impact of those guidelines were still very evident in the physical layout of the GRA, and the grid-iron pattern of the layout of such towns as Kaduna, Jos, Minna, Enugu, Port Harcourt and also the new districts of most of our cities. The ordinance stipulated for the "Non-European Reservation" the conditions of the layout of buildings the pattern and dimension of streets, the structures of buildings and the density of population within each building. The native hospital, the prison and the barracks for the army and police were usually located near the towns.

A cursory observation of the layout of towns and cities, particularly the new layouts, shows in bold relief the physical impact of the guidelines under the Township Ordinance. No attempt was made to apply the ordinance to the existing traditional cities, nor were there any attempts to replan them.

In 1924, Governor Hughes Clifford established seperate Town Planning Committees for the Northern and southern protectorates. The main aims of this action were to control

and coordinate urban growth and development in the country; initiate and develop planning schemes; approve building plans and to give physical (town) planning a distinct administrative machinery which has been the most important noticeable defect of the 1917 Township Ordinance. Unfortunately, before this move could yield result, Governor Clifford left for England and his successor saw no need for this arrangement. Yet, the insanitary conditions arising largely from the unplanned nature of Lagos was assuming alarming dimensions until there was an outbreak of bubonic plague in Lagos. This then led to the enactment of the Lagos Town Planning Ordinance of 1928.

2.6.3 The 1928 Lagos Town Planning Ordinance

The 1928 Town Planning Ordinance was meant to deal again with the pecular planning problems of Lagos. Since the absence of a seperate administrative machinery contributed significantly to the failure of the 1917 ordinance, the hallmark of the 1928 ordinance was the setting up of the Lagos Executive Development Board (LEDB). The 1928 Town Planning Ordinance was thus the oldest town and country planning ordinance in Nigeria and the LEDB (now the Lagos State Property and Development Corporation LSDPC) is the first planning authority to be established in Nigeria under an ordinance (Agbola, 1992). The ordinance made provision for the re-planning, improvement and development of Lagos (Ola, 1977, Agbola, 1992).

The major functions of this Board were acquisition and disposal of land; compensation and exactment of betterment of land; planning and control of all new developments within Lagos; construction and maintenance of roads; minimal slum clearance on Lagos Island; the reclamation of Victoria Island, provision of houses for displaced low income people; housing schemes in Surulere, south-west Ikoyi and Apapa; the industrial layouts at Apapa, Iganmu and Ijora; and facilitation of the distribution of public utilities, services and other amenities. These functions reflected the problems of the city such as bad plannings; poor drainage; insanitary conditions, housing shortages; and poor network of infrastructural facilities (Oduola, 1985; Agbola 1992).

The composition of the eight member Board (LEDB) which were appointed by the Minister consisted of the Town Clerk of Lagos; a nominee of the Lagos Chamber of Commerce; the Senior Medical Officer, Lagos; the Chief Engineer, two councillors; and certain other persons holding official positions (Ola, 1977).

Prior to 1946, the generous provisions of the township ordinance did not extend to most of the other towns in Nigeria. However, prompted by the prevailing socio-economic circumstance in the country at that time and reminded of the conditions which prompted the 1932 Town and Country Planning Act in Britain, Colonial Administrators enacted the Nigerian Town and Country Planning Ordinance for the colony and protectorate of Nigeria in 1946.

2.6.4 The Nigerian Town and Country Planning Ordinance of 1946

The Nigerian Town and Country Planning Ordinance (No. 4 of 1946) was the first planning ordinance which embraced the whole country. The law came about as a result of the prevailing socio-economic changes in the country at that time which include; increasing population, a growing commercial activities and development of land contrary to the public interest. Therefore, the aim of the ordinance as contained in the ordinance itself, was for the re-planning, improvement and development of different parts of Nigeria.

The most remarkable feature of the ordinance was that it provided for the appointments of planning authorities and secured control of development through the preparation of planning schemes made by planning authorities. Under the ordinance, the central authority for all planning was the Governor, although his powers were delegated to the Minister of Planning of whose interests, unlike those of the chief, are concerned entirely with matters of town planning, in order to ensure consistency and continuity.

The ordinance contains far-reaching provisions affecting the ownership of land and the rights of the owner to use his property, as he likes. It prohibits the carrying out of development without the consent of the planning authority. It empowers the authority to make orders or adopt, with or without modifications, supplementary orders proposed by owners of lands. Where it has made a planning scheme, the authority may include in the

scheme a provision prohibiting or restricting building operations to proceed pending the coming into operation of a general development order and may grant applications for development with or without conditions, where they are satisfied that the proposed development will not prejudice the scheme already prepared. The authority may purchase any land in a planning area compulsorily or by agreement and regulations may be made for the preservation of buildings and objects of artistic, architectural, archeological or historical interest and for reservation of views and prospects and of the amenities of places and features of natural beauty or interest.

Most parts of the provisions of the 1946 ordinance were retained by the three Regional Governments as a result its comprehensiveness when town planning became regional functions. For example, the 1946 ordinance became the Town and Country Law, Cap. 123 of the Laws of Western Nigeria 1959 and this was adopted in 1976 by the Oyo State Government known as Cap. 125 town and country planning law. The same ordinance has been applied in Eastern Nigerian since 1955.

Overtime and as Nigeria advances socio-economically, government and various entrepreneurs still had problems with the acquisition of land, especially within the southern states. This situation therefore led to the enactment of the 1978 Land Use Decree.

2.6.5 The Land Use Decree (Act) of 1978

The Nigerian Land Use Decree No. 6 of 1978 was promulgated on the 29th of March 1978. Before this time, there were various regulations and laws involved in the use and ownership of land. However, the laws were essentially regional in application. There were various tenural systems in the country. For instance, in the North, there was no any private ownership. In short, land was owned by the individuals and communities. Thus with this patternless system, sentiment was attached to ownership and use of land.

Consequently, the Land Use Decree was enacted to integrate and have a uniform, tenural system of land ownership. Again it was supposed to allow for libralisation by allowing the poor to have access to land. Land Use Decree was more or less a Land Reform Policy.

The main aim of Land Use Decree was to govern the ownership and use of land with one law that would be applicable throughout the country. In which case, all Nigerians would be able to own land anywhere. In effect, the LUD has nationalised all land in Nigeria. The Deree (LUD) also highlighted two specific objectives which onclude: to assert and preserve by right the land of all Nigerians to the rights of all Nigerians; and to assure, protect and preserve the right of all Nigerian to use the land and the natural fruits thereof in sufficient quantity to enable them provide for the sustainance of their family.

By the provisions of the decree, all the rights to land in each State is vested in the State Governor, to hold in trust and be administered for the common benefit of all Nigerians. Two committees, one at the state level (the Land Use and Allocation Committee) and at the local level (the Land Allocation and Advisory Committee) are to assist the governor in the administration and control of the land. The decree further stipulates that no land granted to an individual and upon which a certificate of offupancy (C of O) is issued may be alienated without the consent of the Governor.

Evaluating the provisions of the decree certain veritable deductions could be highlighted. For example, the decree has no starting point. We do not know who owns what. There is also no Land Banking System to tell the exact point and location of land owned by people thus making the implementation of the law very difficult. Also, the country now operates, in principle, a contractual land tenure system validated by the C of O which sets out the terms of tenure, including access, succession, duration and rents. In addition, by investing all control power in the Governor, the decree assumed that a governor cannot be wrong, one with utmost heart. It is quite possible for the governor to abuse this provision. As observed by Uchendu (1979) cited in Agbola (1992) the decree removed corporate groups, chiefs and families from the trusteeship of land and replaced them with the state governor.

Furthermore, the law is silent on the size of residential plots of land a citizen could have in the rural area. In the same vein, there are no cadastrial maps or land banking system to assist the decree, hence the decree has been operating in a vacuum; there are no Landuse Allocation Committee (LUAC) or Advisory Committee (AC). Land sales still continue till today despite the land use decree.

To a large extent the LUD has not achieved the purpose for which it was set for. The decree is nothing but a mere mockery of the law.

Over the years, many people have been clamouring in the planning circle for the need to have a new law to govern the practice of town and country planning in Nigeria to replace the already Stale Nigerian Town and Country Ordinance of 1946, which had become obsolete. These various agitations then led to the enactment of the Nigerian Urban and Regional Planning Decree No. 88 of 1992.

2.6.6 Nigerian Urban and Regional Planning Decree 1992

In response to the people's demand and the prevailing economic and cultural circumstances of the nation, the Nigerian Urban and Regional Planning Decree no. 88 of 1992 was promulgated by the Federal Government on 15th December, 1992. This was to replace the Old Nigerian Town and Country ordinance of 1946 which had become outdated.

By provision, the law was divided into six parts which include plan preparation and administration, development control; additional control in special cases; acquisition of land and compensation; improvement areas, rehabilitation, renewal and upgrading and lastly appeal. Part 1 of the law which is plan preparation and administration sets out the parts of plans to be executed by the three levels of governments. National physical planning development, regional plan, urban plan and subject plans like water and solid waste projects are to be executed by the Federal Government. At the state level, regional plan, urban plan, local plan and subject plans are their own responsibility, while at the local level town plan, rural area plan, local and subject plans are within their schedule.

Under plan administration, the Federal Government is empowered under the provision of the law to formulate National Policy for Urban and Regional Planning and also formulate planning standards, planning education and training and co-ordination among states. The state has the duty of formulating the state policy for urban and regional planning, conduction of planning researches and disseminating the reuslts to users organisations. The local level is responsible for the preparation and implementation of a town plan, local and subject plans.

To carry out this functions part 5 of the law says that there should be an urban and regional planning national commission at the federal, urban and regional board at the state

and local planning authority at the local government level.

Part 2 of the law is development control. Under this provision, each of the commission, baord and authority would have a department of development control which would have power over the development within its jurisdiction. This section of the law has provision for Environmental Impact Assessment (EIA). By this provision, a developer shall at the time of submitting its application for development submit to an appropriate department, a detail EIA for an application in respect of: (1) residential estate in respect of 2 hectares (2) permission to build or expand a factory, or for the construction of an ooffice building in respect of 4 fllors or 5000 sq metres of a let take space or for a major recreation development.

Part 3 of the law has provisions for additional control for special cases with regards to physical development. Part 4 on the other hand is on acquisition of land and compensation. Section (75) (1) of this provision gave power to commission, board or authority to revoke the right of occupancy if a land is to be used for public interest and the owner would be paid compensation. Likewise betterment from land owners.

Part 5 of the law is on improvement areas, rehabilitation, renewal and upgrading. This section gave power to commission board and authority at the Federal, State and Local levels respectively to renew and upgrade the urban and rural environment. The last part of

the law which is the appeal gave provision for the establishment of urban and regional planning tribunal to hear appeal from those who are disatisfied with the rejection of his or her plan.

Though the new law is very compenhensive, but there are still some areas of the provisions of the law that need more clarification. For example, part 2 of the law which empowers each of the commission, board and authority to exercise control over the development within its jurisdiction. Performing this function may be problematic because there is no definite boundaries between the Federal, State and Local Government land. There is no articulate land banking strategies. This can then cause confusion in areas where Federal development control department would operate in the state or state development control operates at the local level. But nonetheless, the new law has been able to take care of the major inadequacies with which the old 1946 Nigerian Town and Country Planning Ordinance was known.

CHAPTER THREE

EFFECT OF PLANNING LEGISLATIONS ON URBAN ENVIRONMENT AND HEALTH

3.1 SOCIO-ECONOMIC ATTRIBUTES OF INHABITANTS IN IBADAN

In order to arrive at meaningful analysis of the socio-economic characteristics of the people, the city was divided into three major geographical zones: the high density district, comprising mainly of the core areas of the city; the medium density which is an intermediate zone between the high and low density districts; and lastly the low density district which comprises mainly of the GRA and housing estates in the city. Besides the physical characteristics of the three districts, which helped in the geographical delineation, each district differs from the other with respect to household size, education, income and occupational structure.

Majority of the respondents sampled have lived in the city for over ten years, this constitutes 89.6% of the total respondents. The length of stay however differs with respect to residential districts (Table 3). The respondents have also stayed in their present residences for more than ten years as this also forms the greatest proportion of the total respondents (83.9%). Other respondents have only stayed less than ten years in the house constituting between 2 and 5.9% of the total respondents (Table 4).

Table 3: Household Characteristics by Years of Stay in Ibadan

Districts		Length of Stay in Ibadan			Total %
		1-5 years	6-10 years	Over 10 years	
High Density	No %	-	-	84 41.0	84 41.0
Medium Density	No %	4 2.0	4 2.0	54 26.2	62 30.2
Low Density	No %	1 0.5	12 5.9	46 22.4	59 28.8
Total %		5 2.5	16 7.9	184 89.6	205 100.0

Source: Field Survey, 1995.

Table 4: Longevity of Occupancy

Districts		Length of Stay in house			Total %
		1-5 years	6-10 years	Over 10 years	
High Density	No %	-	-	84 41.0	84 41.0
Medium Density	No %	10 4.8	7 3.4	45 22.0	62 30.2
Low Density	No %	4 2.0	12 5.9	43 20.9	59 28.8
Total %		14 6.8	19 9.3	172 83.9	205 100.0

Source: Field Survey, 1995.

In terms of head of household, males are in the majority constituting 90.7% of the total respondents. The female household heads are however more in the high density district constituting 6.8% of the respondents than the medium and low density districts with 2.5% and 0% respectively (Table 5). The size of the household ranges between 4 - 6 persons per household in the three residential district constituting over 50% of the total respondents. The size is however lowest in the low density district between 1 - 3 persons per household constituting 10.2% of the respondents while the size is highest in the high density district with 65 respondents constituting 31.7% of the total respondents having more than 10 persons per household (Table 6).

Table 5: Household Population by Sex

Districts		Sex of Household Head		Total %
		Male	Female	
High Density	No %	70 34.1	14 6.8	84 41.0
Medium Density	No %	57 27.8	5 2.5	62 30.2
Low Density	No %	59 28.8	- -	59 28.8
Total %		186 90.7	19 9.3	205 100.0

Source: Field Survey, 1995.

Table 6 Density of Household

Districts		Number of Persons per Household			Total %
		1 - 3	4 - 6	Above 10	
High Density	No	-	19	65	84
	%	-	9.3	31.7	41.0
Medium Density	No	4	48	10	62
	%	2.0	23.0	4.9	30.2
Low Density	No	21	36	2	59
	%	10.2	17.6	1.0	28.8
Total		25	103	77	205
%		12.2	50.2	37.6	100.0

Source: Field Survey, 1995.

The breakdown of the educational level of the respondents indicates that 57 people constituting 27.8% are university or polytechnic degree holders residing mainly in the low density residential district while people with no education background are 55 in number constituting 26.8% of the sampled respondents. This group, however, are exclusively residing in the high density residential district. Others with secondary school, primary school certificates and others constitute 25.8, 19.1 and 0.5 per cent respectively (Table 7). In terms of occupation structure of the respondents, a substantial percentage of them are traders or businessmen with 42.4 per cent of the total respondents cutting accross the

residential density districts. Closed in rank with the businessmen are the artisans with 22.0% residenced mainly in the high density residential area. Others include civil servants and public servants with 19.5 and 14.1 per cent respectively. Others which are not specified in the table constitute the least 2.0% of the total respondents (Table 8).

Table 7: Literacy Level

Districts		Level of Education					Total %
		No Edu.	Pry. Sch.	Sec. Sch.	Univ/ Poly	Others	
High Density	No	47	36	1	-	-	84
	%	22.9	17.6	0.5	-	-	41.0
Medium Density	No	8	3	33	17	1	62
	%	3.9	1.5	16.1	8.3	0.5	30.2
Low Density	No	-	-	19	40	-	59
	%	-	-	9.3	19.5	-	28.8
Total		55	39	53	57	1	205
%		26.8	19.1	25.8	27.8	0.5	100.0

Source: Field Survey, 1995.

Table 8: Occupation of Household

Districts		Type of Occupation					Total %
		Civil Service	Public Service	Artisan	Business/ Trading	Others	
High Density	No	2	1	44	37	-	84
	%	1.0	0.5	21.5	18.0	-	41.0
Medium Density	No	37	2	1	19	3	62
	%	18.0	1.0	0.5	9.3	1.5	30.2
Low Density	No	1	26	-	31	1	59
	%	0.5	12.7	-	15.1	0.5	28.8
Total %		40 19.5	29 14.1	45 22.0	87 42.4	4 2.0	205 100.0

Source: Field Survey, 1995.

The income of majority of the respondents is more than N15,000 per annum per household constituting 58 per cent of the total respondents sampled mainly residing in low and medium residential districts constituting 28.2 per cent and 24.9 per cent respectively. Respondents with between N5,001 and N10,000 forms 16.6 per cent while respondents earning between N1,001 and N5,000 constitutes 13.2 per cent. Others with less than N1,000 annual income and between N10,001 and N15,000 constitute 8.3 per cent and 3.9 per cent of the total respondents respectively (Table 9).

Table 9: Household Income

Districts		Household Income per annum					Total %
		<N1000	N1001-5,000	N5001-N10000	N10001-N15000	> N15,000	
High Density	No	17	23	33	1	10	84
	%	8.3	11.2	16.1	0.5	4.9	41.0
Medium Density	No	-	3	1	7	51	62
	%	-	1.5	0.5	3.4	24.9	30.2
Low Density	No	-	1	-	-	58	59
	%	-	0.5	-	-	28.2	28.8
Total		17	27	34	8	119	205
%		8.3	13.2	16.6	3.9	58.0	100.0

Source: Field Survey, 1995.

In general, the various Brazillian types of buildings, that is rooming houses or face-me-I-face you type predominate in the city with 49.8 per cent of the sample located mainly in the high density residential area. Storey buildings follows with 21.0 per cent also localising mainly in the low and medium density areas with 15.1 per cent and 5.9 per cent respectively. Other types of housing include flats and bungalows with 17.1 per cent and 11.2 per cent respectively found mostly in the low and medium residential districts (Table 10).

Table 10: Housing Type of Household

Districts		Housing Type				Total %
		Rooming Apartment	Flats	Bungalow	Storey	
High Density	No	84	-	-	-	84
	%	41.0	-	-	-	41.0
Medium Density	No	18	31	1	12	62
	%	8.8	15.1	0.5	5.9	30.2
Low Density	No	-	4	24	31	59
	%	-	2.0	11.7	15.1	28.8
Total		102	35	25	43	205
%		49.8	17.1	11.2	21.0	100.0

Source: Field Survey, 1995.

3.2 URBAN AND REGIONAL PLANNING LAWS AND ENFORCEMENT OF DEVELOPMENT CONTROL IN IBADAN CITY

Generally, there are few town planning restrictions on the design of buildings in the central area of Ibadan. The then Western Nigeria Government foreseeing the difficulties likely to be encountered in enforcing town planning rules in the central area, appointed Town Planning Authority and charged it with the development planning and control of Ibadan, excluding the area enclosed by a circle radius of two miles, with Mapo Hall as centre (Ola, 1977). Thus the Town Planning Authority deals with the outlying districts

leaving the centre for the local government. The central area consists mainly of unplanned old buildings and relics of the old compounds, intersected by some few streets which are incapable of coping with the requirements of various users such as motorists, shoppers and cyclists.

Today, the entire municipality has been broken into five local government areas which include Ibadan North, Ibadan South West, Ibadan North East, Ibadan North West and Ibadan South East. Each of these local governments has a department of Town Planning charged with the duties of enforcing town planning laws and development planning and control of each of these local government areas.

Despite the fact that the new Urban and Regional Planning Law (Decree 88 URP Law of 1992) has been promulgated to cater for the various lapses in the old laws, majority of the planning authorities in Ibadan city are still operating under the old laws (Table 11). For instance, the survey carried out in all the five local planning authorites in Ibadan indicated that 4 out of the five local planning authorities are still operating under the old law (Cap 125 of Oyo State) only one local planning authority (Ibadan South West Local Planning Authority) repored that they were operating under Decree 88 of 1992 (Table 11).

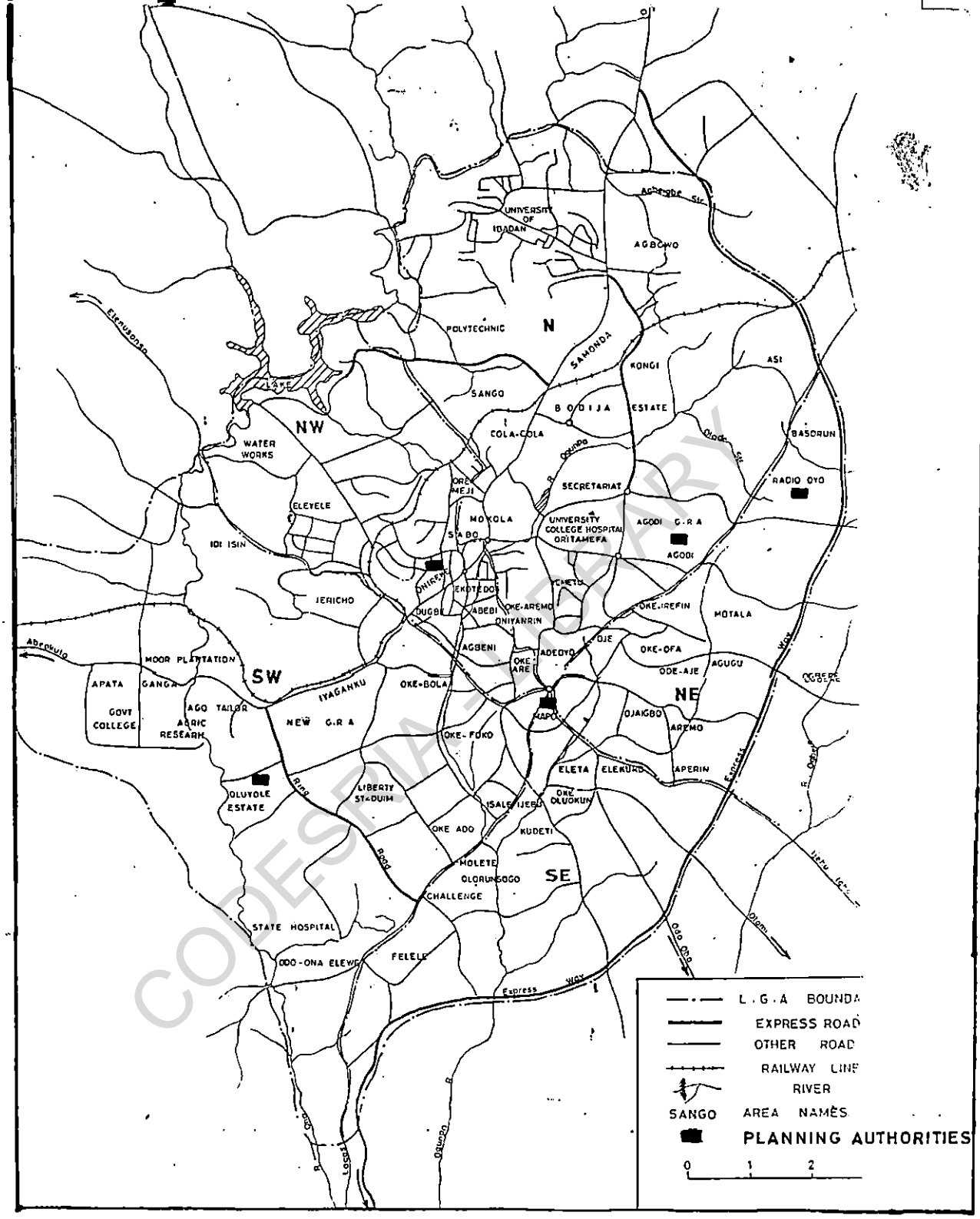

Fig. 4. Map of Ibadan Showing Locations of the Five Local Planning Authorities in Ibadan.

Table 11: Planning Authorities in Ibadan and Laws Under which they Operate

No.	Local Planning Authorities	Location in the City	Law(s) Under Which Operated
1	Ibadan North West	Onireke-Dugbe, Ibadan	Cap 125 Laws of Oyo State 1979
2	Ibadan South West	I.B.B. Way, Ring Road, Ibadan.	Decree 88 of 1992
3	Ibadan North East	Iwo Road, Ibadan.	Cap 125 Laws of Oyo State 1979
4	Ibadan South East	Mapo, Ibadan.	Cap 125 Laws of Oyo State 1979
5	Ibadan North	Agodi, Ibadan	Cap 125 Laws of Oyo State 1979

Source: Field Survey, 1995.

As reported by these planning authorities, their duties under the provisions of the laws include, physical development control, building plan approval and preparation of planning schemes. Others include demolition of illegal structures and protection of places of interest. The reason for lack of implementation of the new law as indicated by the survey lies with the government for not setting up the National Urban and Regional Planning Commission at the Federal, the State Urban and Regional Planning Board, and the

Local Planning Authority at the Local Government level. In other word, the new law is yet to be properly constituted.

In terms of adequacy of the provisions of the new law, majority of the respondents reported that the law was inadequate 4 out of the five local planning authorities maintained that the new law was not adequate because the law did not go into the details of space standards for different types of landuses and building bulk. With regards to the differences between the 1946 and 1992 laws, the differences pointed out are that the new law (1992 URP Decree 88) allocates specific functions to different tiers of Government. Some people however are of the view that the new law is an embodiment of the present day happenings in the physical environment. While others believe that the new law is nationally oriented while the old law 1946 Town and Country Planning Ordinance) was regional in nature. In terms of whether any aspect of the new law caters for the health need of the people in the physical environment, majority of the responses centred on the preparation of Environmental Impact Analysis Report by would-be commercial and industrial developers.

The plan approval procedure by the Town Planning Authority entails that certain standards are checked before giving approval to plans. Some of these standards include the density, zonation and accessibility of the area to be built upon, number and sizes of habitable rooms, set-backs and air space proposals and adequacy of facilities like kitchen,

toilet, bathrooms etc in the plan proposa;. Others include over utilisation of space, adequate ventilation for living rooms and effect of the proposal on the immediate environment. The enforcement of these standards are done in various ways depending on the prevailing circumstances. This includes irregular site inspection to building sites with files of approved plans; in case of disperity, developers are advised to conform or face partial demolition. Other methods include educating developers whose drawings of plan proposals fall short of the standards, serving contravention notices and rejection of plans.

In terms of common types of building contravention which are usually committed by developers in the five local government areas of Ibadan municipality; ;developing without plan approval, inadequate space provision, none conformity with approved plans and change of use are most common. Others include building on streams, lack of access road, and inadequate road set backs (Table 12). The likely effects of the contraventions on health as discovered in the survey include environmental degradation leading to outbreak of diseases, stream encroachment leads to flooding which endangers lives and properties and inadequate air spaces which can cause disease infection (Table 12).

Table 12: Common Types of Building Contravention Committed by Developers in Ibadan City and Effects on Peoples Health and Safety

Local Planning Authority	Types of Building Contravention	Effects on Health
Ibadan North East	Developing without plan approval, non-comformity with approved plan and change of use	Environmental degradation lealding to outbreak of diseases
Ibadan South East	Inadequate space provision, building on stream and lack of access road and adequate road set backs	Blockage of ventilation, encorachment of stream valleys leads to flooding which endanger lives and properties
Ibadan North West	Lack of necessary road setbacks and air spaces, change of use	It endangers the life of the people living in such illegal structures
Ibadan South West	Inadequate building setbacks, non-possession of approved plans. Inadequate air spaces and building on open spaces and roads	Negation of good planning environment; inadequate air spaces cause disease infection
Ibadan North	Inadequate air space and ventilation, lack of adequate road setbacks	Lack of adequate road setbacks lead to vehicles breaking into house, lack of ventilation and air space can lead to disease infection.

Source: Field Survey, 1995.

In terms of planning regulation compliance in the five local government areas the level of compliance is fairly satisfactory. The assessment given by three of the five local planning authorities in the city indicated that compliance was fairly satisfactory, while the remaining two maintained that the level of compliance was satisfactory (Table 13).

Table 13: Assessment of Planning Regulation Compliance by Local Government Areas in Ibadan City

Local Government Area	Location in the city	Complain Rating		
		Satisfactory	Fairly Satisfactory	Not Satisfactory
Ibadan North East	Iwo Road	-	✓	-
Ibadan South East	Mapo	-	✓	-
Ibadan North West	Onireke Dugbe	✓	-	-
Ibadan South West	IBB Road (Ring Road)	-	✓	-
Ibadan North	Agodi	✓	-	-
TOTAL %		2 40.0	3 60.0	5 100.0

Source: Field Survey, 1995.

3.3 EFFECT OF QUALITY OF HOUSING AND PLANNING REGULATIONS NON-ADHERENCE ON HEALTH OF RESIDENTS IN IBADAN

Historically, public concern for environmental quality focused first on publis health, especially purity of water supplies, water pollution urban sanitation, housing and industrial health and safety. The World Health Organisation (WHO) as the only accredited agency that takes care of World Health matters has also been giving constant and sustained attention to major problems of environmental quality such as air and water pollution, pure water supplies and urban sanitation in developed and developing countries (WHO, 1970).

The common phenomenon in most cities of the 20th century in the developing countries is the alarming rate of urban growth into slums. These are usually characterised with low quality housing which are being built without planning regulations compliance. This has therefore resulted into various environmental health problems ranging from diseases outbreaks and other environmental hazards like fire and flood disasters, building collapse and vehicle accidents in the cities.

Whereas the professed goals of planning regulations are to enhance the orderly configuration of our cities and to promote public health, safety and wealfare by reducing negative externalities associated with land development; it is regrettable that most developers in our urban centres are not adopting this laws for betterment of their housing and health standards.

It is in this light that the following three hypotheses will be tested to verify the effect of low quality housing and non-compliance of planning regulations on the health of residents in Ibadan. The data that would be used to investigate the hypotheses is the one gathered from the household questionnaires administered on residents of Ibadan comprising of questions on planning regulations compliance of housing, housing and environmental conditions, housing standard measurement and health status and behaviour of residents.

The three hypotheses to be tested for this purpose are:

Hypothesis 1: There is no significant difference in housing conditions and health status of residents in the three residential districts (high, medium and low) of Ibadan.

The above hypothesis is explained with reference to Tables 14, 15 and 16. Table 14 shows the type of housing peculiar to each of the three residential districts. At a glance, luxury and very adequate type of houses are conspicuously absent in the high density districts, only 0.5 and 1.0 per cent of the luxury and very adequate houses respectively are present in the medium density districts, while 9.7 and 19.6 of luxury and very adequate houses are present in the low density districts respectively.

Table 14: Type of Housing by Residential Districts in Ibadan

District	Type of Housing					Row Total
	Luxury	Very Adequate	Adequate	Less than Adequate	Inadequate	
High Density	- - - -	- - - -	1 1.2 1.8 0.5	31 36.9 88.6 15.1	52 61.9 96.3 25.4	84 41.0
Medium Density	1 1.6 4.8 0.5	2 3.2 5.3 1.0	53 85.5 93.0 25.8	4 6.5 11.4 1.9	2 3.2 3.7 1.0	62 30.2
Low Density	20 33.9 95.2 9.7	36 61.0 94.7 19.6	3 51 5.3 1.5	-	-	59 28.8
Column Total	21 10.2	38 18.5	57 27.8	35 17.1	54 26.3	205 100.0

Source: Field Survey, 1995

Chi-square value = 334.7
Degree of freedom = 8
Level of significant = 0.1%

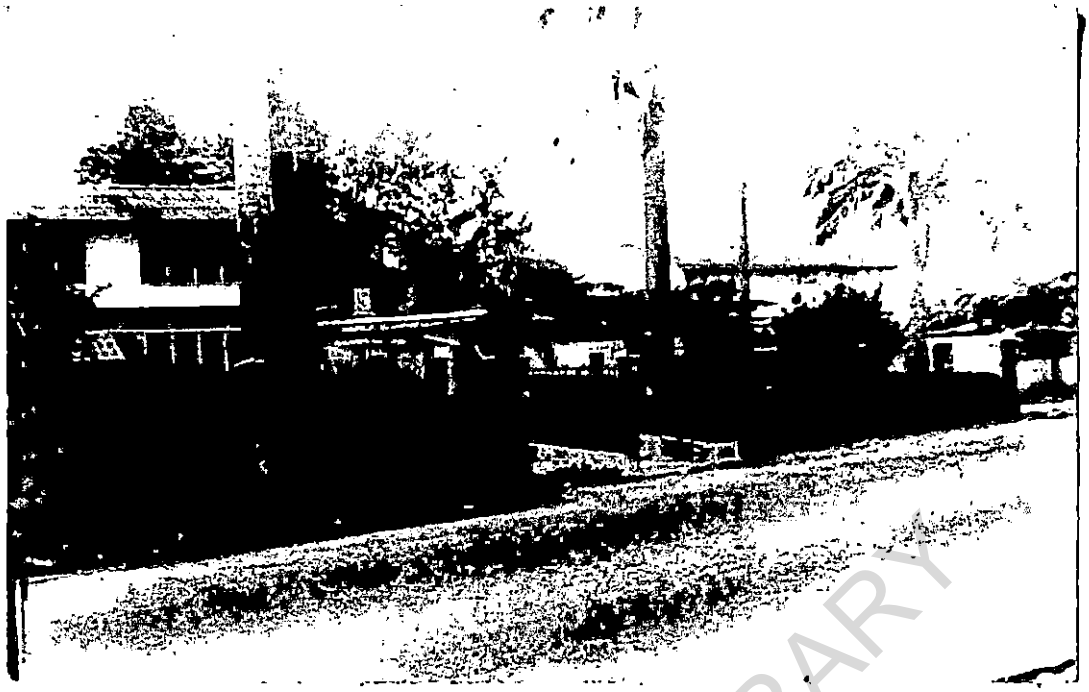

PLATE 2 A View of two types of Standard Housing Located in Bodija in the Low Density Districts of Ibadan

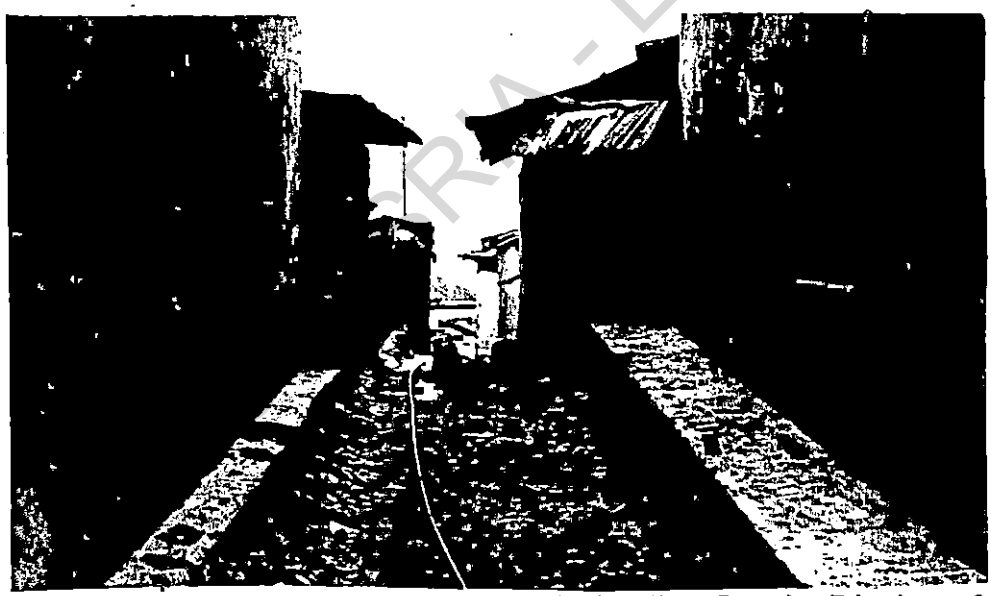

PLATE 3 A View of an area in Mokola in the Medium Density Districts of Ibadan.

PLATE 4 A View of an area in Isale-Ijebu in the High Density Districts of Ibadan

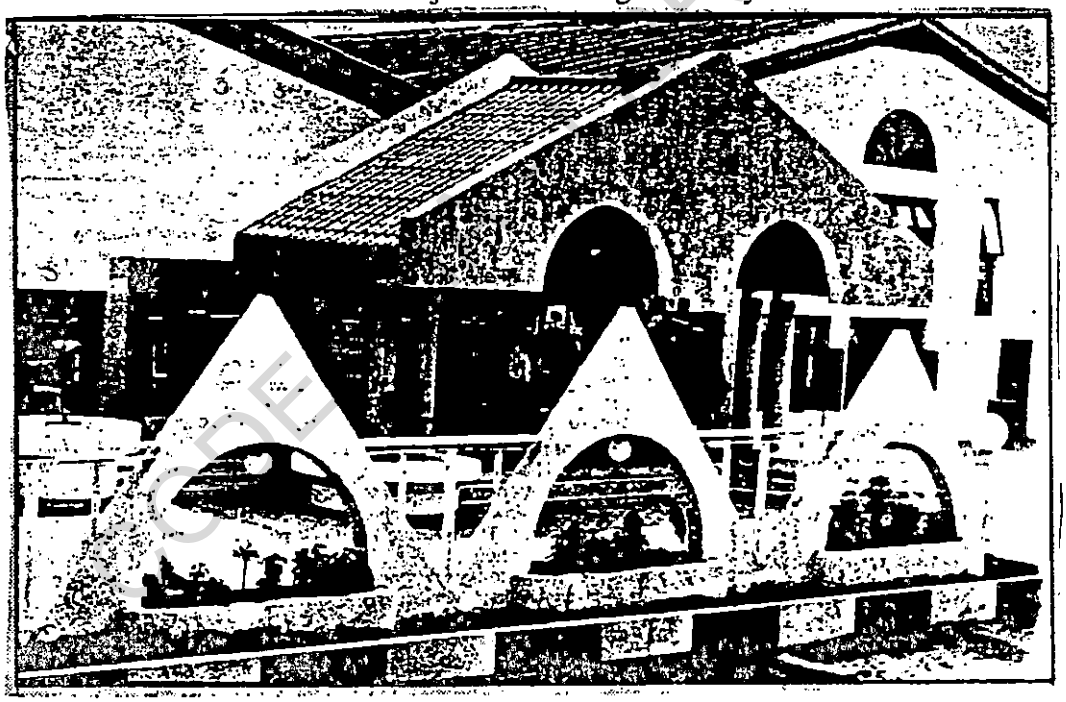

PLATE 5 A Luxury House Located in Oluyole Estate in the Low Density Districts of Ibadan

In terms of adequate and less than adequate type of houses, only 0.5 and 15.1 per cent respectively of the study population are found in the high density districts, 25.8 and 1.9 per cent of adequate and less than adequate respectively are found in the medium density districts, while only adequate type of housing are present in the low density districts constituting 1.5 per cent of the total sample. In terms of inadequate type of housing, the bulk of these are concentrated in the high density districts accounting for 25.4 per cent of the total number of houses sampled and also constituting 96.3 per cent of the total number of inadequate housing in the study population. Only 1.0 per cent of this category of housing are present in the medium density district while none of this type are present in the low density district.

The chi-square value for this analysis in Table 14 is 334.7 while the degree of freedom is 8. The value is therefore significant at 0.1% level of significance (334.7 > 26.12) Ho is therefore rejected. There is significant difference in the type of housing conditions found in each of the three residential districts.

With respect to Table 15 showing the common diseases experienced by residents in the three residential districts of Ibadan. The table indicates that malaria is common to all the districts though in varying but almost uniform percentages.

Table 15: Common Diseases Experienced by Residents in the Three Residential Districts in Ibadan

District	Common Diseases					Row Total
	Typhoid	Malaria	Cholera	Tuber/ cough	Others	
High Density		51 60.7 31.1 24.9		33 39.3 100.0 16.1		84 41.0
Medium Density	1 1.6 100.0 0.5	55 88.7 33.5 26.8	5 8.1 83.3 2.4		1 1.6 100.0 0.5	62 30.2
Low Density		58 98.3 35.4 28.4	1 1.7 16.7 0.5			59 28.8
Column Total	1 0.5	164 80.0	6 2.9	33 16.1	1 0.5	205 100.0

Source: Field Survey, 1995

Chi-square value = 67.5
Degree of freedom = 8
Level of significant = 0.1%

Surprisingly, of all the malaria cases in the study population 35.4 per cent are found in the low density district, 33.5 per cent found in the medium density, while only 31.1 per cent are found in the high density district. On the overall total of the sample these are 28.4, 26.8 and 24.9 for low, medium and high density districts respectively. Surprisingly again cholera is absent in the high density while found in the medium and low density with overall percentages of 2.4 and 0.5 respectively. Typhoid and tuberculosis or cough are found only in the medium and high density districts with 0.5 and 16.1 per cent of the study population respectively.

The chi-square value for this analysis in Table 15 is 67.5 while the degree of freedom is 8. The value is therefore significant at 0.1% level of significance ($67.5 > 26.12$) Ho is rejected. There is significant difference in the type of diseases experienced in the three residential districts.

Reference to Table 16 showing the frequency of diseases complaints by residents in the three residential districts of Ibadan, the analysis from the table shows that people that compalin of ailments on weekly and monthly basis constitute 11.2 and 29.3 per cent in the high density; 0.5 and 5.8 in the medium density respectively. There was no weekly complaints in the low density but 0.5 per cent of the total sample for monthly complaints.

Table 16: Frequency of Diseases Complaints by Residents in the three Residential Districts in Ibadan

District	Frequency of Diseases Complaints					Row Total
	Weekly	Monthly	Every 6 months	Yearly	Occasionally	
High Density	23 27.4 95.8 11.2	60 71.4 82.2 29.3		1 1.2 4.3 0.5		84 41.0
Medium Density	1 1.6 4.2 0.5	12 19.4 16.4 5.8	42 67.7 93.3 20.5	6 9.7 26.1 2.9	1 1.6 2.5 0.5	62 30.2
Low Density		1 1.7 1.4 0.5	3 5.1 6.7 1.5	16 27.1 69.6 7.8	39 16.1 97.5 19.0	59 28.8
Column Total	24 11.7	73 35.6	45 22.0	23 11.2	40 19.5	205 100.0

Source: Field Survey, 1995

Chi-square value = 282.3
Degree of freedom = 8
Level of significant = 0.1%

On the overall weekly and monthly complaints, 95.8 and 82.2 per cent respectively are found in the high density, 4.2 and 16.4 per cent found in the medium density, while 1.4 per cent is found only in the low density for monthly complaints alone. For bi-annual, yearly and occasionaly complaints, only yearly complaints is present in the high density districts constituting 0.5 and 4.3 per cent of the total study population and yearly bases respectively; 20.5, 2.9 and 0.5 percent are for medium density while 1.5, 7.8 and 19.0 per cent represent bi-annual, yearly and occasional complaints respectively for the low density districts. Yearly and occasional complaints were however peculiar to the medium and low density areas with 26.1 and 2.5 per cent and 69.5 and 97.5 per cent respectively of total yearly and occasional complaints for medium and low density areas respectively.

The chi-square value for this analysis in Table 16 is 282.3 while the degree of freedom is 8. The value is therefore significant at 0.1% level of significance (282.3 > 26.12) Ho is therefore rejected; indicating that there is significant difference in the frequency of diseases complaints in the three residential districts of Ibadan.

In conclusion, the hypothesis that there is no significant difference in housing conditions and health status of residents in the three residential districts (high, medium, and low) of Ibadan is therefore rejected.

Hypothesis 2: Incidences of building collapse, flood and fire disasters are rampant in districs where planning regulations and housing standards are not complied with.

Hypothesis 2 will be investigated with reference to Tables 17 to 19. In Table 17 analysing the residential districts and frequency of disasters occurrence in Ibadan indicates that fire and flood disasters as well as building collapse are common in the high density districts representing 21.5, 8.8 and 10.2 per cent respectively of the sample population. But given a critical look, fire disasters is common to all the districts but in terms of rate of occurrence, the rate is higher in the high density district than the medium and low density districts representing 64.7, 27.9 and 7.4 per cent for high, medium and low density districts respectively. In terms of no disaster as reprorted by the respondents, the figure is higher in the low density than the medium and high density districts representing 55.1, 43.9 and 1.0 per cent for low, medium and high density districts respectively.

The chi-square value for the above analysis in Table 17 is 144.3 while the degree of freedom is 6. The value is therefore significant at 0.1% (144.3 > 22.46) Ho is rejected. Therefore incidences of building collapse, fire and flood disaster are common the high and medium residential districts which incidentally coincides with the districts where level of planning regulations compliance and housing standards are low (Tables 13, 29 and 43).

PLATE 6 A View of a slum Settlements in Koloko-Idiobi and Olopometa Area in the High Density Districts of Ibadan

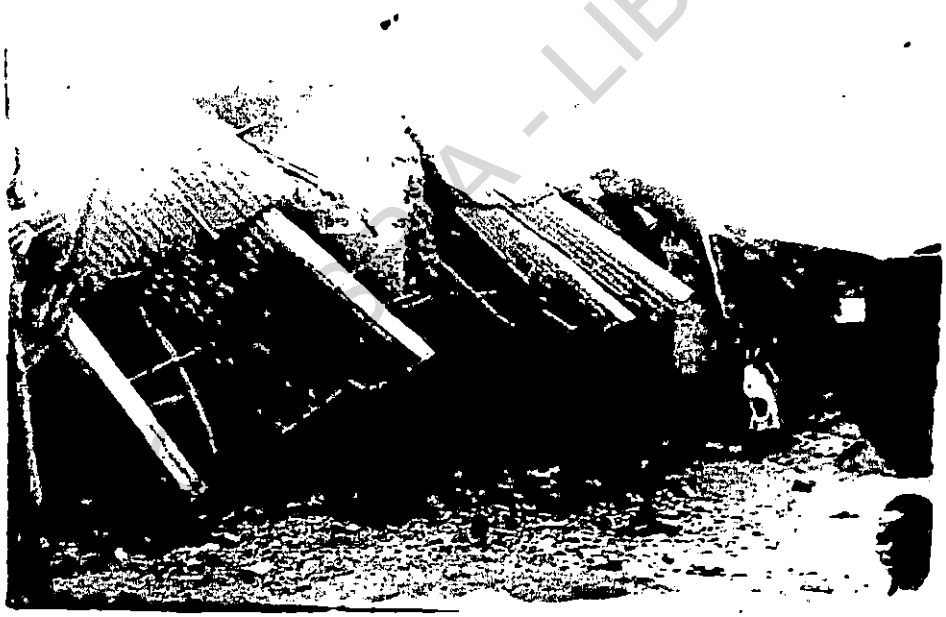

PLATE 7 A View of Delapidated Building in Nalende Area in the High Density Districts of Ibadan

Table 17: Residential Districts and Frequency of Disasters Occurrence in Ibadan

District	Disasters				Row Total
	Fire	Flood	Building Collapse	None	
High Density	44 52.4 64.7 21.5	18 21.4 100.0 8.8	21 25.0 100.0 10.2	1 1.2 1.0 0.5	84 41.0
Medium Density	19 30.6 27.9 9.3			43 69.4 43.9 20.9	62 30.2
Low Density	5 8.5 7.4 2.4			54 91.5 55.1 26.3	59 28.8
Column Total	68 33.2	18 8.8	21 10.2	98 47.8	205 100.0

Source: Field Survey, 1995

Chi-square value = 144.3
Degree of freedom = 6
Level of significant = 0.1%

With respect to Table 18 showing compliance of planning regulations by residents and incidences of disasters in Ibadan. At first place, the table shows that fire disaster is common to all the houses irrespective of whether the house has an approved plan or not. However, the incidences are higher in areas with houses without plan approval than areas with houses having approved plans representing 63.2 and 33.8 per cent respectively. Flood and building collapse are also however not common in areas with plan approval for houses, while these are very common with houses without plan approval accounting for 8.9 and 10.2 per cent for flood aid building collapse respectively of the total study population.

The chi-square value for the analysis in Table 18 below is 136.3 while the degree of freedom is 6. The value is therefore significant at 0.1% (136.3 > 22.46) Ho is rejected. Therefore incidences of disasters are common in areas where houses are without plan approval.

In Table 19 showing standard of housing and incidences of disasters in Ibadan indicates that of all the fire disasters occurrences reported in the survey, the rate of occurrence decreases with decrease in the standard of housing representing zero, 2.4, 22.1, 35.3 and 35.3 for luxury, very adequate, adequate, less than adequate and inadequate type of housing respectively. Flood and building collapse are common only in less than adequate and inadequate housing representing nil and 4.9 per cent for less than adequate and 8.8 and 5.4 per cent for flood and building collapse respectively for inadequate type of housing.

Table 18: Compliance of Planning Regulations by Residents and Incidences of Disasters in Ibadan

District	Type of Disasters				Row Total
	Fire	Flood	Building Collapse	None	
Building with no responses	2 40.0 2.9 1.0			3 60.0 3.1 1.5	5 2.4
Houses with plan approval (Yes)	23 19.7 33.8 11.2			94 80.3 95.9 45.8	117 57.1
Houses with no plan approval (No)	43 51.8 63.2 20.9	18 21.7 100.0 8.9	21 25.3 100.0 10.2	1 1.2 1.0 0.5	83 40.5
Column Total	68 33.2	18 8.8	21 10.2	98 47.8	205 100.0

Source: Field Survey, 1995

Chi-square value = 136.3
Degree of freedom = 6
Level of significant = 0.1%

Table 19: Standard of Housing and Incidences of Disasters in Ibadan

District	Type of Disasters				Row Total
	Fire	Flood	Building Collapse	None	
Luxury				21 100.0 21.4 10.2	21 10.2
Very Adequate	5 13.2 7.4 2.4			33 86.8 33.7 16.1	38 18.5
Adequate	15 26.3 22.1 7.3			42 73.7 42.9 20.5	57 27.8
Less than Adequate	24 68.6 35.3 11.7		10 28.6 47.6 4.9	1 2.9 1.0 0.5	35 17.1
Inadequate	24 44.4 35.3 11.7	18 33.3 100.0 8.8	11 20.4 52.4 5.4	1 1.9 1.0 0.5	54 26.3
Column Total	68 33.2	18 8.8	21 10.2	98 47.8	205 100.0

Source: Field Survey, 1995

Chi-square value = 144.3
Degree of freedom = 6
Level of significant = 0.1%

The chi-square value for the analysis in the table above is 177.5 and the degree of freedom is 12. The value is therefore significant at 0.1% (177.5 > 32.91) Ho is rejected. Therefore the hypotheses that incidences of building collapse, flood and fire disasters are not rampant in districts where planning regulations and housing standards are not complied with is rejected. The truth is that these disasters are more common in districts where planning regulations and housing standards are not complied with.

Hypothesis 3: There is high incidence of diseases experienced by residents of substandard housing and houses without plan approval.

The above hypothesis will be examined with reference to Tables 20 to 21. In Table 20 showing types of housing and common diseases experienced by residents in Ibadan shows at a glance that malaria is common to all the types of housing irrespective of the standard whether luxury or inadequate housing. The distribution of this disease (malaria) by the various housing types shows that 9.7 per cent of the respondents experience malaria in the luxury housing, 18.5 per cent for very adequate housing, 24.9 per cent for adequate housing, 16.6 per cent for less than adequate housing and 10.2 for inadequate housing. In terms of all the malaria cases experienced by respondents in all the five types of housing types, percentage representation are 12.2, 23.2, 31.1, 20.7 and 12.8 for luxury, very adequate, adequate, less than adequate and inadequate housing respectively. However, in

terms of all the various types of diseases experienced by each of the housing types, malaria was the leading ailment representing 95.2 per cent and cholera 4.8 per cent in the luxury housing. In the very adequate housing malaria was the only ailment representing 100.0 per cent, adequate housing represents 89.5 per cent for malaria, 8.8 per cent for cholera and 1.8 per cent for typhoid. In the less than adequate housing 97.1 per cent represent repondents who claimed they experience malaria and 2.9 per cent for others while inadequate housing tuberculosis or cough was the leading ailment representing 61.1 per cent followed by malaria representing 38.9 per cent.

Table 20: Type of Housing and Common Diseases Experienced by Residents in Ibadan

Type of Housing	Diseases Experienced					Row Total
	Typhoid	Malaria	Cholera	Tuber/ Cough	Others	
Luxury		20 95.2 12.2 9.7	1 4.8 16.7 0.5			21 10.2
Very Adequate		38 100.0 23.2 18.5				38 18.5
Adequate	1 1.8 100.0	51 89.5 31.1 24.9	5 8.8 83.3 2.4			57 18.5
Less than Adequate		34 97.1 20.7 16.6			1 2.9 100.0 0.5	35 17.1
Inadequate		21 38.9 12.8 10.2		33 61.1 100.0 16.1		54 26.3
Column Total	1 0.5	164 80.0	6 2.9	33 16.1	1 0.5	205 100.0

Source: Field Survey, 1995

Chi-square value = 126.2
Degree of freedom = 16
Level of significance = 0.1%

The chi-square value for the analysis in table 20 above is 126.2 while degree of freedom is 16. The value is significant at 0.1% level of significance (126.2 > 39.91) Ho is therefore rejected. Though the statistical analysis rejected the hypotheses but this may not be true of all diseases as in the case of malaria that the incidence was even higher in the luxury housing.

With reference to Table 21 showing the types of housing and frequency of residents complaints of diseases indicates that residents of luxury housing had complaints of diseases occasionally representing 90.5 per cent while the remaining percentage represent monthly and yearly complaints with 4.8 per cent each for the very adequate housing, there were no weekly and monthly complaints. Only bi-annual, yearly and occasionally complaints representing 7.9, 36.8 and 55.3 per cent respectively are reported. In the case of adequate housing, there was no weekly complaints, but monthly, bi-annual and yearly complaints representing 17.2, 70.2 and 12.3 per cent respectively were reported. In terms of less than adequate housing, weekly, monthly, bi-annual and yearly complaints representing 31.4, 60.0, 5.7 and 2.9 respectively are reported by the respondents while in the inadequate housing weekly and monthly complaints were mostly reported representing 24.1 and 75.9 respectively.

Table 21: Type of Housing and Frequency of Residents Complaints of Diseases

Type of Housing	Diseases Experienced					Row Total
	Weekly	Monthly	Every 6 months	Yearly	Occasio nally	
Luxury		1 4.8 1.4 0.5		1 4.8 4.3 0.5	19 90.5 47.5 9.2	21 10.2
Very Adequate			3 7.9 6.7 1.5	14 36.8 60.9 6.8	21 55.3 52.5 10.2	38 18.5
Adequate		10 17.5 13.7 4.9	40 70.2 88.9 19.5	7 12.3 30.4 3.4		57 18.5
Less than Adequate	11 31.4 45.8 5.4	21 60.0 28.8 10.2	2 5.7 4.4 1.0	1 2.9 4.3 0.5		35 17.1
Inadequate	13 24.1 54.2 6.2	41 75.9 56.2 20				54 26.3
Column Total	24 11.7	73 35.6	45 22.0	23 11.2	40 19.5	205 100.0

Source: Field Survey, 1995

Chi-square value = 310.5
Degree of freedom = 16
Level of significance = 0.1%

In the overall analysis it could be inferred that diseases complaints are mostly occasional in the luxury, very adequate and adequate types of housing, otherwise designated as standard housing, while disease complaints in the less than adequate and inadequate housing are mainly weekly and monthly supporting the hypothesis (3) above.

The chi-square value for the analysis in Table 21 above is 310.5 and degree of freedom is 16. The value is significant at 0.1% (310.5 > 39.91) Ho is rejected. Residents complaints of diseases are higher in the lower standard housing than in the high standard housing.

With regard to Table 22 showing the adherence of planning regulations of residents and common diseases experienced indicates that residents living in houses with approved plans experience malaria mostly representing 93.2 per cent while typhoid and cholera representing 0.9 and 5.1 per cent respectively are also experienced by this group of respondents. For the residents of the houses without plan approval also experienced malaria and tuberculosis or cough representing 60.2 and 39.8 per cent respectively. On a general note all the diseases shown in the analysis were experienced at varying degree except tuberculosis or cough in the houses without approved plans while only malaria and tuberculosis are reported in the houses without plan approval. So malaria is common with respondents of the two groups of houses.

Table 22: Adherence of Planning Regulations of Residents and Common Diseases Experienced

Respondents	Diseases Experienced					Row Total
	Typhoid	Malaria	Cholera	Tuber/ Cough	Others	
No Response		5 100.0 3.0 2.4				5 2.4
Residents living in houses with approved plans	1 0.9 100.0 0.5	109 93.2 66.5 53.2	6 5.1 100.0 29.3		1 0.9 100.0 0.5	117 57.1
Residents living in houses without plan approval		50 60.2 30.5 24.4		33 39.8 100.0 16.1		83 40.5
Column Total	1 0.5	164 80.0	6 2.9	33 16.1	1 0.5	205 100.0

Source: Field Survey, 1995

Chi-square value = 61.4
Degree of freedom = 8
Level of significance = 0.1%

The chi-square value for the analysis in the table above is 61.4 and the degree of freedom is 8. The value is therefore significant at 0.1% level of significant (61.4 > 26.12) Ho is rejected. Although the statistical test rejects the null hypotheses the picture shown on the table (Table 22) indicate that the occurrence of typhoid, malaria and cholera are experienced in the houses with plan approval while only malaria and tuberculosis or cough are experienced in the residents of houses without plan approval. The inference that can be drawn from this analysis is that certain diseases especially malaria can occur only where irrespective of whether the houses have plan approval or not.

With reference to Table 23 showing the adherence of planning regulations of residents and frequency of disease complaint indicates that monthly, bi-annual, yearly and occasional complaints are reported by the respondents living in houses with plan approval representing 8.5, 38.5, 18.8 and 34.2 per cent respectively while respondents living in houses without plan approval reportd that the frequency of diseases complaints are on weekly and monthly basis only representing 27.7 and 72.3 respectively. From the above analysis in Table 23 therefore it can be inferred that the rate of disease complaints is hither for residents living in houses without plan approval and the frequency of complaints is on weekly and monthly basis alone while the rate is lower for the residents of houses with plan approval with complaints ranging from monthly to occasional in terms of frequency of complaints.

Table 23: Adherence of Planning Regulations of Residents and Frequency of Diseases Complaint

Respondents	Diseases Experienced					Row Total
	Weekly	Monthly	Every 6 months	Yearly	Occasio nally	
No Response	1 20.0 4.2 0.5	3 60.0 4.1 1.5		1 20.0 4.3 0.5		5 2.4
Residents living in houses with plan approval		10 8.5 13.7 4.9	45 38.5 100.0 21.9	22 18.8 95.6 10.7	40 34.2 100.0 19.5	117 57.1
Residents living in houses without plan approval	23 27.7 95.8 11.2	60 72.3 82.2 29.3				83 40.5
Column Total	24 11.7	73 35.6	45 22.0	23 11.2	40 19.5	205 100.0

Source: Field Survey, 1995

Chi-square value = 167.9
Degree of freedom = 8
Level of significance = 0.1%

The chi-square value for the above analysis in Table 23 above is 167.9 while the degree of freedom is 8. The value is therefore significant at 0.1% (167.9 > 26.12). Ho is rejected. The hypotheses that there is high incidence of diseases experienced by residents of sub-standard housing and houses without plan approval is true and accepted.

3.4 FIRE SERVICE DEPARTMENT, FUNCTIONS IN THE CITY AND RELATIONSHIP WITH THE TOWN PLANNING AUTHORITY

The inadequacy of any single discipline to tackle the problems of urban development is being continuously made worse by the acceleration of urban explosion (Ojo, 1978). Apart from adopting a multi-disciplinary approach in urban studies, it is necessary to set up action-oriented observatories in every big city to ensure that essential and adequate data are collected, compiled and analysed for the purpose of obtaining workable and effective solutions to many of the perennial problems which afflict most cities.

The fire service department whose functions are to protect lives and property in the urban centres perform a number of invaluable functions to the wellbeing and safety of city residents. As laid down under the fire service regulation Cap 185 of 1979, the fire service performs the following duties which include saving of lives, providing humanitarian services and protection of lives and properties from destruction by fire. The relationship of the fire service department and the town planning authority is in connection with the section of the

fire service law (Cap 185 of 1979) which empowers the the fire service department to examine and recommend appropriately for approval or disapproval any high rising building up to four storeys and above. This relationship however cannot be described as mutual as indicated by the department because the town planning authorities have not been complying with this regulations.

In terms of fire service department's awareness of town planning laws for approving building plans, the information gathered shows that there is awareness but the department is not well conversant with the laws. In the final analysis the department was of the view that the enforcement of the laws in the cities is not satisfactory because this has in no way solved the problem of hazard and disaster occurrences in our cities.

In terms of property worth and the number of lives rescued and saved in the city of Ibadan in the last ten years, these are enormous and the figure is still on the increase. Table 24 below shows the activities of the fire service department in Ibadan city between 1986 and 1995 by the six stations located in the three districts of Ibadan. During the period, property worth over N60m was saved, about 850 lives were saved, while the number of people injured amounts to 88 and over 120 lives were lost (Table 24).

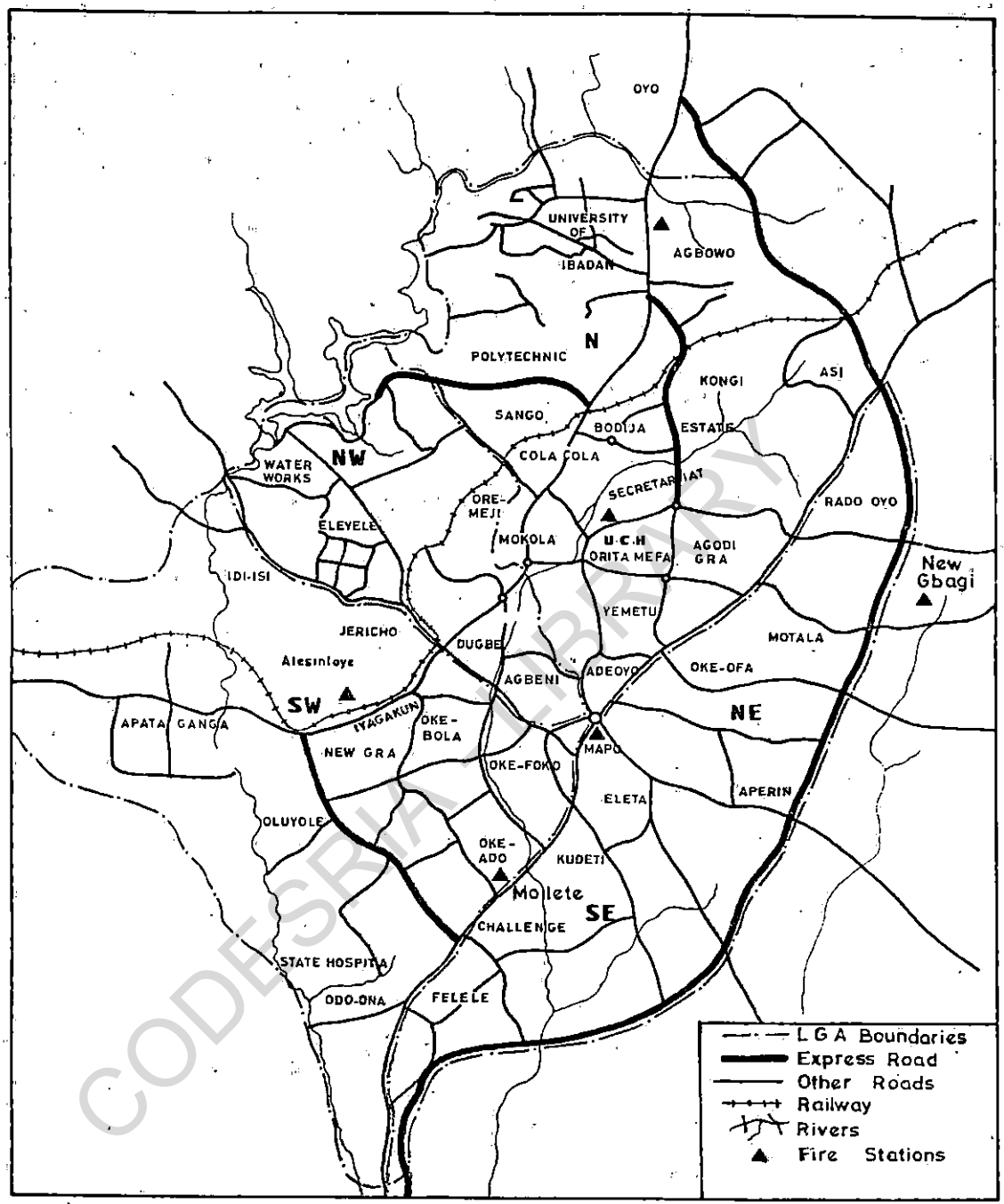

Fig. 5. Map of Ibadan Showing Locations of the Six Five Stations in Ibadan

OCCURRENCE OF DISASTERS IN IBADAN BETWEEN 1980 AND 1995
RECORDED BY SIX DIFFERENT FIRE SERVICE STATIONS IN IBADAN.

TABLE 24

	1				2				3				4				5			
Name of Station	HQS. Secretariat, Agodi, Ibadan Low Density				Molete Five Station Medium Density				Mapo Five Station High Density				Alesinloye Fire Station Medium Density				Agbowo Fire Station U.I., Ibadan Medium/Low			
Disasters	Property worth in ₦	No. of lives saved	No. of pole injured	No. of lives lost	Property worth in ₦	No. of lives saved	No. of pole injured	No. of lives lost	Property worth in ₦	No. of lives saved	No. of pole injured	No. of lives lost	Property worth in ₦	No. of lives saved	No. of pole injured	No. of lives lost	Property worth in ₦	No.of lives saved	No.of pole injured	No.o live lost
Fire and Flood	9.6m	55	7	16	8.7m	45	5	15	13m	15	–	5	2.7m	35	–	13	4.4m	34	–	13
Building Collapse	3.9m	147	8	5	3.7m	90	4	5	0.5m	–	–	–	–	–	–	–	–	–	–	–
City Vehicle accident	5.4m	246	32	22	4.6m	163	32	25	0.2m				0.5m	–	–	–	1.2m	2	–	–
Other environmental hazards	0.5m	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Total	19.4m	448	47	43	17m	298	41	45	13.7m	15	–	5	3.2m	35	–	13	5.6m	36	–	13

6				7				8
New Gbagi Fire Station, Old Ife Road, Medium Density				TOTAL				
Property worth in ₦	No. of lives saved	No. of pple injured	No. of lives lost	Property worth in ₦	No. of lives saved	No. of pple injured	No. of lives lost	Causes of Disasters
5.3m	17	–	2	43.7m	201	12	64	Careless and river encroachment
–	–	–	–	8.1m	237	12	10	Old age and violation of building regulations
2m	–	–	1	13.9m	411	64	48	Planlessness of the city interior
7.3m	17	–	3	66.2m	849	88	122	

Source: Oyo State Fire Service Department, Ibadan.

The major causes of each of these disasters as given by the fire service department include carelessness and river encorachment for fire and flood disasters respectively, old age and violation of buildings regulations for building collapse and planlessness of the city interior for city motor accidents.

CHAPTER FOUR

4.0 HOUSING SITUATION IN THE CITY AND PEOPLE'S HEALTH

4.1 CHARACTERISTICS OF BUILDINGS IN IBADAN

The characteristics of building in Ibadan are quite reflected in the nature and density of the houses (Figure 10). The situation is such that the traditional core area is densely packed, with narrow winding roads seperating the houses. The GRA and the new layouts are however better arranged with wide and well planned roads (Table 26).

The analysis of the buildings in the city reveals that flat terrain predominates in the city with 55.1 per cent of the study carried out. In terms of density zones, the low density districts are generally more flat with 27.8 per cent, followed by high density (14.1 per cent) and medium density (13.2 per cent). The rugged terrains however are mainly concentrated in the high and medium density districts constituting 22.9 per cent of the total sample. Dry land also cuts accross the density areas constitute 15.6 per cent while marshy land constitute the least (6.3 per cent) found mainly in the high and medium density districts of the city (Table 25).

Table 25: Characteristics of Buildings in Ibadan

DISTRICT		TYPE OF TERRAIN				Total %
		Dryland	Marshy Land	Flat Terrain	Rugged Terrain	
High Density	No	9	9	29	37	84
	%	4.4	4.4	14.1	18.0	41.0
Medium Density	No	21	4	27	10	62
	%	10.2	1.9	13.2	4.9	30.2
Low Density	No	2	-	57	-	59
	%	1.0	-	27.8	-	28.8
Total		32	13	113	47	205
%		15.6	6.3	55.1	22.9	100.0

Source: Field Survey, 1995.

In terms of building accessibility, majority of the buildings sampled are accessible by streets with 59.0% but most of these houses are located in the low and medium density districts with 28.3 and 25.3 per cent respectively. Buildings accessible only by footpath are next in rank with 32.7 per cent mainly concentrated in the high density district (30.7 per cent). Houses with trunk road access are however the least with 8.3 per cent found mainly in the high and medium density areas (Table 26).

Table 26: Characteristics of Buildings by Accessibility of the house

DISTRICT		ACCESSIBILITY TYPES			Total %
		By Trunk Road	By Street	By Footpath	
High Density	No %	10 4.9	11 5.4	63 30.7	84 41.0
Medium Density	No %	6 2.9	52 25.3	4 2.0	62 30.2
Low Density	No %	1 0.5	58 28.3	- -	59 28.8
Total %		17 8.3	121 59.0	67 32.7	205 100.0

Source: Field Survey, 1995.

The distance of most of the buildings to the adjacent roads are generally below six metres as this constitutes 64.4 per cent of the sampled buildings concentrating mainly in the high and medium density areas. Houses with distance of more than 6 metres to the adjacent road are greater in number in the low density district constituting 35.6 per cent of the total sample houses (Table 27). From the analysis above it could be inferred that majority of the houses in the city especially in the high and medium density districts had not complied with the building line regulation of 6 metres from the property to the access road. This group of houses constitutes 64.4 per cent of the total houses sample (Table 27).

Table 27: Distance of Building to Adjacent Street/Road

DISTRICT		Distance in Metres		Total %
		Less than 6	Above 6	
High Density	No %	83 40.5	1 0.5	84 41.0
Medium Density	No %	45 21.9	17 8.3	62 30.2
Low Density	No %	4 1.9	55 26.8	59 28.8
Total %		132 64.4	73 35.6	205 100.0

Source: Field Survey, 1995.

However, majority of the houses sampled were sited far away from streams and rivers constituting 85.8 per cent while houses sited at distance of 15 metres and above which is the planning regulation parameter for distance of property to any floodable stream constitute 7.4% of the houses sampled. Houses sited at distance of less than 15 metres to the nearest stream are smaller in number constituting 6.8 per cent of the total number of houses sampled. This set of buildings are found mainly in the high and medium density districts of the city constituting 4.4 and 1.9 per cent of the total sample respectively (Table 28).

Table 28: Distance of Buildings to Nearest Stream

DISTRICT		Distance in Metres			Total %
		Less than 15	15 and above	Far away	
High Density	No %	9 4.4	2 1.0	73 35.6	84 41.0
Medium Density	No %	4 1.9	12 5.9	46 22.4	62 30.2
Low Density	No %	1 0.5	1 0.5	57 27.8	59 28.8
Total %		14 6.8	15 7.4	176 85.8	205 100.0

Source: Field Survey, 1995.

Houses with plan approval constitutes a greater percentage of the total number of houses sampled constituting 57.1 per cent but these are however concentrated in the low and medium density districts with 28.8 and 27.3 per cent of the total sample respectively. Houses without plan approval form 42.9 per cent of the total number of houses sampled concentrating mainly in the high density areas with 40.0 per cent of the total houses sampled in the city (Table 29).

Table 29: Buildings' Availability of Plan Approval

DISTRICT		House with plan approval	Houses without plan approval	Total %
High Density	No %	2 1.0	82 40.0	84 41.0
Medium Density	No %	56 27.3	6 2.9	62 30.2
Low Density	No %	59 28.8	- -	59 28.8
Total %		117 57.1	88 42.9	205 100.0

Source: Field Survey, 1995.

In terms of age of the buildings, houses with between 10 to 19 years constitute 30.7 per cent found mainly in in the medium and low density districts with 17.5 and 12.7 per cent respectively, while houses with ages of between 40 to 49 years constitute 24.9 per cent found mainly in the high density and low density areas of the city with 19.5 and 5.4 per cent respectively. Houses with between 20 to 29 years old form 20.1 per cent while those above 50 years constitute 15.1 per cent found only in the high density districts especially in the core indigenous areas of the city. Houses with between 30 to 39 years old and those with less than 10 years constitute 6.3 and 2.9 per cent respectively (Table 30).

Table 30: Age of House

DISTRICT		Age of Building in Years						Total %
		Less than 10	10-19	20-29	30-39	40-49	Above 50	
High Density	No	-	1	1	11	40	31	84
	%	-	0.5	0.5	5.4	19.5	15.1	41.0
Medium Density	No	4	36	20	2	-	-	62
	%	1.9	17.5	9.8	0.9	-	-	30.2
Low Density	No	2	26	20	-	11	-	59
	%	1.0	12.7	9.8	-	5.4	-	28.8
Total		6	63	41	13	51	31	205
%		2.9	30.7	20.1	6.3	24.9	15.1	100.0

Source: Field Survey, 1995.

Most of the houses sampled in the city had no space around the houses (39.5) and where space were provided they were not generally adequate (23.4 per cent). This set of buildings are found mainly in the high and medium density areas with houses closely packed together into slums. Adequate space provision were however provided in houses of the low and medium density districts with 28.8 and 7.8 per cent respectively constituting 37.1 per cent of the total houses sampled (Table 31).

Table 31: Space Provision of Buildings

DISTRICT		None	Not Adequate	Adequate	Total %
High Density	No %	72 35.1	11 5.4	1 0.5	84 41.0
Medium Density	No %	9 4.4	37 18.0	16 7.8	62 30.2
Low Density	No %	- -	- -	59 28.8	59 28.8
Total %		81 39.5	48 23.4	76 37.1	205 100.0

Source: Field Survey, 1995.

In terms of house fencing, majority of the houses were not fenced, but more dominated in the high and medium density districts with 41.0 and 11.2 per cent respectively constituting 52.7 per cent of the total number of houses sampled. Houses which were totally fenced constitute 41.5 per cent found mainly in the low and medium density districts with 27.8 and 13.7 per cent of the total houses sampled respectively (Table 32).

Table 32: Fencing of Buildings

DISTRICT		None	Not Adequate	Adequate	Total %
High Density	No	84	-	-	84
	%	41.0	-	-	41.0
Medium Density	No	23	11	28	62
	%	11.2	5.4	13.7	30.2
Low Density	No	1	1	57	59
	%	0.5	0.5	27.8	28.8
Total		108	12	85	205
%		52.7	5.9	41.5	100.0

Source: Field Survey, 1995.

4.2 HOUSING SITUATION AND AMENITY LEVEL IN IBADAN CITY

The determination of the adequacy of housing presupposes the existence of an acceptable minimum standard. But the establishment of such a minimum is not only difficult but must be dynamic. The difficulty of specifying minimal shelter requirements, say in terms of health, safety and sanitary requirements arises as a result of variation in climate. Apart from this, the emerging trend is that housing amenities hitherto regarded as comforts are increasingly being regarded as not only desirable but necessary (Ozo, 1987).

For an old city such as Ibadan, where traditional houses with poor constructional materials and technology are still in use till today, age, type of constructional materials and amenity level provide good measure of housing quality and degree of obsolescence. The study carried out shows that 57.5 per cent of the houses were built with cement block concentrating mainly in the low and medium density districts, 41.0 per cent were built of mud found mainly in the high density areas while houses built with mud block constitutes the least with 1.5 per cent (Table 33). However, despite the variation in the type of wall materials, majority of the houses were still in good condition accounting for about 75.0 per cent of house whose wall materials were in tact. Only 25.4 per cent of the houses were in a delapidating situation while 2.0 per cent of the study population represents delapidated houses (Table 34).

As expected, most of the houses were roofed with zinc accounting for over 69 per cent concentrating mainly in the high and medium density areas with 41.0 and 22.9 per cent respectively. Buildings roofed with asbestors account for about 30 per cent which were also concentrated in the low and medium density residential areas with 23.4 and 6.3 per cent respectively while concrete roofs forms only 1.0 per cent of the study population (Table 35). The situation of these roorfs were however in good condition with 84.4 per cent of the roofs sampled indicate intact condition while only about 16 per cent were leaking (Table 36).

Table 33: Housing Conditions by Nature of Wall Material

DISTRICT		Wall Material			Total %
		Mud	Mud Block	Cement Block	
High Density	No	83	-	1	84
	%	40.5	-	0.5	41.0
Medium Density	No	1	3	58	62
	%	0.5	1.5	28.2	30.2
Low Density	No	-	-	59	59
	%	-	-	28.8	28.8
Total		84	3	118	205
%		41.0	1.5	57.5	100.0

Source: Field Survey, 1995.

Table 34: Housing Situation by Condition of Wall Material

DISTRICT		Wall Condition			Total %
		Intact	Dilapidating	Dilapidated	
High Density	No	30	51	3	84
	%	14.6	24.9	1.5	41.0
Medium Density	No	60	1	1	62
	%	29.2	0.5	0.5	30.2
Low Density	No	59	-	-	59
	%	28.8	-	-	28.8
Total		152	52	4	205
%		74.6	25.4	2.0	100.0

Source: Field Survey, 1995.

Table 35: Housing Situation by Nature of Roof Material

DISTRICT		Roof Material			Total %
		Asbestor	Concrete	Zinc	
High Density	No	-	-	84	84
	%	-	-	41.0	41.0
Medium Density	No	13	2	47	62
	%	6.3	1.0	22.9	30.2
Low Density	No	48	-	11	59
	%	23.4	-	5.4	28.8
Total		61	2	142	205
%		29.8	1.0	69.3	100.0

Source: Field Survey, 1995.

Table 36: Housing Situation by Condition of Roof Material

DISTRICT		Roof Condition		Total %
		Intact	Leaking	
High Density	No	54	30	84
	%	26.3	14.6	41.0
Medium Density	No	60	2	62
	%	29.2	1.0	30.2
Low Density	No	59	-	59
	%	28.8	-	28.8
Total		173	32	205
%		84.4	15.6	100.0

Source: Field Survey, 1995.

The floor of most of the houses were concreted accounting for about 91.0 per cent while the earth floored houses constitutes less than 10.0 per cent of the study population (Table 37). In terms of occupancy ratio 62.9 per cent reported more than 2 persons per room, while the remaining 37.5 per cent reported 2 persons or less per room. The situation here is that there is high density in the high and medium density districts with 38.5 and 15.6 per cent indicating more than 2 persons per room respectively (Table 38).

Table 37: Housing Situation by Floor Material

DISTRICT		Floor Materials		Total %
		Concrete	Earth	
High Density	No	66	18	84
	%	32.2	8.8	41.0
Medium Density	No	61	1	62
	%	29.7	0.5	30.2
Low Density	No	59	-	59
	%	28.8	-	28.8
Total		186	19	205
%		90.7	9.3	100.0

Source: Field Survey, 1995.

Table 38: Housing Situation by Number of People Per Room

DISTRICT		Number of People Per Room		Total %
		1 - 2	More than 2	
High Density	No %	5 2.5	79 38.5	84 41.0
Medium Density	No %	30 14.6	32 15.6	62 30.2
Low Density	No %	41 20.0	18 8.8	59 28.8
Total %		76 37.5	129 62.9	205 100.0

Source: Field Survey, 1995.

The water supply situation of most of the houses are grossly inadequate. Only 45.9 per cent of the houses had either pipe borne water or wells in their houses, while 42.4 per cent depended on water from another street. Only 11.7 per cent reported having their source of water from streets adjacent to their houses (Table 39). The electricity usage is however a common denominator in the city as most of the houses (97.6 per cent) indicated the usage of electricity while less than 3.0 per cent claimed they did not make use of electricity (Table 40).

Table 39: Amenity Level of Housing by Source of Water Supply

DISTRICT		Water Supply Source			Total %
		PBW in House	PBW in Street	PBW in Another Street	
High Density	No %	6 2.9	- -	78 38.0	84 41.0
Medium Density	No %	29 14.1	24 11.7	9 4.4	62 30.2
Low Density	No %	59 28.8	- -	- -	59 28.8
Total %		94 45.9	24 11.7	87 42.4	205 100.0

Source: Field Survey, 1995.

Table 40: Amenity Level of Housing by Use of Electricity

DISTRICT		Electricity Usage		Total %
		In Use	Not in Use	
High Density	No %	79 38.5	5 2.4	84 41.0
Medium Density	No %	62 30.2	- -	62 30.2
Low Density	No %	59 28.8	- -	59 28.8
Total %		200 97.6	5 2.4	205 100.0

Source: Field Survey, 1995.

In terms of toilet facility, an appreciable proportion of the houses claimed to have water closet toilet facility accounting for about 58 per cent, though limited only to the low and medium density district. Houses without toilet facility constitute over 30 per cent, found mainly in the high density residential districts, while houses with pit latrines and bucket types of toilet facility account for 10.2 and 1.0 per cent of the total houses surveyed respectively (Table 41).

The implication of a situation like this where a good number of houses lack adequate toilet facility is that, people would then be defecating just any place which can result into an outbreak of diseases which can have adverse effect on the health of the inhabitants. In the case of bathroom facility, majority of the houses in the low and medium density districts claimed to have shower bathroom accounting for over 40.0 per cent, while houses with outside bathrooms constitute about 35.0 per cent based mainly in the high density districts. Houses which had neither shower not outside bathroom account for about 15.0 per cent while others like bath tube account for the remaining 8.8 per cent (Table 42).

Table 41: Amenity Level of Housing by Type of Toilet Facilities

DISTRICT		Type of Toilet Facility				Total %
		Water Closet	Pit	Bucket	None	
High Density	No %		19 9.3	2 1.0	63 30.7	84 41.0
Medium Density	No %	59 28.8	2 1.0		1 0.5	62 30.2
Low Density	No %	59 28.8				59 28.8
Total %		118 57.6	21 10.2	2 1.0	64 31.2	205 100.0

Source: Field Survey, 1995.

Table 42: Amenity Level of Housing by Type of Bathroom

DISTRICT		Type of Bathroom Facility				Total %
		Shower	Not Shower	Outside Bathroom	Others	
High Density	No %		10 4.9	69 36.7	5 2.4	84 41.0
Medium Density	No %	40 19.5	20 9.7	2 1.0		62 30.2
Low Density	No %	46 22.4			13 6.4	59 28.8
Total %		86 42.0	30 14.6	71 34.6	18 8.8	205 100.0

Source: Field Survey, 1995.

On the overall evaluation of housing adequacy of inhabitants in the three residential districts by the type of housing they live, shows that 27.8 per cent live in adequate housing cutting across the medium, low and high density districts with 25.8, 1.5 and 0.5 per cent respectively. Inadequate housing accounts for 26.3 per cent, very adequate 18.5 per cent, less than adequate 17.1 per cent while luxury housing found mainly in the low density districts constitutes the remaining 10.2 per cent (Table 43).

Table 43: Assessment of Housing Adequacy by Housing Standard in Ibadan

DISTRICT		Type of Housing					Total %
		Luxury	Very Adequate	Adequate	Less than Adequate	Inade-quate	
High Density	No			1	31	52	84
	%			0.5	15.1	25.4	41.0
Medium Density	No	1	2	53	4	2	62
	%	0.5	1.0	25.8	1.9	1.0	30.2
Low Density	No	20	36	3			59
	%	9.7	17.6	1.5			28.8
Total		21	38	57	35	54	205
%		10.2	18.5	27.8	17.1	26.3	100.0

Source: Field Survey, 1995.

4.3 ENVIRONMENTAL CONDITIONS OF HOUSING AND SANITATION IN IBADAN CITY

The livability of a house is influenced, among other things, by the housing unit and the environment in which the house is located. A filthy environment constituts a danger to health. The absence of any regular system of refuse disposal potentially renders an environment filthy, as poor refuse disposal constitutes one of the major sources of environmental deterioration in Nigeria (Ozo, 1987).

With growing urban population the increasing environmental decay of our cities, partly resulting from household discharges of refuse, have become a source of national concern. Arising from this concern many state governments have set up agencies or financially assisted city administrations for the purpose of refuse collection and disposal. In spite of these efforts the problem of refuse collection remains unsolvable.

For this study, the neighbourhood surroundings of houses were examined in terms of being clean, fair and dirty. The survey shows that houses with clean and dirty environment constitute 36.6 per cent while the remaining 26.8 per cent constitutes houses with fair neighbourhood surrounding. However, the high density areas were more dirty with over 35.1 per cent of the surveyed houses, while the low density areas were the most clean in terms of neighbourhood surrounding with 28.3 per cent (Table 44).

Table 44: Environmental Conditions by Type of Neighbourhood Surrounding

DISTRICT		Type of Neighbourhood Surrounding			Total %
		Clean	Fair	Dirty	
High Density	No %	11 5.4	1 0.5	72 35.1	84 41.0
Medium Density	No %	6 2.9	53 25.8	3 1.5	62 30.2
Low Density	No %	58 28.3	1 0.5		59 28.8
Total %		75 36.6	55 26.8	75 36.6	205 100.0

Source: Field Survey, 1995.

In terms of street conditions over 30.0 per cent of the houses have no adjacent streets. The adjacent streets which were tarred but in poor conditions represent 33.2 per cent, while tarred streets with good condition account for 24.0 per cent. The adjacent streets for 12.2 per cent are not tarred and experience problems of water-logging and flooding during the wet season (Table 45). For these, the convenience of getting to the house during the wet season is hampered, but for those without streets the problem is worse particularly as public transportation does not get to such houses.

Table 45: Environmental Conditions by the Nature of Adjacent Street

DISTRICT		Type of Adjacent Street				Total %
		Tarred in good condition	Tarred in poor condition	Untarred	No Street	
High Density	No %		25 12.2	1 0.5	58 28.3	84 41.0
Medium Density	No %	6 2.9	31 14.6	21 10.2	5 2.4	62 30.2
Low Density	No %	43 21.1	13 6.4	3 1.5		59 28.8
Total %		49 23.9	68 33.2	25 12.2	63 30.7	205 100.0

Source: Field Survey, 1995.

In terms of nature of refuse disposal facility, 48.8 per cent of the respondents reported that there was no refuse disposal facility in their houses, respondents which claimed having adequate refuse disposal facility represent 29.3 per cent, while those that reported they have but inadequate constitute the remaining 22.0 per cent (Table 46). Given the lack of private capacity to dispose of this refuse far away, the immediate housing environment invariably gets littered with massive household refuse discharges.

Table 46: Environmental Conditions of Housing by Nature of Refuse Disposal Facility

DISTRICT		Type of Refuse Disposal Facility			Total %
		Present and Adequate	Lacking	Present but inadequate	
High Density	No %		78 38.1	6 2.9	84 41.0
Medium Density	No %	5 2.5	20 9.7	37 18.0	62 30.2
Low Density	No %	55 26.8	2 1.0	2 1.0	59 28.8
Total %		60 29.3	100 48.8	45 22.0	205 100.0

Source: Field Survey, 1995.

It is therefore, not surprising that as much as 36.6 per cent of the respondents consider the environmental conditions of their neighbourhoods as dirty, while another 36.6 per cent of the respondents consider the neighbourhood surrounding as clean. The remaining 26.8 per cent regard same as fair (Table 44). The method of waste disposal are by disposing at organised collection point and along road site with 44.8 and 30.7 per cent respectively while only insignificant 17.1 and 7.3 per cent respectively represent disposal into stream and by open dump respectively (Table 47).

Table 47: Environmental Conditions of Housing by Method of Waste Disposal

DISTRICT		Method of Waste Disposal				Total %
		Open Dump	Along Roadside	Into Stream	At organized collection point	
High Density	No %	2 1.0	52 25.4	30 14.6		84 41.0
Medium Density	No %	11 5.4	10 4.8	5 2.5	36 17.5	62 30.2
Low Density	No %	2 1.0	1 0.5		56 27.3	59 28.8
Total %		15 7.3	63 30.7	35 17.1	92 44.8	205 100.0

Source: Field Survey, 1995.

In terms of drainage facility, a significant proportion of the respondents representing 40.5 per cent claimed that the facility was lacking while 30.2 per cent reported that this was present but not adequate. The respondents who claimed that the facility was present and adequate constitute the remaining 29.3 per cent (Table 48). The nature of drainage as claimed by the respondents are mainly open representing a very significant 83.4 per cent of the study population. Only insignificant 11.2 and 5.4 per cent represent covered and underground drains (Table 49). In this kind of an environment where drainage facility is

inadequate, it will not allow storm water to flow freely. This can then cause offensive odour in the environment which subsequently can lead to outbreak of diseases. Not that alone such inadequate open drains can turn into breeding grounds for mosquitoes which can transmit malaria parasites into people leading to malaria feaver infection. It is therefore, no surprise that as much as over 51.0 per cent of the respondents in all the three districts of the study population reported that the common disease they experienced was malaria (Table 34). Other diseases like tubeculosis, cholera and typhoid represent insignificant 9.8, 8.7 and 0.5 per cent respectively. Respondents who claimed they had non constitute 29.7 per cent.

Table 48: Environmental Conditions of Housing by Drainage Condition

DISTRICT		Drainage Condition			Total %
		Present and Adequate	Present not Adequate	Lacking	
High Density	No %		6 2.9	78 38.1	84 41.0
Medium Density	No %	3 1.5	54 26.3	5 2.5	62 30.2
Low Density	No %	57 27.8	2 1.0		59 28.8
Total %		60 29.3	62 30.2	83 40.5	205 100.0

Source: Field Survey, 1995.

Table 49: Environmental Condition of Housing by Nature of Drains

DISTRICT		Nature of Drains			Total %
		Open	Covered	Underground	
High Density	No	84			84
	%	41.0			41.0
Medium Density	No	59	2	1	62
	%	28.8	1.0	0.5	30.2
Low Density	No	28	21	10	59
	%	13.8	10.2	4.8	28.8
Total		171	23	11	205
%		83.4	11.2	5.4	100.0

Source: Field Survey, 1995.

4.4 HEALTH STATUS OF INHABITANTS IN IBADAN

The phrase health status in this study is defined as the susceptibility of the respondents to the various environmental diseases, frequency of complaints of these diseases and of course the awareness to know how and where to have treatment for curation.

The analysis of the inhabitants health status by common diseases experienced indicates that malaria was the most common disease experienced by most of the respondents accounting for over 51.0 per cent of the study population. Respondents who claimed they

did not experience any disease constitute 29.7 per cent while tuberculosis or coughs, cholera and typhoid represent 9.8, 8.7 and 0.5 per cent respectively (Table 50).

Table 50: Health Status of Inhabitants by Common Diseases Experienced

DISTRICT		Type of Diseses					Total %
		Typhoid	Malaria	Cholera	Tuber-culosis	None	
High Density	No %		51 24.9	13 6.3	20 9.8		84 41.0
Medium Density	No %	1 0.5	36 17.6	5 2.4		20 9.8	62 30.2
Low Density	No %		18 8.8			41 20.0	59 28.8
Total %		1 0.5	105 51.3	18 8.7	20 9.8	61 29.7	205 100.0

Source: Field Survey, 1995.

The study also shows that respondents complain of these diseases on a monthly phenomenon as the respondents that claimed that they experienced the diseases every month representing 35.6 per cent. The respondents who indicated that the complaints was at interval of every 6 months and occasionally account for 22.0 and 19.5 per cent respectively. Insignificant 11.7 and 11.2 per cent represent weekly and yearly complaints respectively (Table 51).

Table 51: Health Status of Inhabitants by Frequency of Diseases Complaints

DISTRICT		Frequency of Diseses Complaints					Total %
		Weekly	Monthly	Every 6 months	Yearly	Occasio nally	
High Density	No	23	60		1		84
	%	11.3	29.2		0.5		41.0
Medium Density	No	1	12	42	6	1	62
	%	0.5	5.8	20.5	2.9	0.5	30.2
Low Density	No		1	3	16	39	59
	%		0.5	1.5	7.8	19.0	28.8
Total		24	73	45	23	40	205
%		11.7	35.6	22.0	11.2	19.5	100.0

Source: Field Survey, 1995.

For the treatment method, a significant proportion of the respondents constituting 81.0 per cent of the study population patronise hospital for their treatment, while respondents that chose self medication as their own option represent 14.6 per cent. Insignificant 2.9 and 1.5 per cent indicate the choice of respondents that uses chemist shops and health centres respectively (Table 52).

Amongst the array of reasons given by respondents for choice of treatment method, adequate treatment, best cure, for medical advice and respondent claimed self medication is not good represent 25.8, 21.5, 12.6 and 12.2 per cent respectively. Others which include

for expert handling, sickness not severe, no money represent 11.7, 7.3 and 6.8 per cent respectively. Respondents who gave reasons of high cost of treatment and convenience represent 1.0 per cent each (Table 53).

Table 52: Health Status of Inhabitants by Means of Disease Treatment

DISTRICT		Method of Disease Treatment				Total %
		Hospital	Health Clinic	Chemist Shop	Self Medication	
High Density	No %	55 26.8			29 14.2	84 41.0
Medium Density	No %	54 26.4	1 0.5	6 2.9	1 0.5	62 30.2
Low Density	No %	57 27.8	2 1.0			59 28.8
Total %		166 81.0	3 1.5	6 2.9	30 14.6	205 100.0

Source: Field Survey, 1995.

Table 53: Health Status of Inhabitants by Reasons given for Treatment Choice

DISTRICT		Reasons for Treatment Choice									Total %
		Adequate Treatment	Best cure	Medical advice	Self med. not good	Expert handling	Sickness not severe	High cost of treatment	Convenience	No money	
High Density	No	27	31	1			11			14	84
	%	13.2	15.0	0.5			5.4			6.8	41.0
Medium Density	No	25	13	13	1	4	2	2	2		62
	%	12.2	6.3	6.3	0.5	1.9	1.0	1.0	1.0		30.2
Low Density	No	1		12	24	20	2				59
	%	0.5		5.9	11.7	9.8	1.0				28.8
Total %		53	44	26	25	24	15	2	2	14	205
		25.8	21.5	12.6	12.2	11.7	7.3	1.0	1.0	6.8	100.0

Source: Field Survey, 1995.

CHAPTER FIVE

SUMMARY OF FINDINGS, RECOMMENDATION AND CONCLUSION

5.1 SUMMARY OF FINDINGS

From the foregoing analysis and discussions, a number of findings that have policy relevance can be identified. First, besides the universal poor drainage conditions, characterised of almost all the houses in the three residential districts, and the prevalence of malaria in all the residential districts, poor housing conditions and sanitation is another major feature. These characteristics are evident irrespective of the type of residential density districts.

Secondly, the housing quality of the residents of the high density and most part of the medium density districts is depressingly low and this poor quality of housing is more of reflection of the paucity of internal facilities and conveniences and environmental conditions than structural conditions. The adverse effects of this poor housing condition on the health of the city residents cannot be overemphasised.

Thirdly, Planning Regulations and housing standard have not been adequately enforced by the appropriate authority and this is evident in the rate at which slum settlements are still growing in Ibadan city. This situation may however change with the breaking of the city into five local government areas with each having its own seperate local planning authority that will be enforcing development control over its area of jurisdiction.

Finally, the results of the three hypotheses investigated in this study show that:

(i) Housing conditions and health status of residents in the three residential districts differ.

The quality of housing in the high density districts is glaringly lower than that of the medium and low density districts. In like manner, the housing quality in the medium density districts is also lower than that of the low residential density areas. The same situation is applicable with respect to health status.

(ii) Incidence of building collapses flood and fire disasters are rampant in the high and medium density districts. However, fire disasters is more or less general in terms of occurrences as these are also found occurring in the low density districts. and

(iii) High incidence of diseases are experienced by residents of substandard housing and houses without planning approval. This is also evident in the rate at which residents of high and medium density areas complain of various diseases

5.2 RECOMMENDATIONS

The above discussion has shown that housing quality in the entire city of Ibadan is generally low. This is especially evident in the high and medium density districts where

poor environmental conditions and sanitation have adversely affected the residents' health status. In this connection, a more rational approach to the development of basic services in the depressed neighbourhood should be adopted. Government should as a matter of priority concentrate on the development of services and urban infrastructure and environmental improvement in the poor neighbourhoods. In order to meet the huge financial commitment arising from this, government should embark on a comprehensive property tax collection in all the five local government areas of the city.

Secondly, planning regulations and housing standards should be made open to the generality of residents by organising seminals and lectures on the benefits derivable from abiding with these rules. Radio advertisement and jingles should also be employed to convey the benefits derivable from complying with these regulations.

Thirdly, for multiple household dwellings, regulations for level of facilities and services commensurate with the number of households for which the buildings are designed, on the assumption of one household per two rooms, should be made a condition for building plan approval.

Finally, the government should as a matter of urgency formulate supportive programmes that would be geared at improving slums and up-grading viable informal settlements in Ibadan city.

5.3 CONCLUSION

This study has endeavoured to show that the level of compliance to planning regulations and housing standard is generally low in Ibadan city. This has also subsequently resulted into low housing and environmental quality and of course low health status on the part of the residents. Attempt was also made to find out the adequacy of the planning regulations both old and new from the agency operating it (the Town Planning Authority) and was found it be adequate to the present socio-cultural and economic conditions of our society.

Also in the course of the study, findings of relevance policy consideration were highlighted, and appropriate recommendations were put forth. It is hoped that these recommendations if rightly implemented would ameliorate the deteriorating conditions of our cities.

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APPENDIX I

A LIST OF HOSPITALS REGISTERED IN IBADAN AS AT 1994

Name of Hospital	Location in the city	Year of Registration
GOVERNMENT HOSPITAL		
1. University College Hospital (UCH)	Elizabeth Rd, Ib.)	Registered
2. Ring Road State Hospital	Ring Rd., Ibadan)	before 1979
3. Adeoyo State Hospital	Adeoyo, Ibadan)	
4. Jericho Orthopaedic Hospital	Jericho, Ibadan)	
5. Govt. Chest Hospital	")	
6. Oni Memorial Children's Hosp.	Ring road, Ibadan)	
7. Jericho Nursing Home	Jericho, Ibadan)	
8. Maternity Hospital	Aremo, Ibadan)	
9. Maternal & Child Health Clinic	Apata, Ibadan)	Registered
10. Leprosy Control Unit	")	after 1979
11. Secretariat Clinic	Secretariat)	
12. Govt. House Clinic	Agodi, Ibadan)	
13. Dental Centre	Dugbe, Ibadan)	
14. Military Hospital	Odogbo-Ojoo, Ib)	
MISSION/PRIVATE HOSPITALS		
15. Catholic Hospital	Academy, Ibadan)	Registered
16. St. Mary's Hospital	Oluyoro, Ibadan)	after 1979
17. Abiyalowo Clinic & Mat. Home	Eleta, Ibadan	1982
18. Abiola Memorial Hospital	Yemetu, Ibadan	1984
19. Adel Medical Centre	Itamaya, Ibadan	1980
20. Adeoti Hosp. & Mat. Home	Aremo, Ibadn	1983
21. Afrik Specialist Hosp.	Challenge, Ib.	1981
22. Aggrey Clinic	Yemetu, Ibadan	1987
23. Alpha Hospital	Oyo Rd., Ibadan	1988
24. Akerele Hospital	Okebola, Ibadan	1986
25. Alafia Hospital	Fajuyi rd., Ib.	N/A

Appendix I cntd.

Name of Hospital	Location in the city	Year of Registration
26. Alanu Hospital	Ago-Tailor, Ib.	1970
27. Anfani Medical Centre	Ring Rd., Ib.	1978
28. Ayodele Mat. & Hosp.	Yemetu, Ibadan	1982
29. Badejoko Hosp. & Mat. Home	Oke-Offa, Ib.	1984
30. Beta Hospital	Popo Str., Ib.	1982
31. Bethel Specialist Hosp.	Awolowo Ave. Ib.	1986
32. Bif Specialist Hosp.	Oke-Ado, Ibadan	1984
33. Blue Cross Specialist Hosp.	Bodija, Ibadan	N/A
34. Camerio Specialist Hosp.	Akinloye L/O, Ib.	1982
35. Clinic on the Hill	Prem. Hotel Hill, Ib.	1978
36. Doctors Poly Clinic	Agbowo, U.I. Ibadan	1984
37. Ebenezer Clinic	Yemetu, Ibadan	N/A
38. Ejire Hosp. & Mat. Centre	Secretariat, Ibadan	1985
39. Emmanuel Hosp. & Mat. Home	Felele, Ibadan	1982
40. Ernost Memorial Spec. Clinic	U.I., Ibadan	N/A
41. Faith Medical Centre	Sango, Ibadan	1982
42. Fajimi Memorial Hosp.	Bodija, Ibadan	1981
43. Felewa Hospital	Oke-Ado, Ibadan	1982
44. Fimolu Medical Centre	Orita Challenge, Ib.	1985
45. Folami Mem. Spec. Hosp.	Coca-Cola, Ibadan	1986
46. Full House Med. & Mat. Centre	Orita U.I. Ibadan	1986
47. Group Med. Pract. Hosp.	Mokola, Ibadan	1979
48. Ibilade Doctor's Clinic	Yemetu, Ibadan	1984
49. Ibilade Hospital	Academy,Iwo Rd, Ib.	1975
50. Idi-Ape Medical Centre	Orita-Basorun, Ib.	1975
51. Ilera Hosp. (Annexe)	Agugu, Ibadan	1986
52. Jokotola Mem. Infirmatory	Oke-Ado, Ibadan	1971
53. Kejide Hospital	Challenge, Ib.	1978
54. Lagelu Medical Centre	Apata, Ibadan	1983
55. Lalu Clinic	Inalende, Ibadan	1986

Appendix I cntd.

Name of Hospital	Location in the city	Year of Registration
56. Mak Clinic	Yemetu, Ibadan	1981
57. May-Day Clinic & Mat. Home	Akinlolu Ave, Ib.	1982
58. Mobolaji Hosp. & Mat. Home	Oke-Adu, Ibadan	1986
59. Mokola Hospital	Mokola, Ibadan	N/A
60. Molly Medical Clinic	Idi-Ape, Ibadan	1986
61. Naccoh Hospital	Alakia Str., Ibadan	1983
62. Oke-Ado Hospital	Oke-Ado, Ibadan	1979
63. Olajumoke Spec. Clinic & Mat.	Iwo Rd., Ibadan	1980
64. Ola-Ojubu Nursing Clinic	Lagos By-Pass, Ib.	1981
65. Olorunsogo Hosp. & Mat.	Poly Rd., Ibadan	N/A
66. Olubi Mem. Hosp.	Odutola Rd., Ib.	1984
67. Oluranti Hospital	Iwo-Rd., Ibadan	1987
68. Oluwaseyi Nursing Clinic	Eleyele, Ibadan	1979
69. Oluyole Estate Clinic	Oluyole, Ibadan	1977
70. Omotowoju Clinic	Labo, Ibadan	1984
71. Omowumi Hospital	Oke-Ado, Ibadan	1984
72. Orisun Medical Centre	Oke-Padre, Ibadan	N/A
73. Oshodi Hospital	Ekotedo, Ibadan	N/A
74. Peace Hospital	Agbowo, U.I., Ib.	1986
75. Ponle Mem. Med. Clinic	Oke-Ado, Ibadan	N/A
76. Salam Hospital	Oyetunde St., Ib.	1986
77. Savage Mat. Clinic	Oke-Bola, Ibadan	N/A
78. Sbarig Diag Med. Centre	Kudeti Ave. Ib.	N/A
79. Shoyode & Franklin Clinic	Molete, Ibadan	N/A
80. Silver Cross Spec. Hosp.	Lagos By-pass, Ib.	1986
81. Skyline Hospital	Sal. Army Rd, Ib.	1984
82. Samaria Clinic & Mat.	Aremo, Ibadan	1984
83. Sodun Hospital	Odinjo, Ibadan	1987
84. Doctor's Clinic	Odinjo, Ibadan	1989
85. St. David's Med. Clinic	Bodija, Ibadan	N/A

Appendix I cntd.

Name of Hospital	Location in the city	Year of Registration
86. St. Gabriel Spec. Clinic	Salvation Army Rd, Ib	1980
87. St. Jacob's Hospital	Apata, Ibadan	1986
88. St. Lawrence Medical Centre	Mokola, Ibadan	1983
89. St. Lucia Hospital	Oke-Ado, Ibadan	1977
90. St. Martina's Hospital	Molete, Ibadan	1979
91. Teju Specialist Hospital	NTC Road, Ibadan	1986
92. Tobi Medical Centre	Felele, Ibadan	1984
93. Tobi Medical Centre (Annexe)	Ode-Aje, Ibadan	1991
94. Tolulope Nursing Clinic	Orita-Aperin, Ibadan	N/A
95. Tona Clinic & Mat. Home	Iwo Road, Ibadan	N/A
96. Toun Memorial Hospital	New Ife Road, Ibadan	1977
97. Trinity Hospital & Mat. Centre	Kobokoje, Ibadan	1984
98. Welfare Hospital	Old Ife Road, Ibadan	1979
99. Wemi-Mak Clinic	Ikolaba, Ibadan	N/A
100.White Cross Med. Clinic & Mat.	Odinjo, ibadan	1984
101.Al-Ayul Hospital	Sawmill, Old Ife Road, Ibadan	N/A
102.Jolamade Specialist Clinic	Idi-Ape, Ibadan	N/A
103.Jaja Clinic	U.I. Campus, Ibadan	N/A

Source: Ministry of Health, Ibadan, 1994

APPENDIX II

DETERMINATION OF MINIMUM HOUSING STANDARDS AND ASSESSMENT OF HOUSING QUALITY

Based on the promise that housing should provide:

(i) Shelter from climatic elements;

(ii) Safety (in terms of fire hazards, building collapse etc)

(iii) Healthy living and health promoting conditions and

(iv) Adequate space and privacy among others, some basic paramiters necessary for measuring standards in housing can be identified.

The Nigerian Town Planning Act of 1959 and Building and Sub-Division Regulation order, 1975 provide relevant guides for defining minimum housing standard. The reason for using this is that such specifications are in the new (Decree 88) Urban and Regional Planning Law of 1992.

Housing Standards Parameters

	Housing Components	Minimum Requirements	Desirable Standards
A.	Structural Elements	Mud, Bricks	Cement Blocks
	1. Wall	Cement Finishing to	Terrazo and Tills
	2. Floors	Avoid Damping	
B.	Internal Facilities and Conveniences		
	1. Water	Deep Well/Pipe Borne form	Pipe Borne/Bore Hole in House
	2. Electricity	Adjacent Street.	W.C.
	3. Toilet	Pit	Exclusive in House
	4. Kitchen	Shared in Compound	2 persons/Habitable Room
	5. No of People per habitable room	Low Density - 1.0, Medium. -1.5 and High - 2.0	
C.	Environmental Conditions		Covered Drain
	1. Refuse Disposal	Regular	
	2. Drainage Cond.	Open Drains	
	3. Nature of adjacente stree.	Drains Constructed and Tamed	

Source: The Urban Poor in Nigeria Makinde and Ozo (1987 edited) Pages: 238 and 239.

APPENDIX III
RESIDENTIAL LOCALITIES IN IBADAN

Residential Districts	Localities
High Density	Dugbe, Abebi, Idikan, Oje, Agbeni, Oniyanrin, Oke-Are, Yemetu, Igosun, Oke-irefin, Motala, Oke-Offa, Ode-Aje, Agugu, Oja-Igbo, Oke-Aremo, Elekuro, Mapo, Odinjo, Bode, Ilupeju, Ile-tuntun, Odo-Oba, Isale-Osi, Oke-Foko, Itamaya, Kudeti, Eleta, Opoyiosa, Apete, Oke-Oluokun, Adeoyo, Bere, Nalende, ogunpa, Olorunsogo, Aliwo.
Medium Density	Samonda, Coca-Cola, Mokola, Oke-Ado, Odo-Ona, Oke-Bola, NTC, State Hospital, Elewura, Molete, Challenge, Yejide, Liberty Stadium, Sango, Felele, Imalefalafia, Orogun, Ekotedo, Iwo Road, Yidi, Sabo, Elewe, Apata, Ago-Taylor, Apata-Ganga, Moore-Plantation, Alalubosa, Eleyele Water Works, Eleyele Market, Army Barracks, Ashi, Sango Motor Park, Oluwo, Radio Oyo, Orita Basorun, NTA, Orita-Mefa, Ijokodo, Agbowo, Olopometa, Eleyele Barracks, Oke-Itunu, Okoro Village, Bodija Ojurin, Orita-Aperin, Aperin.
Low Density	Secretariat, Polytechnic, Old Bodija, New Bodija, Baptist Grammar School, Iyaganku, Agodi, Idi-Ape, University of Ibadan, Ikolaba, Kongi, Onireke, Link Reservation, Idi-Isin, Jericho, Oluyole Layout, Oluyole Extension.

Source: National Population Commission, 1991.

APPENDIX IV

CENTRE FOR URBAN AND REGIONAL PLANNING
FACAULTY OF THE SOCIAL SCIENCES
UNIVERSITY OF IBADAN
IBADAN.

THE IMPACT OF PLANNING LEGISLATIONS AND HOUSING STANDARDS ON THE HEALTH OF IBADAN CITY RESIDENTS

Household Questionaires

1. District:..... (1) High density (2) Medium density

   (3) Low density

2. Street:.....

3. Locality:.....

SOCIO-ECONOMIC/DEMOGRAPHIC CHARACTERS

4. For how long have you been living in Ibadan?.....

   (1) 1-5 yrs. (2) 6-10 yrs. (3) over 10 yrs.

5. For how long have you been living in this house?.....

   (1) 1-5 yrs (2) 6-10 yrs. (3) over 10 yrs.

6. Sex of head of household:..... (1) Male (2) Female

7. No of persons in the household:..... (1) 1-3 (2) 4-6

   (3) Above 10.

8. Education:.....

(1) No Formal Education (2) Pry. School

(3) Secondary School (4) University/Polytechnic

(5) Others, specify

9. Occupation:.....

(1) Civil Service (2) Public Service

(3) Artisan (4) Businessman

(5) Others, specify

10. Income per annum in Naira

(1) less than ₦1000 (2) ₦1001 - ₦5000

(3) ₦5001 - ₦10,000 (4) ₦10,001 - ₦15,000

(5) greater than ₦15,000

.....

PLANNING REGULATIONS COMPLIANCE OF HOUSING

11. Type of housing:.....

(1) Rooming apartments (2) Flats

(3) Self Contained Bungalow (4) Self Contained Storey

(5) Compound type

12. Terrain of the surrounding of the house:.....

(1) Dry land (2) Navshy land

(3) Flat terrain (4) Rugged terrain

13. Accessibility of the house:.....

(1) By trunk road (2) By street

(3) By footpath

14. Distance of the house to the adjacent road (Building line)....

..... (1) Less than 6 metres (2) 6 metres and above.

15. Distance of the house to the nearest stream:.....

(1) Less than 15 metres (2) 15 metres and above

(3) Far away

16. Adequate space provision around the house:.....

(1) None (2) Not adequate (3) Adequate

17. Fencing:.....

(1) None (2) Partly fenced (3) Totally fenced

18. Does this house have a building plan approval?.....

(1) Yes (2) No

19. When was it obtained and how?.....

.....

.....

20. Were there requests for ammendments by the Town Planning Authorities?..... (1) Yes (2) No

21. If yes, which type(s) of ammendments?.....

.....

22. Was it conformed with?..... (1) Yes (2) No

23. What is the age of this house?.....

(1) Less than 10 years (2) 10 yrs

(3) 20-21 yrs (4) 30-39 yrs.

(5) 40 - 49 yrs. (6) 50 yrs and above

HOUSING CONDITIONS/HOUSING STANDARDS

24. Wall material.....

(1) Mud (2) Mud block (3) Cement block

25. Wall Condition:.....

(1) Intact (2) Delapidating (3) Delapidated

26. Roof Material:.....

(1) Asbestor (2) Concrete (3) Zinc (4) Thatch

27. Roof condition:.....

(1) Intact (2) Leaking (3) Delapidated

28. Floor material:.....

(1) Concrete (2) Earth (226) No of people per room (1) 1-2 (2) More than 2.

(INTERNAL FACILITIES AND CONVENIENCE)

29. Source of water supply:.....

(1) Pipe-borne well/in house/compound (2) Pipe borne/well from street

(3) Pipe-borne/well from another street (4) Itinerary thankers

(5) Others, specify.

30. Electricity:..... (1) In use (2) Not in use

31. Toilet facility:.....

(1) Water closet (2) Pit (3) Bucket

(4) None (5) Others, specify

32. Bathroom:.....

(1) Shower (2) Not shower (3) Outside bathroom

(4) Others, specify

33. No of households in the house (Occupancy ration).....

(1) 1-2 (2) 3-4 (3) 5-6 (4) Above 6

(ENVIRONMENTAL CONDITIONS)

34. Neighbourhood surrounding:.....

(1) Clean (2) Fair (3) Dirty

35. Nature of adjacent street:.....

(1) Tarred in good condition (2) Tarred in poor condition

(3) Untarred (4) No street

36. Refuse disposal facility:.....

(1) Present and adequate (2) Lacking

(3) Present but adequate (4) Others specify

37. Method of waste disposal.....

(1) Open dump (2) Along road site

(3) Into the stream (4) At organised collection point.

38. Drainage condition:.....

(1) Present and adequate (2) Present but inadequate (3) Lacking

39. Nature of drains:.....

(1) Open (2) Covered (3) Underground

(OVERALL MEASUREMENT OF HOUSING STANDARDS)

40. Rationalise the variety of relative housing standards observed above into one of the following five categories:.....

(1) Luxury - Well above average

(2) Very adequate - Slightly above average

(3) Adequate - average

(4) Less than adequate - Slightly below average

(5) Inadequate - Well below average (Elum/Squatter)

Health Behaviour/Status)

41. What are the most common diseases experienced by your household in the last five years?.....

(1) Diarrhea (2) Typhoid (3) Malaria (4) Cholera

(5) Cough/Tuberculosis (6) Others, specify

42. How often does your fmaily complain of the above diseases?.....

(1) Daily (2) Weekly (3) Monthly

(4) Every-six months (5) Yearly

43. What age is most often affected?.....

(1) Children (1-15 yrs) (2) Adult - 16 yrs)

44. Have you lost any member of the household since you started residing in this house?.....

(1) Yes (2) No

45. Was the death caused by any of the diseases listed in (36) above?.....

(1) Yes (2) No

46. Where do you and your family members go when you experience any health problems?.....

(1) Hospital (2) Health centre (3) Chemist shop

(4) Traditional Doctor (5) Self medication (6) Others, specify

47. Give reason(s) for the choice in (36) above

.....

.....

48. How much do you spend on treatment of household allments in a month

.....

(1) Less that ₦100 (2) ₦100-₦200

(3) ₦201 - ₦300 (4) Above ₦300

49. Which of the folowing disasters has ever been experienced in this house or around this area in the last term of fifteen years?.....

(1) Fire disaster (2) Flood disaster

(3) Building collapse (4) Epidemics (spread of desease)

(5) None (6) Other specify

50. If any of 1 - 4 is the answer, what in your own opinion was responsible for the disaster?.....

51. How was the situation put under control?

.....

APPENDIX V

QUESTIONAIRE FOR PLANNING AUTHORITIES

1. Name of the Planning Authority:.....

2. Location in the City:.....

3. Under which Law(s) is the Planning Authority Operating:

.....

4. What are your duties under the provision of the law(s)?

(1) .....

(2) .....

(3) .....

(4) .....

5. Have you started ;implementing the provisions of the 1992

Urban and Regional Planning law:.....

(1) Yes (2) No

6. If yes, how would you assess the adequacy of the provisions of the law to the present Urban Structure and Health Aspirations of the people in the Nigerian Cities?

.....

.....

7. If No, why have you not started using the new (URP) Laws?

.....

.....

8. How soon would you want the law to be implemented?.....

.....and why?.....

.....

9. What in your own opinion are the major differences between the old Law (1946 law and the new Law 1992) (URP) Law?:

.....

.....

10. Does the new Law addresse the health need of the people in our physical environment? .....

(1) Yes, (2) No..

11. If yes, what are they?.....

.....

12. What are those things that you check in a building plan before they are approved?

(1)..... (2) .....

(3)..... (4).....

(5).....

13. How are all these standards enforced?

(1)..... (2)..... (3).....

14. How many buildings have your development control department pulled down, or marked for demolitions as a result of contravention in the last five years?.....

15. What are the major types of building contravention committed by most of the developers? .....

.....

16. Does these contraventions have any consequences on the people's health and safety?.....

(1) Yes (2) No

17. If yes, what are they?

(1).....

(2).....

18. How would you assess the people's compliance to planning Regulations in this local government area:.....

(1) Satisfactory (2) Not Satisfactory

19. Comment freely on the peoples' compliance to building and Planning Regulations in this Local Government Area:

.....

.....

.....

APPENDIX VI

QUESTIONAIRE FOR HEALTH INSTITUTIONS

1. Name of Health Institutions:.....

2. Category:.....

   (1) Teaching/General Hospital (2) Private Hospital

   (3) Comprehensive Health Centre (4) Clinic

   (5) Primary Health Centre

3. Ownership:.....

   (1) Government (2) Private

   (3) Community

4. Year established:.....

5. Designation of the medical officer:.....

   (1) Doctor (2) Nurse

   (3) Pharmacist (4) Health Supritendent

6. No of Cases handled between: (1985 - 1995)

1985.....1986.....

1987..... 1988.....1989.....

1990..... 1991.....1992.....

1993..... 1994.....1995.....

7. No of cases due to:-

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Cough/Tuberculosis											
Cholera											
Dysentary											
Phenmonia											
Malaria											
Typhoid											
Accidents within the Town											
Other environmental related diseases (specify)											
Total											

8. Are the cases above attributable to the housing conditions of the patients?..... (1) Yes (2) No

9. Would you then conclude that most of the disease related to housing conditions and unhygenic environment are common in this area? ..... (1) Yes (2) No

10. Reason(s) for your conclusion: .....

.....

.....

.....

11. Are you aware of any Planning Legislative measures against bad housing and poor environmental sanitation:.....

(1) Yes (2) No

12. If yes, How would you assess the effectiveness of these legislative

(1) Adequate (2) Not Adequate

13. Comment freely on the relationship between bad and filthy environment and health in our cities.