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DEPARTMENT OF ARCHITECTURE AND BUILDING SCIENCE
SCHOOL OF THE BUILT ENVIRONMENT**

**A MODEL FOR SOCIO-ECONOMIC ACTIVITIES DEVELOPMENT
IN LAINI SABA NEIGHBOURHOOD OF KIBERA – CITY OF
NAIROBI.**

BY

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REQUIREMENTS OF THE MASTER OF URBAN MANAGEMENT DEGREE IN THE
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2009

DECLARATION

I do hereby declare that this research project is my original work and has not been presented for a degree in any other university.

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SIGNED..... DATE

This research project has been submitted for examination with my approval as the university supervisor.

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Finally, I wish to thank all those who contributed in one way or another towards the success of the study.

DEDICATION

I dedicate this work to my parents and siblings for their love, support and encouragement towards my education.

ABSTRACT

In a modern age where knowledge based industry has increasing dominance, much private sector production are increasingly becoming home-based. However, in Laini Saba, this has not been the case and in essence it has lowered the capacity of the income generating activities, income levels and distribution of work hence income and the entire socio-economic development in the neighbourhood have not been enhanced. Thus 'at-home' work as opposed to 'out-of-the office' work and even other income-generating activities that the residents of Laini Saba highly depend upon in order to supplement their other informal employments have not well been incorporated within their housing environment. This is positively correlated to low infrastructure provision levels in the area. As a resulted, housing Laini Saba has done little to encourage social and human capital formation leading to minimal enhancement of socio-economic development. Much value in housing is about the 'housing capability' which is closely associated with the housing conditions and accompanying infrastructural services. However, housing may lack important economic capability for various reasons and so create diswelfare than welfare to the society, resulting to little or no social-economic gains to the society. Household development that leads to positive economic benefits occurs in homes, in libraries and neighbourhood study centres, schools, firms, colleges, universities, recreational facilities and health centres. The presence and/ or inadequacy of these facilities has close relationship to the various economic aspects that are related to housing. The study therefore aims at coming up with a comprehensive model encompassing neighbourhood economic wellbeing with focus on socio-economic improvement by advising on the most visible ways of having the above facilities made available within the informal set ups.

The overall objective of this study was to come up with a comprehensive model for the improvement of socio-economic activities in Laini Saba as a case study. Specific objectives included determining the socio-economic activities taking place in the neighbourhood, establishing the infrastructural impediments for the enhancement of socio-economic activities, determining the environmental impact of the socio-economic activities within the area and finally to recommend a suitable model for socio-economic activities development in the neighbourhood. Shelter problems in Kenya like any other developing country is due to high urban population growth rates resulting from urban natural growth, rapid rural-urban migration, a lag in urban infrastructure development to support shelter development, low purchasing power of the majority of the urban households, inappropriate building materials and various local authorities' by-laws especially for the low-income shelter in addition to unforeseen shelter policy. For example, housing in Nairobi has tended to mushroom without regard to services, yet shelter in reality should be backed by a package of services such as land, public facilities, access to employment and other socio services as well as the dwelling structure itself. Inadequate housing in Laini Saba has manifested itself in many forms such as poor

infrastructural services like roads, sewerage, water and sanitation and so on. The level of overcrowding both in terms of area and the number of separate rooms is a common sign of inadequate shelter. As frequent as inadequacy of space is lack of services available to the large numbers of people in Laini Saba. The lack of services such as clean water supply, means of safe disposal of human and domestic waste has contributed to morbidity and mortality on massive scale. In general, the poor are inadequately housed and the poorer a country is the less adequate are the shelter conditions at least for the low-income groups. This has led to little socio-economic development of the people of Laini Saba. The study has therefore recommended a socio-economic development framework for shelter upgrading including proposals like upgrading of the existing shelter, proposals on the informal sector activity sites, proposals on the land-use policies and infrastructure provision, proposals on the management structure and informal activity allocation, proposals on the environmental policies, proposals on the assistance programmes to be adopted towards improving the economic welfare of informal sector workers and lastly proposals on the improvement of legal and regulatory framework.

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CHAPTER ONE: INTRODUCTION

1.0: BACKGROUND OF THE STUDY

Informal housing sector produces the majority of all new housing units in the city of Nairobi and other developing cities in general. However, it is rarely appreciated or supported (Syagga and Malombe, 1994). On the contrary, the houses and social-economic activities in informal settlements have often been destroyed by the local authorities, thus retarding social-economic development in such areas. However, the government is gradually realizing that informal housing can be a panacea to housing problems for it requires minimal investments both at individual, private and public sector levels. Informal settlements regardless of their poor quality, provides affordable housing for the poor and their destruction decreases the housing stock, increases poverty and only shifts the slums into another location and growth in crime rate as occasioned by increased poverty levels in the informal settlements. In this regard, the government's recognition of the positive effects of informal housing in totality has been clear for its failure to build houses for all the needy and therefore should support the efforts of people to provide housing for themselves. This implies the acceptance of informal settlements as legitimate forms of urban housing which should be improved rather than demolished. Such a move should include the improvement of the infrastructural services, which are the engines of social-economic economic growth.

The above mentioned positive attributes of informal settlements do not in any way justify their continued existence and should not be an excuse for the slow progress made towards achieving the goal of adequate shelter for all. Many past responses to the problem of slums have been based on the erroneous belief that provision of housing and related services, through slum upgrading, site and service schemes and physical eradication will on their own solve the problem. Solutions based on this premise have failed to address the underlying causes of slums, of which poverty is the most significant. Indeed, policies should be more vigorous at addressing the issues of the livelihoods of slum dwellers and the urban poor in general, thus going beyond the traditional approaches that have tended to concentrate on improvement of housing, infrastructure and physical environmental conditions. This means enabling urban informal activities to flourish, linking low-income housing development to income generation and ensuring easy access to jobs through pro-poor transportation policies.

1.1: STATEMENT OF THE PROBLEM

Somerville (1994) noted the relationship between household, household economy and housing. His ideas of 'housing capability' lead to studies of housing standards in relation to the 'productivity' of housing, especially in economic development. In most regions, housing has the potential of becoming an engine of economic growth even at a household level. However, differences in investment in the intertwined sectors of housing and infrastructure exist across countries but generally universal delivery of infrastructural services continues to be plagued by problems that have existed for many

years. The condition of infrastructure in Nairobi in general, and Laini Saba in particular are poor thus the services provided are inferior. This lowers the overall housing conditions, environment and capability in relation to economic development to deplorable status. Housing infrastructure and the theory of household economy are adaptable to considerations of socio-economic circumstances. As argued by Gershuny (1978), in a modern age where knowledge based industry has increasing dominance, much private sector production are increasingly becoming home-based. However, in Laini Saba, this has not been the case. This in essence has lowered the capacity of the income generating activities, income levels and distribution of work hence income and the entire general 'housing capability' in the neighbourhood have not been enhanced. Thus 'at-home' work as opposed to 'out-of-office' work and even other income-generating activities that the residents highly depend upon in order to supplement their other informal employments have not well been incorporated within their housing environment positively correlated to low infrastructure provision levels. As a result, housing in Laini Saba has done little to encourage social and human capital formation leading to minimal enhancement of economic development.

Much value in housing is about the 'housing capability' which is closely associated with the housing conditions and accompanying infrastructural services. However, housing may lack important economic capability for various reasons and so create a diswelfare rather than welfare to the society, leading to little or no social-economic gains to the society. Household development that leads to positive economic benefits occurs in homes, in libraries and neighbourhood study centres, schools, firms, colleges,

universities, recreational facilities and health centres. The presence and/ or inadequacy of these facilities has close relationship to the various economic aspects that are related to housing. The study therefore aims at coming with a comprehensive model encompassing neighbourhood upgrading with focus on socio-economic improvement by advising on the most visible ways of having the above facilities made available within the informal set ups.

1.2: OBJECTIVES OF THE STUDY

1.2.1: General Objective

The overall objective of this study was to come up with a comprehensive model for the improvement of socio-economic activities using Laini Saba as a case study.

1.2.2: Specific Objectives

1. To determine the main socio-economic activities taking place in the neighbourhood.
2. To establish the infrastructural impediments for the enhancement of socio-economic activities.
3. To determine the environmental impact of the socio-economic activities within the area.
4. To recommend a suitable model for socio-economic activities development in the neighbourhood.

1.3: SCOPE OF THE STUDY

The study focused on Laini Saba of Kibera neighbourhood of Nairobi City. The focus of the study was to investigate problems in the neighbourhood that hamper socio-economic development and evolve a model for their enhancement. Towards this end, Laini Saba village was used as a case study. The village was chosen because it is the most densely populated and predominantly consisting of the lowest income group in Kibera slums with an approximate 50,000 people living with an average income of Kshs.45 per day out of which 55 per cent of these being women (UNCHS, 1999).

1.4: HYPOTHESIS OF THE STUDY

The socio-economic activities situation in Laini Saba shall remain dilapidated unless a policy for the neighbourhood improvement takes cognizance of the socio-economic needs of the residents.

1.5: JUSTIFICATION OF THE STUDY

While there are serious problems in Kenya, both in rural and urban areas, housing problems are most acute in urban areas. The phenomenon of rapid urbanization being experienced world-wide has brought about many challenges, the most critical being a general deterioration of living standards of an increasing majority of urban dwellers (Davis and Golden, 1954). When '*Abraham Maslow*' discussed the '*hierarchy of human needs*' he referred to food, shelter and clothing as items of necessity in that order. They

are all physiological, in that even those who cannot afford still need them. Yet unlike food or clothing, which, one can take in 'small doses' by its nature, housing represents a major investment and is needed constantly. Moreover it serves as an abode for almost all human activities. The problem of urban informal settlements is mainly that of acute shortage in the number of dwellings, inadequate infrastructure, community facilities and services, over-crowding and sub-standard human settlements leading to unhealthy environmental impacts. This situation has been aggravated by recent changes in social-economic development strategies in a liberalized world economic order (Abrams, 1964).

Having, appreciated the various other works on housing, poverty, squatters and informal settlements and their role and/ or impact on general development, the divergence from all these works is based on the establishment of the various economic aspects of informal housing. Such an establishment would act as an eye opener to the various housing institutions such as government agencies, private individuals and the private sector as a whole in acknowledging the need and role of informal housing in economic development. This acknowledgement is a tool towards further infrastructure building to improve informal housing. As such, housing and the domestic sector would be induced to do better in 'capability welfare'. Children and adults, for instance, would in such circumstances be well socialized and thus expand human capital formation which will be useful in the wider economy of the society. It should be noted that life-cycle household economy often has inducements for self-help, for saving, for earning and generation of income and for integrating various economic activities within an area.

Value in housing arises because it can be more or less capable of promoting wellbeing in these things. The need for ‘housing capability’ in providing and supporting various socio-economic activities was the core of this research. An achievement of all the above would help reduce the household poverty levels as it would result to increased income levels.

1.6: RESEARCH METHODOGY

1.6.1: Research Design

This study was aimed at determining the socio-economic aspects of informal housing settlements with Laini Saba being used as a case study.

1.6.2: Sampling Techniques and Tools Used

The population of interest in this study comprised of all the households of the study area. Owing to large number of households though, a census study was conducted and 105 households interviewed with the interviewer targeting the head of the household. There was a concerted effort to get both the economic and social-economic aspects of the population. The research design was an undertaking of a case study based on Laini Saba village in the expansive Kibera slums. This case study was chosen, first under the assumption that it bears the characteristics of a typical informal housing in Kenya for replication purposes. Stratified random sampling was highly relied on to get the sample population for data collection. The study utilized both qualitative and quantitative

methods of data analysis while presentation of data involved appropriate tabulations, written text and calculations by use of percentages and measures of central tendency.

1.6.3: Primary Data

Questionnaires containing both open and closed ended questions were used to collect primary data. The questionnaires were personally administered to households and NGOs. Primarily, the questions focused on the people's income, housing conditions, housing contribution to both the household's income and socio-economic development, sources of income and expenditure, environment and general infrastructure provision level. A random sampling was used to select interviewees and every twentieth household head interviewed. A total of 95 households and 10 non-governmental organizations were interviewed and/ or a questionnaire presented. Visual researcher observation, inspection and assessment of the housing and allied activities also formed a large part of primary data. A camera was employed to capture some of the main features of the study area. Emphasis was put on the heads of household rather than on the total adult population.

1.6.4: Secondary Data

Secondary data formed the main source of information including a review of the existing published and unpublished literature such as an analysis of relevant government papers and acts of parliament. It also involved a review of several

documents, statistical analysis of census and other data, academic papers, textbooks, newspapers, journals, maps and both published and unpublished thesis in search of socio-economic data relating to the study area.

1.6.5: Data Analysis and Presentation of Findings

This was done through both quantitative and qualitative analysis. Data obtained from the field was largely analyzed quantitatively and simple prescriptive tools such as percentages and averages were employed. Tables, diagrams, maps and photographs were also used to present the critical points of the subject matter. There was an attempt to use descriptive analysis through objective judgment of facts in order to form learned opinions as to what the socio-economic aspects of informal settlements are and the role of housing in Kenya. The data findings were done in terms of written text, percentages and tables depending on the type of data under consideration and the intended output to be relayed. The nature of data collected had primary influence on the presentation techniques in the study. Data collected was related to the socio-economic activity sites in the area of Laini Saba. Stratified random sampling was employed to pick on the respondents and questionnaires were used to collect primary data. Research observations, inspections and assessments also formed a main part of primary data. Review of published and unpublished academic papers, journals and government papers was a major part of secondary data. Data analysis was done through both quantitative and qualitative analysis. It was largely analyzed quantitatively and simple prescriptive

tools such as percentages and averages are employed. Presentation of data was in the form of written text, tables, maps and photographs.

1.7: STUDY LIMITATIONS

Lack of resources to carry a wider study was the main limitation. Shortage of time attributed to division of the available time to office duty and research work was a major setback. The interviewees were not willing to give information voluntarily and some went to the extent of asking for money before they answered questions or filled up the questionnaires. Where money was not available, the researcher had to do a lot of convincing to get information out of the households thus taking too long in the field.

1.8: STUDY ORGANIZATION

The study has been organized into five chapters. Chapter one has provided the introduction giving the general background of the study; chapter two has dealt with the literature review on conceptualization of socio-economic aspects of the informal housing and settlements while chapter three has covered background information on the study area. Chapter four has provided the socio-economic attributes of the neighbourhood while chapter five has given the conclusions, recommendations as well as granting a leeway for further studies.

CHAPTER TWO

LITERATURE REVIEW AND CONCEPTUALIZATION OF THE SOCIAL - ECONOMIC ASPECTS OF THE INFORMAL HOUSING AND SETTLEMENTS

2.0: INTRODUCTION

This section discusses philosophical basis of housing by highlighting urbanization trends in Kenya and linking it to housing and socio-economic development. A typology of the country's housing sector is then presented with a brief discussion on the importance of analyzing the housing problem within the wider national context and the pitfalls of attempting to solve the housing problem in isolation. A greater portion of this section is then devoted to works dealing with the economic aspects of informal housing such as the factors affecting low income housing development such as land, income levels, and infrastructural services within the context of Laini Saba. The informal housing development demand-supply imbalance will also be presented in order to show the economic gaps that the study is expected to fill. A suitable place to live is fundamental to people's identity and wellbeing, and there are many aspects to housing that affect the quality of people's lives. Dwelling attributes, such as their size, number of bedrooms, physical condition, location relative to amenities and services, and their affordability, are all important in this regard but there is currently no single indicator that succinctly captures whether people's many needs and desires for suitable housing are being met (Shihembetsa, 1985). Studies in the problems of urbanization and the subsequent housing shortage have significant economic, social, political and

development-related implications. The highly visible implications of inadequate housing are quite apparent manifesting in two ways namely, the fewer dwelling units than the number of households and the present overcrowding of the existing dwelling.

Adequate shelter means adequate privacy, space, physical accessibility, physical security and security of tenure of the housing structure, structural stability, adequate lighting, heating and ventilation, basic infrastructure such as water and energy, sanitation and waste management facilities. It also means suitable environmental quality and health related factors, adequate and accessible location with regard to work and basic facilities all of which should be available at an affordable cost. On average, households in Kenyan urban centres spend between 15 per cent and 25 per cent of their total income on shelter although the share tends to be lower in some urban centres and also varies considerably between and within income groups (Government of Kenya, 1999). Access to adequate housing has been recognized as a basic human right. A secure, safe and appropriately serviced home improves the health of its occupants and contributes to their physical, mental, social and economic well-being. Lack of adequate housing can lead to the expansion of slums, disenchantment of urban populations and increased health risks resulting to very minimal or no economic development by the households. The right to adequate housing is also seen as an important component of the right to adequate standard of living in the Universal Declaration on Human Rights of 1948. However, the vast majority of urban dwellers have been unable to gain access to adequate housing largely owing to the regulatory frameworks operating in the cities and towns in which they live (Devas and Rakodi, 1993). This has not only denied them

the environmental, health, safety and social welfare benefits of adequate legal housing, but also the chance to earn livelihoods through home-based entrepreneurial activities. Most housing regulations and standards in Kenya have been conceived with new housing development in mind, often of the type of a single house on its own plot. This in itself is unaffordable to many urban households and confers the role of housing in the wider context of urban management. Housing has also a deep social significance for it represents a social status by its location, size and style. A family's housing requirement change with time and circumstances and houses should adapt to these changes. This, however, is not always the case and overcrowding, lack of amenities, and other infrastructural services are the results as few can build their own house. A house of any comfort needs land, materials and skills as well as time to construct it. Generally, the labour, materials and skills have to be obtained from oneself or someone else and the terms on which they are made available is the root cause of many of the features of housing one can observe today. Informal housing settlements in urban areas are therefore inevitable phenomena. As long as urban areas offer economies of scale and agglomeration economies, large cities will always continue to grow attracting migrants from rural and smaller urban areas, leading to even a large need for housing. There are no universal "quick-fix" solutions that can solve all the problems of informal housing settlements in all parts of the developing world. Considering the inevitability of rural-urban migration and therefore the need for informal housing, one such approach that has been receiving considerable attention from various government and public authorities has been the "enabling" approach, where instead of taking a confrontationist attitude, governments have strived to create an enabling environment, under which people, using

and generating their own resources, could find unique local solutions for their housing and shelter problems (Government of Kenya, 1999).

In many third world countries, the housing shortage is increasing and yet insufficient resources are allocated to satisfying the housing need. One reason for this is that housing has held a low priority than other sectors of the economy because the return from housing takes quite a long time to be realized. It is believed that in developing countries there exists a housing deficit of astonishing proportion, in most cases underestimated, and progressively growing larger. This growth of housing problem is a result of increased in-migration of population and the overuse of the housing supply, which in turn accelerates its deterioration and removal from use. There is chronic overcrowding that has taken place in the urban areas for long periods, and a frequently low-level of repair and maintenance of such urban housing. The problem is further worsened by the destruction of some incidental to redevelopment and the building of the long overdue urban road by-passes and other government projects especially in the city of Nairobi. On the other side is the extremely low capacity of the economy to supply equivalent public housing, either because of the inability of central and local governments to supply funds for this purpose; or because of low incomes amongst prospective households, or due to obstacles to residential development created by the rigid official housing and building standards (Government of Kenya, 1999). The rate of growth of the housing problem can therefore be said to be growing that it seems inconceivable than any of the countries can hope to catch up with the demand. The United Nations once summed up the situation as follows; *'In many countries the*

provision of completed housing units to all households in need of housing is simply beyond the national resources. The critical point has been reached since most developing countries cannot solve their housing problems without destroying the main development objectives' (UN Department of Economic Affairs, 1977: 4).

Cuban president, Fidel Castro, while analyzing housing conditions in developing countries remarked that the housing conditions in countries 'is enormous that if the country was to dedicate itself to dwelling construction it could not develop in other areas and if it dedicates itself to development of these other areas, it cannot built dwelling' (UN Department of Economic Affairs, 1977: 7). This connotes that housing problem is as challenging to most countries as the problem of the overall development and there will be a continuing urban growth in developing countries such that the fastest growing segment of the urban population will be composed of migrants who will not have the resources to supply themselves with dwellings. The basic fact seems to be that with some exceptions, it is not possible to build a permanent standard housing unit for individuals or family occupation at a cost that, when turned into an economic rent, can be met out of the incomes and taste patterns of the lower segments of the urban labour force and peripheral population. Many countries have attempted to provide unrealistically high standard dwelling rather than meet the effective demand for housing leading to regulations that discourage the production of appropriate standard housing and limited public resources on high priced housing for a small portion of the population. The end result has been the condoning of squatter settlements.

2.1: URBANIZATION AND HOUSING PROVISION

Housing is a domestic capital and a resource input to the domestic economy and therefore a close relationship between housing and economic development exists. Housing is an object of value and various economic techniques have been used to value economic elements which in aggregate explain the housing values. Sociological surveys have also explored housing values alongside orthodox housing economics which postulate housing to constitute convenience in design, amenities, tenure and property rights. Therefore, it is evident that economic theories focused on housing captures complex structures of households and their behaviour. Information on the demographic structure, decision-making process, resource allocation, income levels, gender and division of labour is a prerequisite for understanding the extent to which informal housing has contributed to or otherwise hindered economic development at the household level.

Urban population growth is expected to continue in Africa and it is estimated that by the year 2025, approximately 42.5 per cent of Africa's population will live in cities (UNCHS, 1990). This growth represents unprecedented demand for shelter in urban areas as more than 10 million new units will be required in the Africa's urban areas during the next decade to cater for population growth alone (UNCHS / ILO, 1995). Cities play a significant role in economic development as they continue to attract migrants from rural areas due to their socio-economic advancement as corroborated by their significant economies of scale such as provision of jobs, housing services,

productivity and social development. However, the stress of this rapid urban population growth is overwhelming with a long list of afflictions including urban poverty rates ranging averagely to 60 per cent (UNCHS, 1987). Despite growing investments, more than one third of the urban population lives in sub-standard housing (UNCHS, 1990). The UN-Habitat report, ‘‘The Challenge of Slums: Global Report on Human Settlements 2003’’, defines slum household as ‘a group of individuals living under the same roof that lack one or more of the following conditions: access to safe water, sanitation, secure tenure, durability of housing and sufficient living area’. The report shows that slum life often entails enduring some of the most intolerable housing conditions such as the sharing of toilets with hundreds of people, living in overcrowded and insecure neighbourhoods and constantly facing the threat of eviction owing to the fact that most areas where such slums are found is either state or private land. This life places enormous social and psychological burdens on residents, which often leads to broken homes and social exclusion. Such burdens may hinder economic development that may have been imminent among the households.

Informal housing may not be a desirable policy objective, but their existence in many cities can be of unintended benefits (Republic of Kenya, 2003). For instance, they are often the first stopping point for rural-urban migrants and hence provide low-cost affordable housing that enables the new migrants to save enough money for their eventual absorption into the urban society. With approximate 60 per cent of labour force in Nairobi living in the informal settlements, a big section of these dwellers earn their living in informal but crucial activities, and therefore provides services that may not be

easily available through the formal sector (UNCHS, 1987). Many of these cities and industries would simply come to a halt without the labour provided by these dwellers, their housing conditions notwithstanding. As Nairobi's art and music scene will attest, slums and other informal housing settlements are also vibrant places where the mixing of different cultures often produces new forms of artistic expression. These unhealthy, crowded environments, therefore, can sow the seeds of new cultural movements and levels of solidarity unknown among the middle and upper classes (Gilbert and Gugler, 1984). Despite the fact that the informal housing sector produces the majority of all new housing units in the city of Nairobi and other developing cities in general, it is rarely appreciated or supported (Syagga and Malombe, 1994). On the contrary, the houses and economic activities in informal settlements have often been destroyed by the local authorities, thus aggravating, instead of alleviating poverty consequently retarding development in such areas. However, the government is gradually realizing that informal housing can be a panacea to housing problems for it requires minimal investments both at individual, private and public sector levels. Informal settlements regardless of their poor quality, provides affordable housing for the poor and their destruction decreases the housing stock, increases poverty and only shifts the slums into another location and growth in crime rate as occasioned by increased poverty levels in the informal settlements. In this regard, the government's recognition of the positive effects of informal housing in totality has been clear for its failure to build houses for all the needy and therefore should support the efforts of people to provide housing for themselves. This implies the acceptance of informal settlements as legitimate forms of urban housing which should be improved rather than demolished. Such a move should

include the improvement of the infrastructural services, which are the engines of economic growth. The above mentioned positive attributes of informal settlements do not in any way justify their continued existence and should not be an excuse for the slow progress made towards achieving the goal of adequate shelter for all. Many past responses to the problem of slums have been based on the erroneous belief that provision of housing and related services, through slum upgrading, site and service schemes and physical eradication will on their own solve the problem. Solutions based on this premise have failed to address the underlying causes of slums, of which poverty is the most significant. Indeed policies should be more vigorous at addressing the issues of the livelihoods of slum dwellers and the urban poor in general, thus going beyond the traditional approaches that have tended to concentrate on improvement of housing, infrastructure and physical environmental conditions. This means enabling urban informal activities to flourish, linking low-income housing development to income generation and ensuring easy access to jobs through pro-poor transportation policies.

Although there is a growing recognition worldwide of the need to address the informal housing question, as manifested in the recent United Nations Millennium Declaration, which aims at significantly improving lives of at least 100 million slum dwellers by the year 2020, the report notes that there is still a general apathy and lack of political good will and economic capability among governments to implement policies aimed at improving their living conditions. Towards this end, it is clear that informal housing formation is closely linked to economic cycles, trends in national income distribution and in more recent years, to national economic development policies. But policy failure

at all levels (international, national and local) has had the net effect of weakening the capacity of national governments to improve housing and living conditions of low-income groups (Turner, 1968). Hundreds of millions of urban poor in the developing and transitional world have few options but to live in squalid and unsafe environments where they face multiple threats to their health and security. Slums and other informal housing lack the most basic infrastructure and services. Their populations are marginalized and largely disenfranchised. They are exposed to diseases, crime and are vulnerable to natural disasters. Such housing is growing at an alarming rate, projected to double in 25 years (UNCHS, 1986). Informal housing settlements are strongly believed to be the products of failed policies, bad governance, corruption, inappropriate regulations, dysfunctional land markets, unresponsive financial systems and a fundamental lack of political good will (Syagga, 1992). Each of these failures adds to the constraints the enormous opportunity for economic development that urban economic structures offer. The rate of urbanization in Kenya has accelerated during the last three decades as a result of natural population increase, rural-urban migration, boundary extensions of towns and the reclassification of local authorities. In 1948 when Kenya undertook the first national population census, there were 17 towns with a combined population of 276,240 representing 5.1 per cent of the total national population. By the next census in 1962, the number of towns had risen to 34 with a total population of 670,950 representing 7.8 per cent of the total national population. The rate of urbanization increased faster after independence in 1963 and by 1969 the number of towns had risen to 48 with a combined population of 1,079,908 representing 9.9 per cent of the total national population. The upward trend continued and by 1979 the

number of towns had reached 91 with a population of 2,307,000 and in 1989 the number of towns had risen to 139 with total population being 3,900,000 representing 18.1 per cent of the total national population (Obudho, 1976; Government of Kenya, 1989). The most significant thing is that this is projected to continue and by 2010, the urban population will constitute 26.4 per cent of the total population (Government of Kenya, 1995:2).

It has been estimated that about one-third of the urban population in the developing countries lives in urban slums and shantytowns although the percentage of people living in such areas markedly vary from country to country (Lee - Smith and Lamba, 1998). Most of them share the same precarious and dismal environment: overcrowded sub-standard shelter with inadequate clean water supply, lack of sanitation, poor roads and garbage collection services. Such settlements provide a scenario of undernourished and chronically sick. The socio-economic and environmental conditions of the slums are well illustrated by the intra-urban differentials in health. In Nairobi for example, the infant mortality rate for the whole city in the year 2000 was 73 per 1000 live births against 210 for Kibera and Mathare slums. Neonatal mortality in Nairobi was 30 per 1000 births while it is 43 in the same slums (UN - Habitat, 2003). The population of the world is therefore becoming increasingly urban. Current population growth rates pose particular problems of the shelter-delivery system in the cities of developing countries. Trends in the global economy, exacerbated by policies adopted in response to them, have resulted in a significant decline in shelter investments. Worldwide, economic recessions and population growth in Africa urban centres have hampered the capacity of

these nations to provide basic shelter and allied services such as water and sanitation (Mbogua, 1994). Housing consumption is low not because of lack of an effective demand but because of failures in the above system of supply (Syagga, 1992). In response to this, provider-based solutions have been replaced in many countries, and in the policies supported by international agencies, by support based approaches. While they are difficult to prove, there are impressionistic links between improvements in housing and increased productivity, health, and other measures of well-being. Housing improvements come with improvement in the infrastructural services (water, roads, schools, health centres, fire fighting, pollution, open spaces, security) and such have a positive impact on the economic development.

Certainly, the scale of urbanization currently underway in developing countries is without parallel in human history as confirmed by United Nations statistics. The world's overall population has increased from 2.5 billion in 1950 to 6 billion in 2002, of which 60 per cent has been in the urban areas of developing countries. As if this did not in itself present a massive challenge to governments, civil society and the international community, the global urban population is set to increase by more than 2 billion within 30 years unless major changes are made to the present policies and practices of urban management at a time when rural population remain virtually static or, in some cases, begin to decline. The projected increase in population globally represents an annual increase of about 70 million people, all of whom will need land, housing, services and most importantly work primarily in urban areas. This requires a dramatic increase in efforts to improve living conditions in existing slums and informal settlements and to

reduce the existing numbers down to modest levels. It also requires an acceptance that unless access to legal shelter is made more affordable and accessible to the majority of the urban poor, the growth of such unauthorized settlements will continue unabated. This is obviously not good news for the poor who have to endure substandard living conditions. The main challenge facing the government, the international community and civil society organizations involved in urban development today is the development of a twin-track approach that aims at upgrading the existing informal settlements and improving their access to legal and affordable housing taking cognizance that a significant proportion of the growing urban populations are living on low incomes which is a manifestation of urban poverty. This is further compounded by inadequacy of housing and urban infrastructure. The severity of the problems reflects primarily the rapidity of overall population growth and the acute shortage of resources with which to equip the additions to urban population. Urbanization is one of the processes responsible for the distribution and re-distribution of the human population as it entails concentration of large populations in relatively small areas thus strongly correlated with settlement and housing in particular (Kabra, 1975). How urbanization comes about, the rate at which it takes place and its impact on the existing spatial patterns has been documented for many scholars, all agreeing that it associates with industrialization, development and structural shifts away from agriculture (Davis and Golden, 1954). Hence the role of rural-urban migration has been over-emphasized in explaining rapid urban growth, though some scholars now contend that migration has been out-paced by natural increase as the major component of urban growth (Davis, 1965). However, due to wide variations among third world countries, it might be safely asserted that though

natural increase tends to be the major cause of rapid urban growth, some countries still exhibit high rates of rural-urban migration. One thing is certain, though: Third World countries are growing at an alarming rate.

In Kenya, the consequence of urbanization is exemplified by Nairobi whose 60 per cent of inhabitants live in informal settlements occupying 5 per cent of the city's residential land area. Nairobi's population increased from 120,000 in 1948, to 350,000 in 1962, to 500,000 in 1971, 2.3 million in 1999 and now approximated at 3 million (The Standard, Wednesday July 27, 2005). At its current rate of growth, the population of Nairobi is expected to reach 5,000,000 by 2015. Without substantial economic growth, this further increase in Nairobi's population will increase the levels of inequity in the city as majority of the migrants will be drawn to the city's slum settlements. Fast rates of urban growth have a number of obvious problematic effects such as unemployment and housing manifested in the poverty levels thus the two phenomenons are interrelated (Lloyd, 1979; Sandbrook, 1982). If housing problem is really an income problem then development programs that stress 'housing assistance' instead of 'economic assistance' should involve extra costs to society and the government may have to subsidize such housing (World Bank, 1975). Housing assistance oriented programs fail to specify and identify who requires aid. The failure to identify and cater for the interest of the deserving group is a cancerous problem in Third World countries where houses intended for the poor and/ or low income people end up in the hands of the wealthy (Ogutu, 1978; Herbert, 1979). It may be argued, therefore, that the first step in solving the housing problems is an assault on poverty. The eradication of poverty does not

merely imply massive financial aid to the victims as proposed by Lewis (1966) in his attempt to distinguish between poverty and what he terms ‘the culture of poverty’. It is argued in this study that such panacea for ‘curing’ poverty is ill-conceived and is therefore not curative but palliative as it does not address itself to what causes total and relative deprivation in the Third World. In this regard, an analysis of the housing problem must take cognizance of the total organization of a society.

2.2: PROXIMATE FACTORS FOR HOUSING PROVISION

Human settlement challenges in the urban areas can be traced from the 1920s when almost all Africans lived in unregulated settlements emanating from the colonial apartheid policies. The physical Development of Nairobi was based on the British Model of the Garden City Plan which entailed controlling the African urban population through low African Wages, segregation of African living quarters from Europeans and maintenance of various standards of public health among the African population aimed at preventing the spread of diseases. The effect of the above was ‘ethnic tripartition’ which ensured that the Europeans overwhelmingly occupied the North-Western and Western areas of high rent and high land values while the Asians were consigned to the densely populated East and South of the city. Moreover, the government discouraged provision of large scale public housing which they reviewed as a recipe of encouraging influx of Africans into the urban areas. Indeed, to date there still exists some level of racial compartmentalization and since independence segregation has been purely along economic considerations. Urban housing is therefore facing several constraints such as land, finance, building materials and a practical regulatory framework while the

problems of the developer, the champion, the design and the protracted procurement process cannot be ignored.

Recent attempts at unconventional and innovative approaches to low-income housing like site and service schemes have evolved from a very down to earth review of what housing really is and what it had always been in the centuries prior to industrialization and the advent of government housing agencies. This rediscovery of how ordinary people traditionally obtain shelter came at a time when a dilemma in housing activity by the government agencies was being confronted. In the process of trying to improve the housing conditions of the urban poor, such agencies were bankrupting themselves in building far too few, far too expensive housing units and at the same time were destroying the existing housing stock of a large number of poor urban families because they were illegal. These houses were considered illegal because they were on land that did not belong to the occupants and because they were not up to the high structural standards dictated by the urban building codes which, in many cases were a colonial heritage from developed countries. The net effect was housing deficits for the growing number of the urban poor. Thus instead of improving the habitat of large numbers of the urban poor, conventional housing programs were often providing small numbers of families with expensive subsidized housing usually in the form of high-rise flats but demolishing, in much greater quantities the housing stock that the poor had organized for themselves at no direct cost to government agencies.

Shelter problems in Kenya like any other developing country is due to high urban population growth rates resulting from urban natural growth, rapid rural-urban migration coupled with a lag in urban infrastructure development to support shelter development, low purchasing power of the majority of the poor urban households, inappropriate building materials and various local authorities by-laws especially for the low-income shelter in addition to unfocused shelter policy (Government of Kenya, 1990). This has translated to 500 illegal dwellings completed and occupied every week in the Kenyan urban centres (Yaya et al, 1983). For example, housing in Nairobi has tended to mushroom without regard to services, yet shelter in reality should be backed by package of services - land, public facilities, access to employment and other social services. Effective response to shelter provision must consider affordability and employment needs of the dwellers combined with realistic standards of construction. The Kenyan scenario is that low income housing, especially in the unplanned settlements and in the site and service schemes are generally constructed by landlords and by owner occupiers or squatters who normally improve their dwellings in stages while the tenants rarely make any significant improvements to their housing conditions. Public housing agencies have also rarely contributed to large-scale, low-income housing especially in the last two decades. Major obstacles to adequate shelter provision for all in an urbanizing Kenya still remain inadequate financial mechanisms, cumbersome land management and shelter delivery systems, high cost of building materials, unrealistic building by-laws, planning regulations and limited enabling legislation, inefficient infrastructure provision, maintenance and rehabilitation mechanisms, high rate of

urbanization and regional economic imbalances. However, most of these obstacles are more related to the conventional housing.

2.2.1: Land and Finance

Currently land supply and delivery mechanisms for housing development are characterized by formal and informal land subdivisions undertaken by both public and private sectors. However, formal subdivisions follow a long process because provision of services is mandatory before registration and necessary transfers can be affected. On the other hand, informal subdivisions often fall short of planning requirements, essential infrastructure and social amenities set by the approving authorities hence the land administrators cannot register them. The expanding population and limited housing stock suggest a strong potential demand, especially from the low income earners. Adequate and efficient financing mechanisms such as primary and secondary mortgage institutions providing short and long-term credit to meet potential demands as expressed in the market need to be instituted, because the capital outlay even for shelter of minimum acceptable standards is so high that only a few families can afford (Odienge, 1992 and Macoloo, 1994). This necessitates the need for strong micro enterprise finance sector to enable the poor build their own basic units. Despite this apparent potential however, virtually every component of the enabling environment from land security, affordability to financial legislation in Kenya restricts rather than encourage potential demand and supply of housing microfinance.

Rapid urban developments have brought dynamic changes to large cities in developing countries consequently altering spatial and value distribution of land for housing development yet land values have significant implications on economic growth in setting the agenda for industrial development and other development parameters. In this regard, land is viewed as a constantly evolving and changing process. It is, however, limited in supply and allocating it to the various space-consuming activities needs considerable care. In addition, complex social and ecological processes must be taken into account and in order to ensure future well-being, the way in which land is distributed and used must be treated with full awareness of interrelationships between human beings and their environment. Provision of land for housing is complicated by the fact that land has many uses other than for shelter and access. Among productive uses, housing competes with industrial, commercial, administrative and recreational uses, among others.

To all urban families, land for housing is essential for access to employment, infrastructure and social services. To low-income families in particular, a piece of land on which basic facilities are provided is its foothold in the urban community. To the city as a whole, a smoothly functioning land market may improve the spatial relation of residential and employment and other infrastructural service locations (Grimes, 1976: 42). As cities grow in size and population and as they come to house an increasing proportion of Third world's population, associated environmental problems arise. Since the cheapest legal house or even housing plot on which to build is too expensive for most urban dwellers, houses and shacks are built illegally. Dotted throughout most

Third world cities are large and small clusters of illegal housing on illegally occupied or subdivided land. Understanding security of tenure is crucial in housing advice as different forms of tenure determine an occupier's rights to staying in the property, getting repairs done and other important issues. Secure tenure is one of the indispensable pillars of the right to adequate housing without which, the full enjoyment of housing rights is not possible, and forced eviction becomes a real threat. It is believed that all people should have legal protection against threats of forced eviction and harassment especially because tenure is linked with so many other aspects of life. Significant sections of the population in Kenya lack security of land tenure, which denies them collateral for financing diversified investment development and/ or improvement. In squatter settlements, like the Kibera Laini Saba, frequent harassments and evictions often accompany this lack of security. In urban areas, these trends stultify residents' investments in housing whether in the formal or informal housing sectors. Limited access to land also negatively impacts on the development and expansion potential of micro-enterprises, particularly where there are strict zoning regulations.

Living in a home without secure tenure means in essence that people do not ultimately control what happens to their housing. Individuals, families and communities lacking security of tenure are understandably reluctant to invest in improving their homes for fear that such investments will only be destroyed or taken away from them once they are evicted. For similar reasons, long term planning is rarely undertaken. Lack of secure tenure can also reinforce social exclusion and poverty. Individuals, families and communities are often well aware that they are being treated differently than others

simply because they cannot afford property to which secure tenure attaches. Conversely, the provision of secure tenure has many positive implications, not the least of which is legal recognition of entire communities. Secure tenure affords people the opportunity to make improvements to their homes with the knowledge that their efforts are not wasted. It provides confidence in dwellers to develop and take pride in their communities and to make them their own. The knowledge that a community will not disappear because of the whims of government officials produces greater demands and expectations by community members for improved local services. It also allows dwellers the security and peace of mind that assists them in carrying on with daily activities such as employment, education and community involvement. The legal recognition and protection of secure tenure is a significant step that national governments can take towards the realization of the right to housing. The Habitat Agenda (1996), reaffirms the role of national governments in promoting and protecting secure tenure when it states at paragraph 40 (b) that governments should commit themselves to:- *‘providing legal security of tenure and equal access to land to all people, including women and those living in poverty; and undertaking legislative and administrative reforms to give women full and equal access to economic resources, including ownership of land and other property, credit, natural resources and appropriate technologies’.*

The United Nations Centre on Human Settlements (Habitat) has also recognized how vital security of tenure is for the enjoyment of housing rights and recently inaugurated a *Global Campaign for Secure Tenure* to ensure that everyone in the world is accorded

this basic right. In urban areas, high land prices have resulted in increased difficulties for the urban poor and evictions now target land that was of little value previously. In general, both rural and urban land management need good policy on tenure, which would play a crucial role in both the supply and demand for land, a prerequisite for any housing development initiative. Most poor Kenyans want to have a home of their own. However, the ability to take the first step towards achieving this dream is acquiring a plot of land or even accessing financial facilities is extremely limited due to three interrelated factors: mainly the high cost of available land, obstacles of affordable alternatives like communal ownership or subdivision and strong controls on squatting. The few households that are able to acquire a simple plot are constrained by limited land insecurity. Obtaining freehold title (the highest form of land security in Kenya) to their land can be a life-long battle with the government bureaucracy. Without legal title, households face the real possibility of eviction and when the poor do build, they face high building codes and limited finance options.

The formal housing finance institutions provide services mainly to the upper and middle-income groups because the urban poor lack collateral, regular income and savings. The urban poor depend on informal credit sources, such as family members, rotating credit societies and savings clubs. These are often successful because they are based on social ties. They require little paperwork or no collateral, they are not regulated by the government, and they use peer pressure to prevent default (Shihembetsa, 1985). They are constrained, however, because they can offer only limited capital for a short term and because they do not have a wide enough base to

diversify risk. Rotating credit societies are major players in informal housing, and they can become important tools in poverty alleviation. The challenge is to link them to a wider, national housing finance system. This can be achieved, for instance, by developing bridging organizations that will assist in streamlining the administrative processes related to the servicing of the loans.

For many of the urban poor, including small households, young couples and newly arrived migrants, rental housing is the only practical form of tenure. Urban poor tenants often use a large part of their income on rent; even for grossly inadequate housing (Syagga, 1987). Research has shown that the proportion of income spent on housing is highest for the poorest, estimate at between 15 - 25 per cent (Government of Kenya, 1999). After paying the rent and buying daily food, the poor often have nothing left for savings. Thus, many low-income households find themselves in a vicious circle of poverty: lack of steady income forces them to rent accommodation and high rents keep them poor.

2.2.2: Legal and Regulatory Framework for Housing Provision

The existing legal and regulatory framework ignores how the poor build. Poor households often acquire land without title through squatting, inheritance to progressively built structures and add services as they acquire sufficient capital. As such they are unable to access housing finance from the conventional banking most of which require a title deed as collateral. Such variations and improvisation actually require

corresponding innovation in housing-finance products. However, such changes are only possible with flexible legislation and regulations that do not rigidly define who lends to whom on what terms and conditions. The responsibility therefore of bringing this flexibility in legislation and regulation lies in the government in order to remove the constraints of both the demand and supply of housing microfinance. This would clearly be supported by the fact that at every step in the progressive building process, from acquiring land to building a basic unit to obtaining finance, poor households face limited options or active enforcement of restrictive legislation. It should be clearly noted that even if demand were to materialize, legislation restricts potential providers from innovating to serve the needs of these potential clients. Further, building regulations and codes prohibit the use of the only building materials the poor can afford: mud-bricks, compressed earth blocks, hand-made roofing tiles, or soil-cement flooring, among others (Syagga, 1992). As the urban poor cannot afford to buy officially recognized building materials, they are obliged to build in informal areas where the building code is not enforced. However, as there are no standards for locally produced building materials, banks do not provide loans for houses built with local materials. Besides impeding access to adequate housing for the urban poor, prohibitive building codes hinder the development of the small-scale and informal building sector which could play an important role in poverty reduction.

2.3: HOUSING AS A WORK PLACE FOR SOCIO-ECONOMIC DEVELOPMENT

Forward linkages, where housing provides an intermediate input to some other economic activities, are difficult to calculate but evidently quite significant, particularly concerning economic activities carried out within dwellings and their immediate surroundings. The use of home as a workplace is relatively common in developing countries. Informal-sector activities carried out in the home range from retailing of food to growing of crops, from manufacturing various products to keeping of livestock. The activities involve a wide range of skills and resources, and may use small or considerable parts of the living quarters, despite the small space available for all the activities. The ability to use space for both living and working is a major attraction of home-based economic activities. The greater majority of active home-based enterprises are retail outlets. The type of activity differs between types of neighbourhood: petty retailing and cooked food preparation tend to be common in most of the residential areas and especially near modes of transport such as railway lines and bus-stops which have variety of services. The assumption that small scale enterprises (SSEs) based in houses are likely to expand into the formal industries of tomorrow, however, is rather debatable. Efforts to improve housing conditions are likely to disrupt income-generating activities if they involve relocation, even though they may recover after several years. Improvements in services in existing areas have positive and negative benefits which are difficult to quantify and vary between uses and areas.

2.3.1: Employment and Income Levels

Urbanization and poverty, which is wide spread in the slums and squatter settlements is one of the biggest limitation and factor hindering the development of decent shelter by the majority of the households. The 2003 *National Household Welfare Monitoring and Evaluation Survey* indicated that about 63 per cent of the households had incomes below the national average with considerable variations at provincial level (Evaluation Survey, 2003). Available data further indicates that approximately 60 per cent of the total population of Nairobi, the majority of whom are poor, live on less than 5 per cent of the total residential land area (Malombe, 1995). Most of them are tenants living in informal settlements - the type of Laini Saba (Malombe, 1995). With most of the residents of Laini Saba living below \$1 per day, the efforts of one acquiring his own basic unit, either by construction, purchase or rental are negligible. Housing has the potential of becoming an engine of economic growth because of its high yield on invested resources, a high multiplier effect, and a host of beneficial forward and backward linkages in the economy. However, while the economic benefits of housing have been widely recognized, housing, and more so the informal housing, is rarely used as an element of poverty alleviation strategies neither is it seen as a tool that would attract employment opportunities. As a great part of the urban poor live in informal settlements, and derive their livelihoods from the informal sector, policies aimed at alleviating urban poverty and those that encourage different economic activities within the settlements must focus on promotion of the informal sector (Grimes, 1976). Housing construction, formal or informal, has the ability to stimulate domestic economic

activity, because the sector is generally labour-intensive and relies heavily on local inputs to create demand for goods and services through backward and forward linkages. Investment in housing can also induce the development of financial institutions which mobilize domestic savings for economically productive investments. Improving housing, therefore, enhances productivity, especially for the poor.

Despite the fact that the informal housing sector produces the majority of all new housing units in the cities of developing countries, it is rarely appreciated or supported (Syagga, 1987). On the contrary, the houses and the economic activities in informal settlements have often been destroyed by local authorities, thus aggravating poverty instead of alleviating it. However, governments are gradually realizing that informal housing can indeed become a solution because it requires minimum public investments. Informal settlements, regardless of quality, provide affordable housing for the poor. Destruction of informal settlements decreases the housing stock, increases poverty and only shifts the slums into another location. As governments are unable to build houses for all the needy, they should support the efforts of people to provide housing for themselves. This implies the acceptance of informal settlements as legitimate forms of urban housing which should be improved rather than demolished. Housing construction offers more employment opportunities, both directly and indirectly, than any other sector of the construction industry. A number of studies have demonstrated that low-cost housing is more labour-intensive than multi-storey housing (Syagga, 1987). Low-income housing, therefore, is an important source of employment opportunities but increasing the production of housing units cannot be achieved without ensuring an

adequate supply of suitable building materials. In order to improve output and increase employment opportunities more effort should be directed at promoting the production of local indigenous building materials and the use of appropriate technologies. According to the Global Overview on Strategy and Shelter to the Year 2000, “rapid expansion of the supply of basic materials at low cost can be achieved by promoting the small-scale sector.”

Small-scale contractors mostly found in the informal settings can play an important role in poverty alleviation and employment provision because they use unskilled labour, local materials and labour - intensive techniques. However, their growth is constrained by many factors, such as lack of access to markets, finance, vocational training, equipment and information. Public agencies tend to favour large-scale public or private enterprises through various practices and procedures such as tendering conditions that call for large financial capacity, machinery and equipment, cheap credit, preferential pricing, building material concessions, specifications calling for high technological building techniques and materials. Apart from using labour-intensive methods, the small-scale sector has a number of strengths notably their flexibility in adjusting to special consumer requirements and knowledge of local market conditions. Many small-scale enterprises operate from places where most of their consumers live and they offer a local service on customer specific requirements, have the capacity to develop from a very small scale, giving employment to local unskilled and unemployed labour as well as local artisans in the process and, the ability to use a variety of local raw materials and minimal use of imported inputs. The vast majority of the urban populations in

developing countries will be housed in settlements which are constructed by the homeowners themselves. A high potential for increasing employment opportunities and income generation exists, therefore, in self-help housing sector where demand is for small-scale contractors and locally-made materials. Constructing simple low-income housing units provides an entry point for learning skills and an opportunity to develop experience. This is important because it not only offers employment opportunities but also the potential for new enterprises to start and grow as well as developing skills through experience and to increase their productivity. The use of local materials creates employment opportunities not only to the manufacturer of the building components themselves, but also through the backward links in the supply, preparation and transport of the raw materials which often is labour intensive. Coughlin states that many jobs would be created if Kenya adopted policies to encourage the use of locally made tiles especially sisal, cement or clay tiles and discourage the use of galvanized roofing. For instance, if Kenya adopted policies to substitute tiles for half the currently used corrugated mabati roofing, more than 3,000 jobs would be created directly in small decentralized factories. Building materials for construction and maintenance of the already existing housing stock will continue to play a leading role towards shelter provision for the poor. By the year 2002, the output of this industry formed about 50 per cent of the gross fixed capital formation and about 4.5 per cent of the Gross Domestic Product (GDP) in Kenya (Government of Kenya, 2002). Development and utilization of local building materials has a great likelihood of achieving lower construction cost than using the conventional building materials. This is besides the employment opportunities the use of such local materials is likely to create among the poor. There are many

examples of building materials being developed which can be manufactured on a small scale using labour-intensive techniques which use local raw materials and do not require skilled labour. Incentives and technology are not lacking but they so often remain at the experimental stage due to lack of promotion and dissemination of knowledge by research institutes which do not have market-oriented approach.

2.3.2: Infrastructural Services

The significant strategy for ensuring that there exists equitable opportunities in the provision of housing infrastructure to the citizens, whether in the conventional housing provision or the non-conventional, is via perfection of the land markets. This requires capacity enhancement in the data collection and dissemination of the information derived from the exercise (Malombe, 1992). The analysis should include information on legal and regulatory framework and should determine the limitations of the markets in serving certain groups of people in the society so that specific mechanisms are formulated for such groups. Easier procedures which release land for housing development need to be devised and adopted (Syagga, 2000; Ramos, 1990 and Obudho, 1987). The opening of new land for housing development or the upgrading of the existing settlements requires the installation, maintenance and management of the infrastructure such as roads, water supply, storm water drainage, sanitation, solid waste disposal and electricity, among others. Lack of trunk infrastructure has often been cited as a factor hindering housing development by the private sector or even private individuals. The above being the case, basic infrastructure and service delivery by the

local authorities and other development agencies is paramount in the realization of adequate housing for the citizens (Macoloo, 1996 and Maina, 1995). The rapid growth of the urban population has obvious implications for the infrastructure and community service needs of various settlements. The failure to expand health services, water supplies, sanitation systems, roads and transportation to match the growth of population has been a prime cause of the human misery in the cities of the developing world. The United Nations Centre for Human Settlements, in its *Global Report on Human Settlements 2000*, estimates that around 30 per cent of the developing world's urban population does not have access to safe water supplies - a figure which rises to over 40 per cent for Africa. Of the developing world's urban population 40 per cent do not have access to proper sanitation - over 50 per cent in the case of Asia. The same report suggests that in many cities of the developing world, 40 - 50 per cent of the population live in the slums and other informal settlements - as much as 85 per cent in the case of Addis Ababa, 59 per cent for Bogotá and 51 per cent for Ankara (UNCHS, 2003). While not all informal settlements provide unsatisfactory living conditions, they are usually inadequately served with essential infrastructure.

Other services, too, are generally quite inadequate to meet the rapidly growing needs. UNCHS estimates that, for most large settlements in the developing world, only a quarter to a half of solid waste is collected by municipal authorities (UNCHS, 2003). Whilst some of the rest may be recycled, much of the uncollected waste ends up on open ground or in waste course, with obvious consequences for public health. Inadequate road network result in severe congestion as the volume of traffic grows;

public transport systems disintegrate through overcrowding and lack of investment. In addition, provision of social services such as health and education lag far behind the needs. While the health facilities for high-income groups may be very good, those for the poor are often so inadequate that their health conditions are as bad as those of the rural population.

2.3.2.1: Roads and Drainage

In housing developments, road access is provided by public bodies to standards which are approved by the local authority. The provision usually includes main access roads for public transport and other heavy vehicles and secondary access roads to housing areas. The extent of the network and the standard of roads in terms of widths and surface quality are usually determined by considerations of cost thus influencing the amount of maintenance required. The question of cost in-use as compared with initial capital cost is one which municipal engineers have argued over for years. It is complicated by local considerations of soil conditions, topography and the amount of rainfall. For the purpose of this discussion, it is enough to say that the debate basically comes down to the choice between a road with an earth surface which will require frequent maintenance and a road with a bitumen surface the maintenance of which will need to be less frequent. An additional point is that the construction and maintenance of the earth road will be cheaper than the construction and maintenance of the bitumen road (even though maintenance is less frequent). Both can be constructed and maintained using labour-intensive methods. The surfaced road will require some machinery and equipment but this can be relatively minor. It is the experience in many

developing countries that engineers charged with the responsibility of building and maintaining the roads would chose the bitumen road and capital-intensive methods if costs were no object. Ways of reducing costs, both in terms of initial capital cost and cost in-use are however a major design consideration. If the need to provide more employment opportunities is to be added to the design brief the choice might well be different. The earth road, if properly constructed, has the advantage of being initially less expensive and has the advantage of requiring continuous maintenance which can provide regular employment for unskilled workers. Experience in many countries has been that maintenance by public bodies of bitumen roads has been so poor that their advantages are lost. When they do deteriorate rehabilitation is so expensive that it is continually deferred.

2.3.2.2: Health and Education Services

Health is a basic human need and good health constitutes the total well-being of the people towards enhancing economic development of any given country. However, health and education facilities in the City of Nairobi are poorly managed with most of them served with dilapidated infrastructural facilities such as water, electricity, roads and street lighting. The situation is far much worse in the village of Laini Saba. Poor governance of these centres is the order of the day with most of them if not all prone to corruption, lack of sufficient personnel and resources to improve and/ or even increase their number to serve the exploding city's population. Challenges of overcrowding, shortage of personnel, poor sanitation and other related services within the facilities are common phenomenon.

2.3.2.3: Water and Sanitation

Rapid urbanization coupled with the effects of global economic recession, have resulted in a significant increase in scale of urban poverty in developing countries living in 'housing poverty'. This has hampered the capacity of the nations to provide basic shelter and allied services such as water and sanitation (Mbogua, 1994). The UN Centre for Human Settlements, in its *Global Report on Human Settlements 2000*, estimates that around 30 per cent of the developing world's urban population does not have access to safe water supplies - a figure which rises to over 40 per cent for Africa. Of the developing world's urban population 40 per cent do not have access to proper sanitation - over 50 per cent in the case of Asia. The same report suggests that in many cities of the developing world, 40 to 50 per cent of the population live in the slums and other informal settlements - as much as 85 per cent in the case of Addis Ababa, 59 per cent for Bogotá and 51 per cent for Ankara (UNCHS, 2003). While not all informal settlements provide unsatisfactory living conditions, they are usually inadequately served with essential infrastructure. Despite the urban water supply index in Kenya being an average of 50 per cent, some settlements in the Council of Nairobi, Kibera for instance have very low levels. Over 90 per cent (about 450,000 population) of the residents in this settlement have no water supply. Similarly, over 75 per cent of the residents lack basic sanitation services, while 73 per cent of all housing structures lack pit latrines resulting in unhygienic living conditions (UNCHS, 2003).

2.4: CONCEPTUAL FRAMEWORK

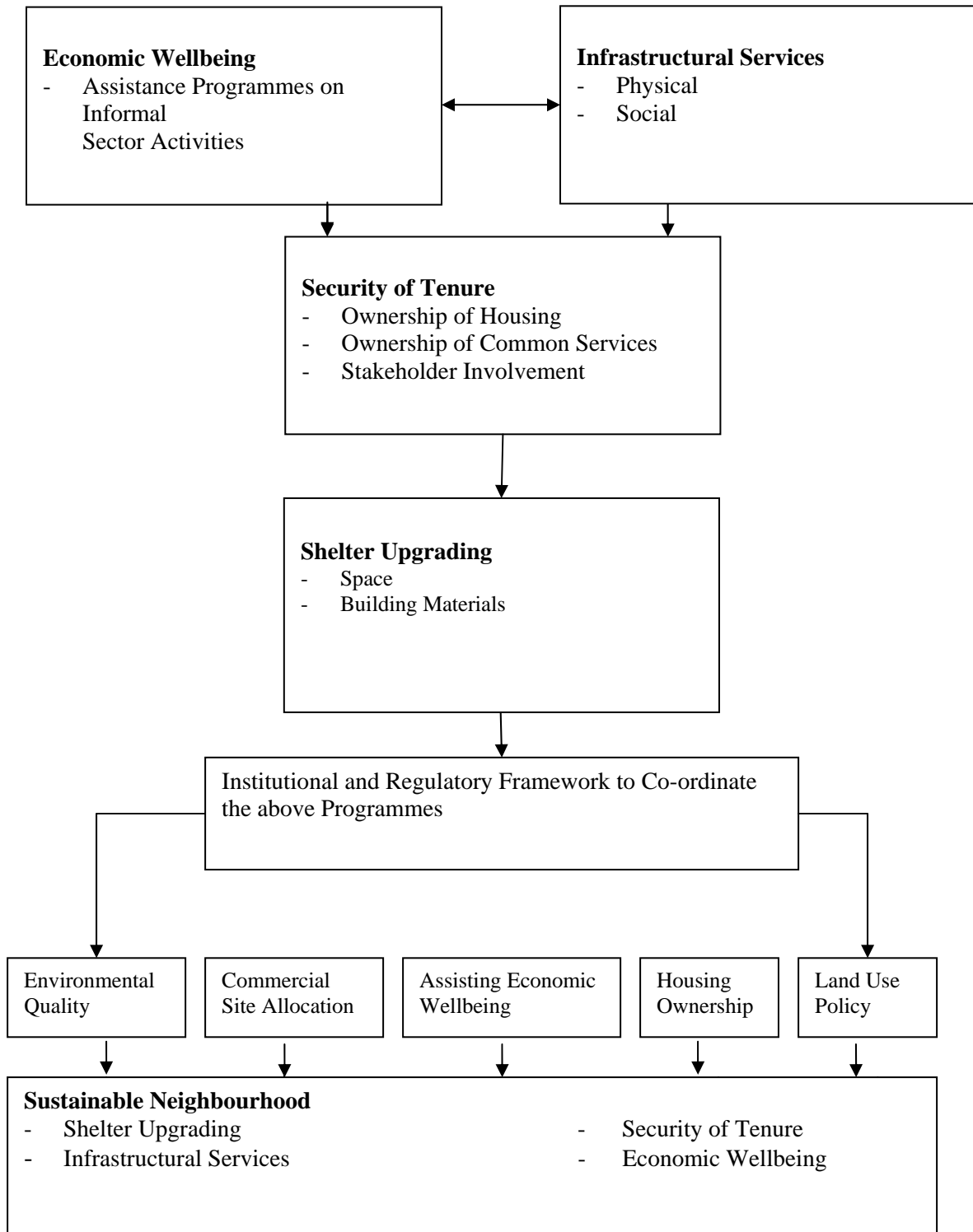
Conceptual framework is hereby used to outline the possible courses of action and present preferred approaches of analysis. It is built from a set of concepts linked to the planned systems and relationships surrounding the spatial model for informal economic activities development in the informal settlements. It is recognized as a reality that in most cities of the developing world where housing for up to 60 percent of city residents is commonly in the informal settlements, the housing conditions have declined tremendously. This has been occasioned by rapid population growth, poverty and unemployment especially in the urban areas of the developing countries at a time when investment in shelter has confirmed to significantly decline (UNCHS, 1999).

The ideals of sustainable neighbourhood development should encompass infrastructure provision as well as the use of appropriate construction technology. Broadly, this should translate to increasing accessibility within neighbourhood, safe water supply and the improvement of waste disposal systems. Rationalizing the use of imported energy by finding cost-effective alternatives through developing and promoting the role of renewable energy sources should not be divorced from this endeavour. This can be achieved through capacity building programmes in management of infrastructure and services at the local authority level. Urban renewal through the large-scale restructuring of neighbourhoods is a major challenge throughout the developing cities in the decades ahead. Current urban restructuring programmes in these cities focus on the demolition and replacement of the existing housing stock. The motivation behind this strategy is

creating a better social mix between ‘poor’ and ‘better-off’ households, to improve the general quality of the housing stock and to create a financially viable restructuring programme. The general aim is to improve various aspects of sustainability in urban neighbourhoods. The study has examined the effects of demolition and replacement strategies on sustainability from different perspectives:-

- i. An economic perspective: the economic wellbeing and the value of the neighbourhoods in terms of quality of shelter and infrastructure.
- ii. Social perspective: the levels of social capital, residential stability and security of tenure.
- iii. Environmental perspective: the energy efficiency and the use of materials in restructuring strategies.

For a sustainable neighbourhood to get started and be successful, residents should be fully involved and there ought to be neighbourhood meeting in neutral setting aimed at solving local problems. The various stakeholders should look at the alternatives in the community in the long-term basis in order that the programme is self-sustainable. There should also be a community to government involvement if the success of the programme is to be achieved. A sustainable neighbourhood programme is illustrated below in the form of a flowchart:

Flowchart 2.1: Sustainable Neighbourhood Programme

Source: (Author's Survey, 2008)

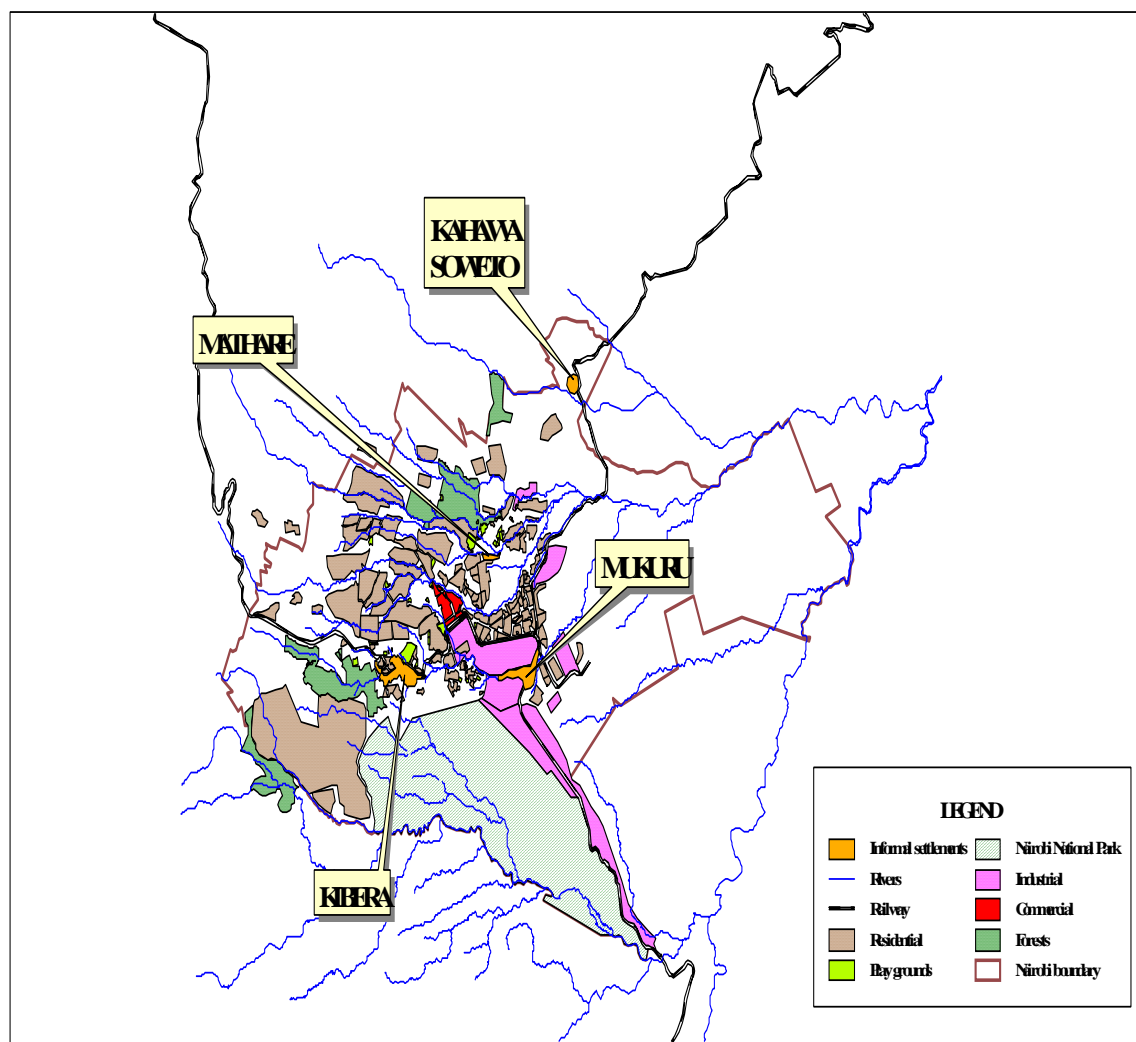
CHAPTER THREE

BACKGROUND INFORMATION ON THE STUDY AREA

3.0: INTRODUCTION

This chapter has looked into Laini Saba in detail, showing its location within Nairobi, the size compared to that of Nairobi, physiological background, climatology and vegetation, drainage and soils, land use planning, physical and institutional infrastructure, community services, the demographic, economic and social profiles. Finally the chapter concludes by giving the various issues that have acted in concert to affect housing development and economic activities within the study area of Kibera Laini Saba. Kibera is among several informal settlements in Nairobi that have developed following the influx of people from the rural areas in search of employment opportunities perceived to be higher in the urban areas than in the rural areas. This increase can also be attributed to migrations from other urban centers as well as natural population increases. Such major slum areas include Kahawa Soweto, Mukuru and Mathare slums.

Map 3.1: Major Slum Areas in Nairobi



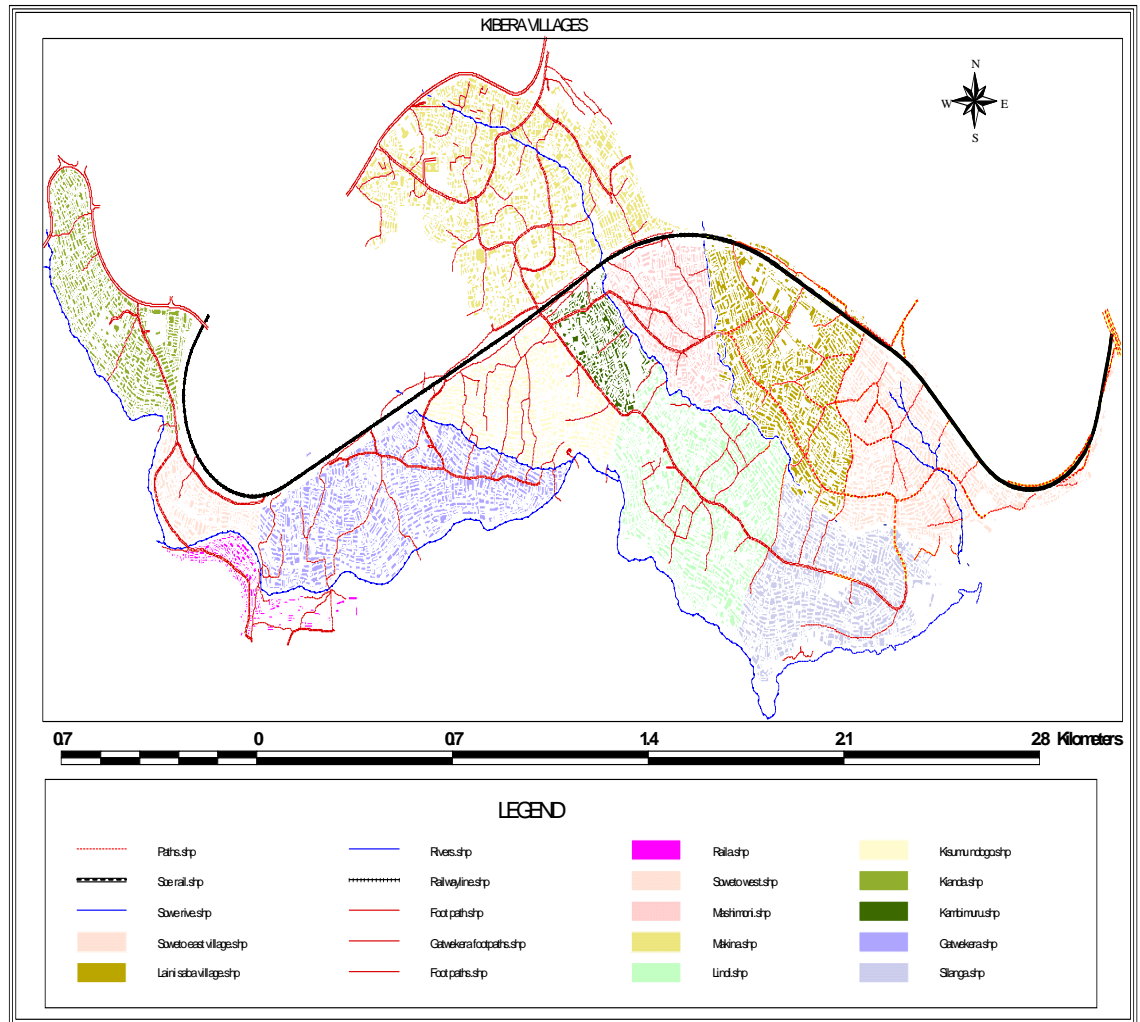
Source: (GOK, 2002)

3.1: HISTORICAL BACKGROUND

Kibera was allocated to the Nubian community of the then King's African Rifles and their descendants in 1904. The land was surveyed in 1917 and formally gazetted in

1918. The beneficiaries immediately named the area '*Kibra*' meaning the jungle infested with wild animals, in the Nubian language, as it was part of the larger Nairobi National Park. The Nubians then created sub localities (villages) such as Makina, Soweto East, Soweto West, Mashimoni, Kianda, Kisumu Ndogo, Kambi Muru, Silanga, Lindi, Gatwekera, Raila and Laini Saba, which they developed according to their need and under the control of the colonial administration. In Kenya, their largest and most important settlement was and still is Kibera, which they embarked on developing from the bush they found over one century ago. They initiated a vibrant and very rich culture, including language, food, dress, dance and artifacts, all which have stood the test of time. The Nubians were part of the development of Nairobi as a city. Self employment at their village level provided essential retail goods and services such as shops, hawking of fruits and vegetables and water sales. Soon after the Second World War, non-Nubians began to infiltrate the area as tenants of Nubians or squatters on vacant land. The fact that Kibera developed at the periphery of the city was one of the reasons why Nubians were forbidden to build in permanent materials. In the 1950's, the government finally became committed to develop the area and from 1961, the government has pursued a series of redevelopment schemes. The Nubians' houses have had to be demolished to pave way for better quality housing development by National Housing Corporation (NHC), exemplified by Olympic Estate, Nyayo Estate, Highrise, Kibera/Otiende and, Ngei Estate among others. The name Kibera will be used interchangeably with Laini Saba to imply the scope of the study.

Map 3.2: Villages Comprising Kibera



Source: (GOK, 2002)

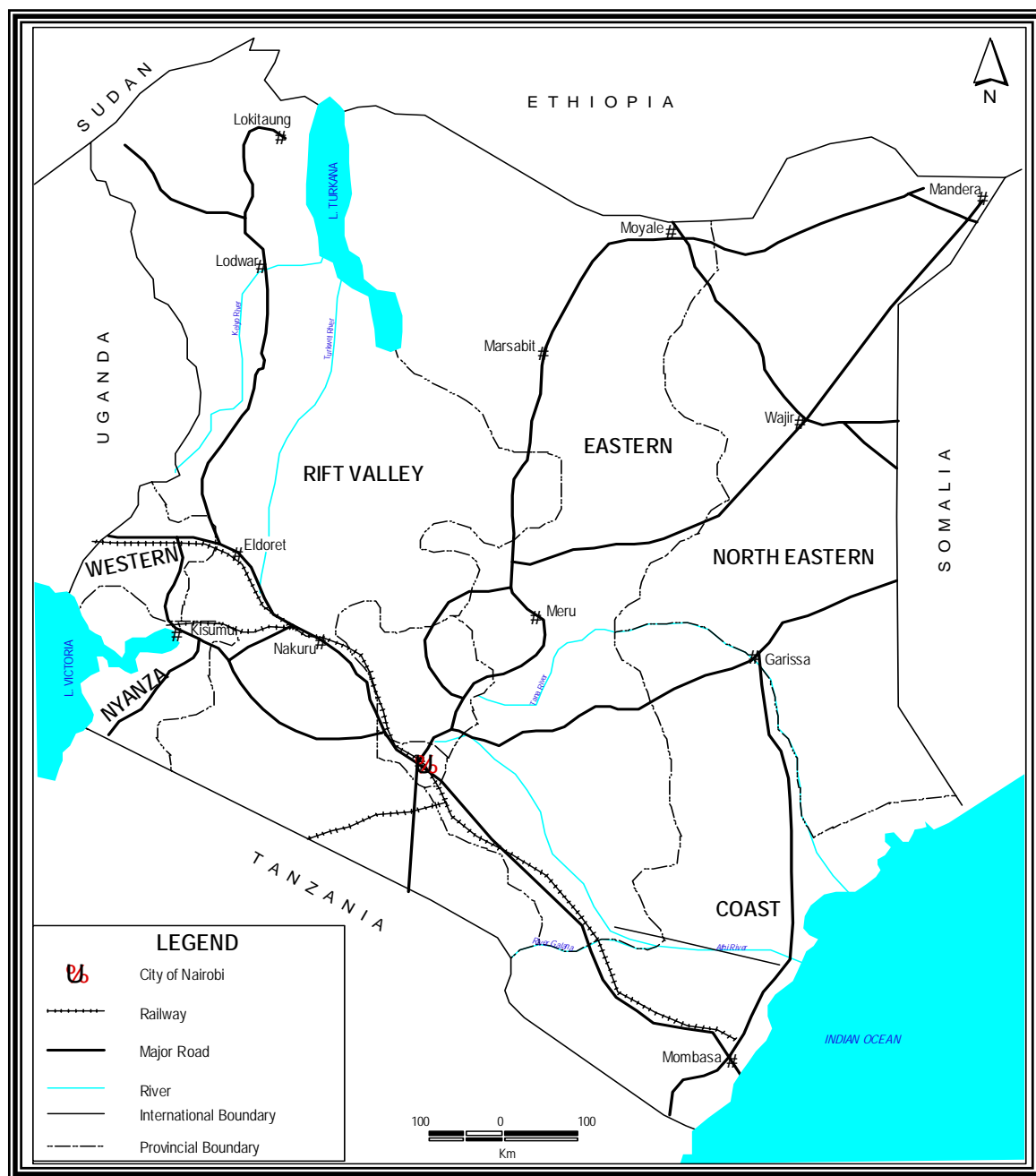
3.2: LOCATION AND SIZE OF KIBERA

Kibera settlement and which Laini Saba forms part of is situated on the outskirts of Nairobi and measures approximately 225 hectares. Its boundary to the north was the present Ngong Road to the north, Lang'ata Road to the south, King George VI Hospital (now Kenyatta National Hospital) to the east and Jamhuri Park (former Royal

Agricultural Society of Kenya grounds) to the west. It has an estimated population of slightly over half a million people on the 225 hectares of land with a resultant density of 2,000 people per hectare (Physical Planning Report on Kibera Informal Settlements Planning, 2002). Nairobi measures 694 square kilometres while Kibera is 2.25 meaning that the size of Kibera as a percentage of Nairobi is a mere 0.32 per cent. Laini Saba on the other hand measures 23.682 hectares or 10.52 per cent of the entire Kibera settlement.

Laini Saba, which is among the villages comprising Kibera neighbourhood is situated in Nairobi's western peri-urban zone approximately seven kilometres from the city of Nairobi. Kibera settlement is divided into two parts; the upper area which is the original Nubian settlement of Makina and the lower area that has been densely settled during the last two decades (Obudho, 1987). Laini Saba is densely populated with 95 per cent of the residents living below poverty line (UNCHS, 1999). Most of the residents work in the industrial area of the city as casual labourers with an average income of Kshs.45 per day. The average family of 7 occupies a small room of 3 by 3 metres.

Map 3.3: Nairobi in National Context

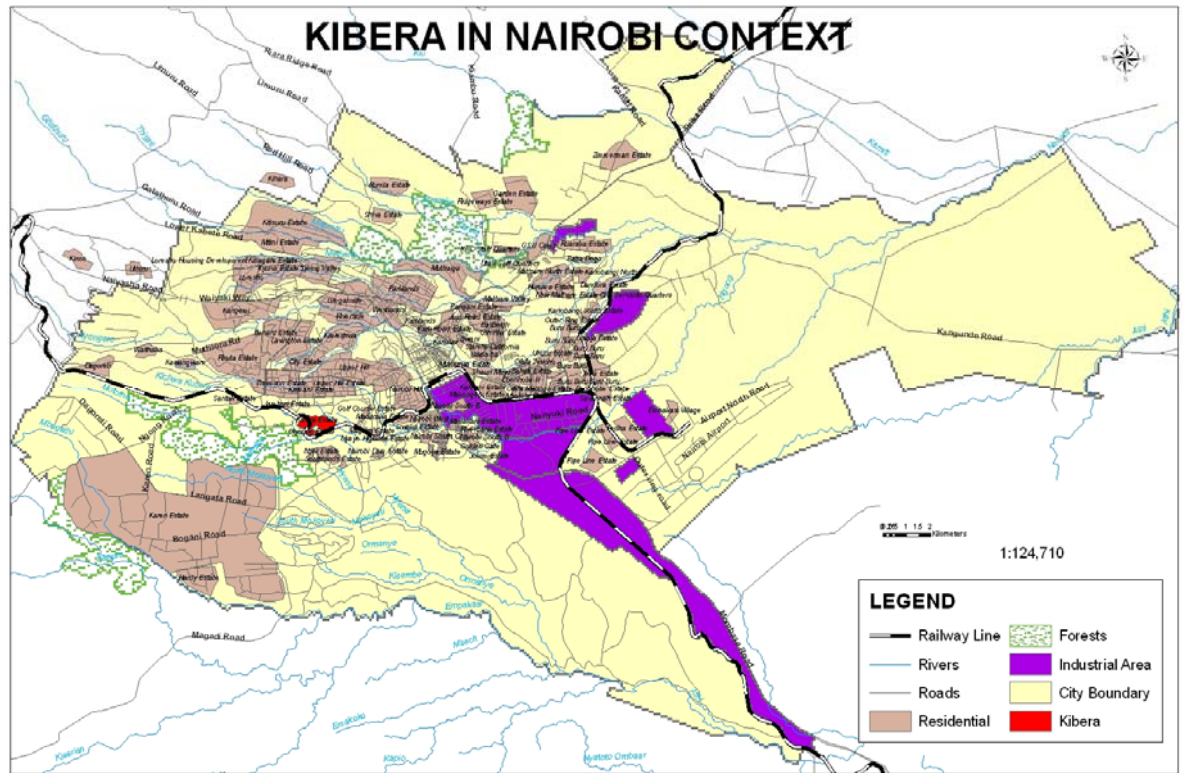


Source: (GOK, 2002)

There are no street lights and almost all the houses are made of mud and wattle walls and roofed with either corrugated iron sheets or covered with polythene paper. Laini Saba is one of the most densely populated villages in Kibera slum and it is this high density and poor service provision that has compounded and accentuated poor housing condition in the neighbourhood limiting economic opportunities and gains to the residents. Kibera however, is no longer the Nubian enclave it was before the 1930's as occasioned by its proximity to the city centre and the industrial area which has since attracted diverse immigrants into the city. As a result of the location of Kibera along major roads of Lang'ata and Ngong and its proximity to the city centre, various economic activities have sprung up to cater for the several residential areas along the roads. The sale of clothes, saloons, eating places in the Toi and Kenyatta markets are examples of such activities. In order to reduce on the cost of transportation of the goods and services to these market places, the housing conditions have deteriorated as the population density increases to cater for these new entrants into the slum. Increased density has also seen further overstretching of the few infrastructural services of roads, health and education centres and other social services.

The proximity of Laini Saba in relation to the city centre and the industrial area has further significance to the housing conditions and socio-economic activities in the area. Residents are able to trek to the city centre and more so to the industrial area in search of jobs and therefore this has resulted to the proliferation of housing units to meet the high demand. Most of these units are of poor quality and go for as little as Kshs.800 affordable to the people.

Map 3.4: Kibera in Nairobi Context



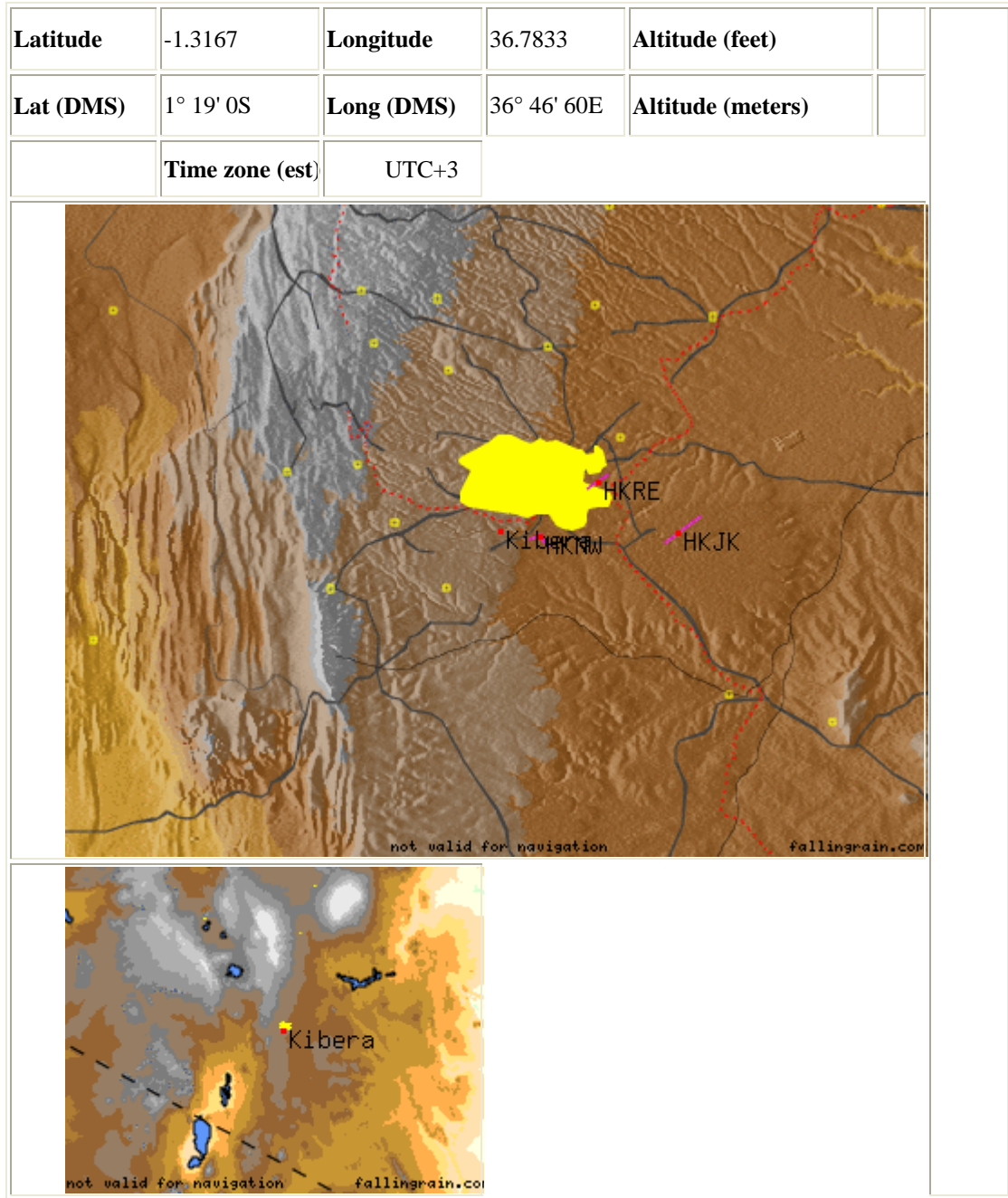
Source: (GOK, 2002)

Following the high density and lack of employment opportunities, a big number of residents have turned to small scale businesses of selling charcoal, water, vegetables, timber products, maize roasting in order to sustain their economic lives. Most of such activities are located on the railway line, road sides and others in stagnated market places such as the Toi and Kenyatta Markets located two kilometers and one kilometer, respectively from Laini Saba.

3.3: PHYSIOLOGICAL BACKGROUND OF KIBERA

Kibera is situated at latitude of -1.3167, 36.7833 longitude and an altitude of 5,859 feet above the sea level as is shown below.

Plate 3.1: Satellite Image Focusing on Nairobi and its Surroundings



Source: (GOK, 2002)

3.4: CLIMATOLOGY AND VEGETATION OF KIBERA LAINI SABA

The climate of Laini Saba presents a micro-climatology to what is experienced in the whole of Nairobi. The city of Nairobi lies roughly one third degrees south of the equator, in a region that would be expected to have an equatorial type of climate. But due to its altitude above sea level, the climate has been generally placed in the category of “Low Latitude Highlands” in most literature. It can be generalized that Nairobi lies in an equatorial climate regime that has been modified by altitude and has small diurnal and annual ranges of temperatures. In Nairobi, the hottest month has a daily mean temperature of 14°C after midnight while the hottest month has a daily mean maximum temperature of 12°C at these times of the day. At 1.5° south of the equator Kibera in Nairobi, basks in all the sun of a tropical city. However, its altitude of 5,000 to 6,000 feet means that the climate is temperate. Rainfall is divided between two rainy seasons: the short rains fall in November and early December, and the long rains between April and mid - June. Because it is virtually on the equator Kibera has a constant twelve hours of daylight per day all year round. The sun rises at 6.30 - 7.00 a.m and sets again at 6.30 - 7.00 p.m. The altitude provides a refreshing light-headedness; cool evenings and mornings - which can get distinctly cold during the rainy seasons. The average day-time temperature varies only slightly throughout the year, from 85°F (29°C) in the dry season and 75°F (24°C) during the rest of the year. At night, however, the temperature sometimes drops as low as 48°F (9°C), though rarely lower. The rainfall during the mid - March to mid - May is more intense with occasional thunderstorms over Nairobi and its environs. This is locally called, “long rains” season. The mid - October to mid - December season is the “short rains” season because it is shorter in duration and the

amount of precipitation is relatively light as compared to the other season. The average rainfall of Kibera is approximately 950 mm per annum. From the climatologically point of view, it is clear that proper housing is required for the people of Laini Saba. The climate can at times be too harsh that most residents living in their kind of housing have miserable nights. There are occasionally heavy downpours which result in the housing along the open drains being carried away because by floods. Run off water also poses a great danger to the residents as many a times houses have been reported to have been washed away.

Map 3.5: Satellite Images of Kibera and the Surroundings



Source: (GOK, 2002)

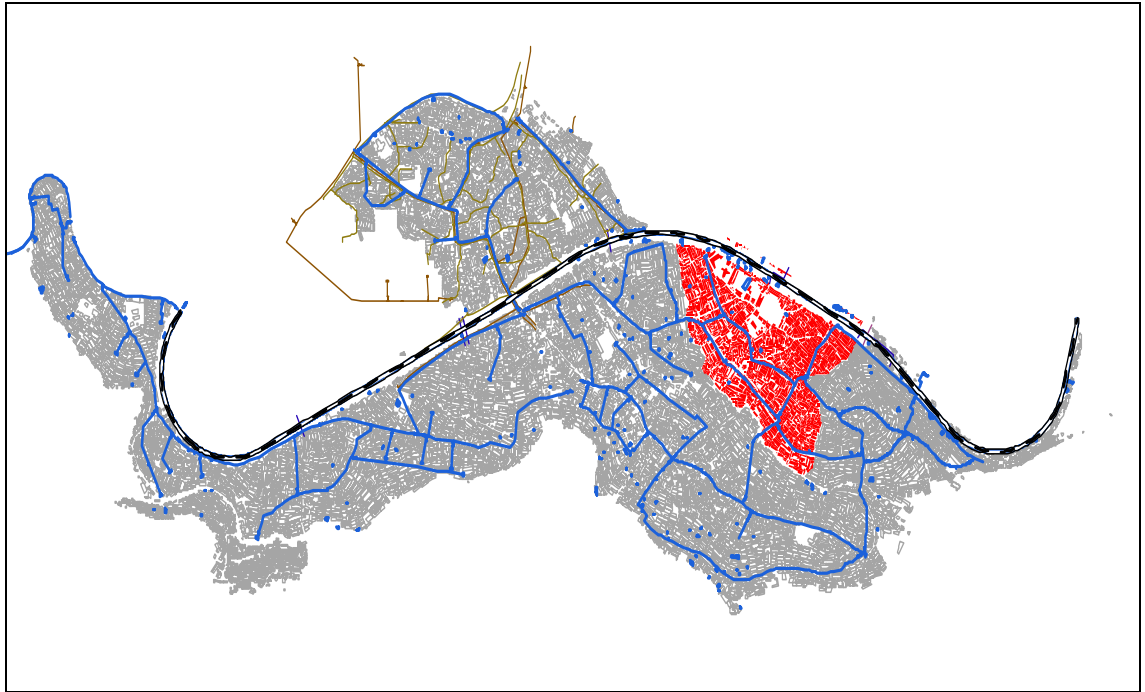
Although "Kibera" means forest, there is no vegetation. However, the slum is surrounded by the large and ever-green Ngong forest on the north and Jamhuri Park on the west.

3.5: DRAINAGE AND TOPOGRAPHY OF KIBERA

Lack of facilities for draining of waste and storm water in Kibera has resulted to most streams running through the settlement to carry polluted water from all kind of sources, including water from bathing, washing of clothes and utensils, pit latrine overflow and all other liquid sources. Most of this is received by the Nairobi Dam which lies at the foot of the settlement. Drainage is poor and limited to major roads and paths. The drainage system in the settlement comprises of shallow open natural drains, man made drains and combination of both. Drains are often used as dumping points of solid waste and sludge and in a few cases open channels are used for emptying sewage from latrines. Residents do not like open drains which are easily blocked by solid waste and are health hazards and blocked drains are a source of conflict between neighbours.

Kibera area comprises of steep hills and river valley. These land features have resulted in the railway line that cuts across the slum to maintain a steady path by cutting through a section of the hilly terrain creating steep trenches especially around the Kambi Muru enclaves.

Map 3.6: Satellite Images showing Topography of Kibera



Source: (GOK, 2002)

The river valleys, on the other hand criss cross the hills and valleys as it drains its water to the Nairobi Dam that is on the periphery of the slum. The failure by the city government to provide solid waste and sewer disposal system has resulted in the contamination and total blockage of the once naturally flowing rivers around the slum area.

3.6: SOILS IN KIBERA

Kibera is mainly covered by loamy soils which is good for agriculture. Most residents have turned to practicing small scale urban agriculture and especially along the river

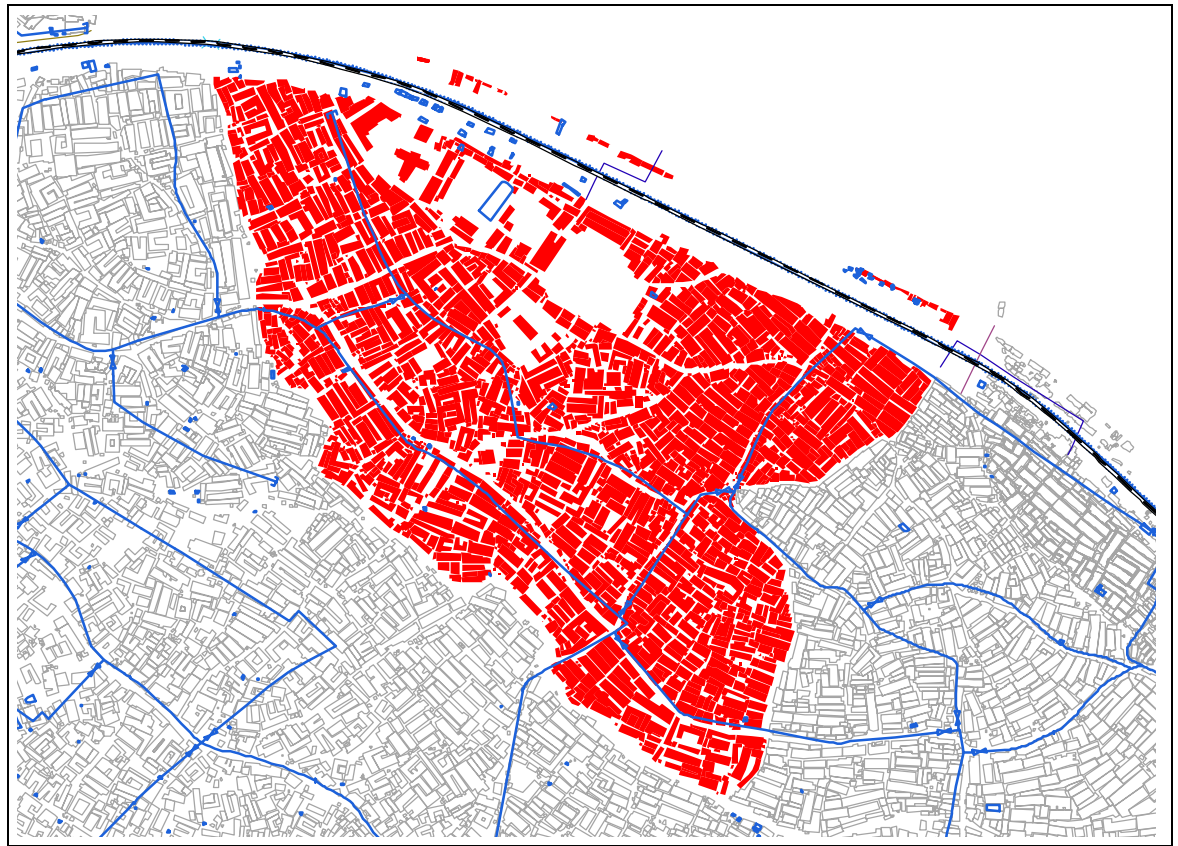
banks. This exercise has not only helped supply of food to the households within the slum but also outside the slum increasing their income and adds on their other small incomes. Housing conditions to those doing such small farming has improved because these are able to pay a little more in terms of rent meaning better housing.

3.7: LAND USE PLANNING AND THE PHYSICAL PLANNING INFRASTRUCTURE

The living conditions in Kibera are a representative of the state of urban poverty world-wide. High population densities, poor sanitation and water quality, low access to basic services like health care, education and incomes often well below the poverty line characterize Kibera. Further, residents lack legal rights like security of tenure, leaving them without powers to leverage structure owners to provide basic services. The recent unveiling of plans to improve living conditions in Kibera slum has send waves of jubilation among the inhabitants of what is arguably the largest informal settlement in East and Central Africa. The jubilation is understandable, population explosion, run away urbanization, poverty and high cost of housing and least of all lack of a clear housing policy has led to the proliferation of crowded slums and other informal settlements where basic services do not exist. The plan therefore represents a possible promise of improved access to basic services such as shelter, water and sanitation, education, health care, security, employment and other income generating opportunities. Urban settlements and cities in Africa continue to become more chaotic as increasing population put more pressure on capacity of urban cities to provide services to their residents. The cost of urban infrastructure and services has become unaffordable to

majority of urban dwellers due to widespread poverty, and low-income levels. This has resulted to the growth of slums and informal settlements, which are unplanned, lack basic infrastructure and services such as water, electricity, roads, lighting and sanitation among others. Therefore, emerges that Housing Planning and Development Policies and Concepts applied have failed to meet the demand for housing, infrastructure and services.

Map 3.7: Satellite Image of Kibera Land Use Planning and Physical Structures



Source: (GOK, 2002)

The majority of the residents in Kibera exist well below the poverty line. Kibera's basic utilities and sanitary infrastructure are sparse, the slum is disease ridden and crime is

rampant. Few families can afford to send their children to school and for some of the residents; the neighbouring Ngong forest provides a source of income from the harvesting of various products including firewood, poles and medicinal plants. Kibera is an illegal settlement and therefore has no land use planning neither does it have structure regulations and control. Improvements in the physical infrastructure and in housing have provided employment opportunities which have had a beneficial impact on the economic situation of families and communities. Building of housing is also an act of wealth generation. The role of the building industry, the building materials, producers and the informal sector creates both wealth and income through housing activity. There is a slight land use planning in Laini Saba and houses have been built and extended without heed to the existing building codes and planning regulations that apply to the planned residential zones of the city. Hardly any space is left for recreational or playing grounds for children. Construction is largely semi-permanent, (mud and wattle walls and corrugated iron sheets) undertaken with higher densities.

3.7.1: Water

Communal water taps rented from Nairobi City Council by private individuals who sell water to the residents is the common source of water. During the rain season, water costs are reduced because inhabitants tap water from their roofs, otherwise the price of water is four times the cost at which the council sells to the vendors (Lee-Smith and Syagga, 1990).

3.7.2: Sewer and Waste Disposal

No sewage disposal services in Laini Saba and most of the houses have detached pit latrines serving between 30 to 500 people. Latrines are not regularly cleaned except for the water the household members pour irregularly and in cases where the latrine doubles as the bathroom! Refuse collection is nil and it is instead burnt or thrown outside the dwelling (UNCHS, 2000).

3.7.3: Toilets

Congestion in Laini Saba is a major problem that has led to scarcity of space, space to even build toilets. Where toilets are found, the number of people using them is usually high leading to long queues outside the toilets. “The toilet here is bad, sometimes I have to walk long distances to use a toilet”, says Mr. Mulwa Mutisya, one of the interviewees and a cobbler in Laini Saba. The lack of toilets has led to what has come to be termed as flying toilets. “Look up on the roof tops”, Mr. Mulwa goes on to add pointing at temporary wooden house structures adjacent to his business. Polythene bags have littered the *mabati* (metal sheets) rooftop. Mr. Mulwa confirms that most of the flying toilets contain young children’s excretions, who especially in the night are afraid of going to search for toilets. With flying toilets littering rooftops and ditches in Laini Saba, and the lack of toilets, sanitation becomes an issue of concern. The flying toilets easily become health hazards especially during rainy season, when chances of water sources getting contaminated by runoffs are high.

3.7.4: Education and Healthcare

There are 17 pre-unit, nursery and primary schools within walking distance from Laini Saba. Private clinics and over-the-counter drug purchase points are numerous. Such clinics are, however, first-aid providers and residents have to walk for about half hour distance for proper medical attention either at the Kenyatta National Hospital, Lang'ata Health Centre or Mbagathi District hospital.

3.7.5: Shopping and Social Facilities

There exist a 101 fruit and vegetable stands and kiosks/ grocery shops which are at a walking distance of less than a minute from the housing units. The market consists of temporary shacks and goods have to be laid out and packed up everyday. This is usually along the railway line, pathways and the famous Toi market which is a 30 - minutes walk from the village. Woodley Social Hall is within walking distance and it is the only one because most open spaces that could be used are either swampy, have been grabbed or are used as dumping grounds. There are various football clubs and festivals most of which are connected to religious areas such as churches or mosques.

3.7.6: Roads and Electricity

Generally, there are no adaptive public roads within Kibera. Considering that most businesses are along these dusty pathways, there is a lot of congestion making vehicular maneuvering difficult. However, Kibera is surrounded by major roads that feed the

affluent estates of Lang'ata, Woodley, Jamhuri, Karen and Ngong. There is no power supply in the interior parts of Kibera and most of the residents use kerosene lamps and charcoal to light their houses. Reading at night becomes therefore difficult for those children that live in Laini Saba.

The poor state and/ or lack of the above infrastructure have rendered the housing state of Kibera pathetic. The lack of proper waste management, sewer and water reticulation, poor roads and power supply, all have had a bad impact on the state of housing within the slum. This also has had a negative influence to the socio-economic activities of the people with most of them engaging in businesses that do not depend highly on these facilities. The government has never identified Laini Saba as an urban settlement and therefore due to inadequate land, urban development policies and planning control in the area, residents are able to put up low income structures that they are able to afford and/ or rent from the slumlords at lower rates. However, this has had the disadvantage of congestion of structures that are so dangerously squeezed that access by some services like fire fighting trucks is rendered difficult. The congestion has also eaten into the open areas left for recreation services and dumping areas. All these have resulted into a poor housing condition devoid of essential basic services.

3.8: DEMOGRAPHIC, ECONOMIC AND SOCIAL PROFILES

Kibera slum situated on the outskirts of Nairobi measures approximately 225 hectares. It bounds to the north the present Ngong Road, Lang'ata Road to the south, Kenyatta National Hospital to the east and Jamhuri Park to the west. It has an estimated

population of slightly over half a million people on 225 hectares of land with a resultant density of 2,000 people per hectare housed in less than 2 per cent of the total city residential land (UNCHS, 2000). Laini Saba is mostly a residential village for the low income people, majority of whom are in temporary and lowly paid jobs. The mean age of Laini Saba residents is 25 years with over two-thirds having attained primary education or less. The majority of them (80.8 per cent) are either not working or are in casual or self-employed jobs. Around 22 per cent of the people in Laini Saba are working and/ or have previously worked and are earning an average amount of Kshs.2, 100 per month, which is low considering the rate of inflation. Self-employment has contributed to the residents' socio-economic development. An approximated 85 per cent of all the self-employed businesses are located along the pathways and railway line (UNCHS, 2000). Casual jobs of the slum dwellers include security guarding, construction and gardening. Residents of Laini Saba consist of different ethnic communities as alluded to earlier. Most of them have come to the city to look for livelihoods that the housing set up is deemed to offer. In the event of social conflicts in the area, ethnic reactions tend to flare up especially between the original Nubian community on one hand and other local ethnic groups on the other. Kenya's water resource crisis carries significant social as well as economic risks. Growing demand over limited endowment of water generates competition and causes conflicts over water use within the village, posing considerable social risks to the poor residents without adequate representation in the location in decision making. In terms of family pattern, the average family size is 7 with most households being female-headed. Thus the village is a big source of day domestic workers in the middle and high class estates

around Nairobi (UNCHS, 2000). With its proximity to the city centre and the industrial area of the city, Laini Saba residents are able to access various job opportunities by walking. This helps in saving and enables them reduce on their monthly consumption. Due to the fact that there is no city council harassment of the business residents, the latter are able to engage themselves in various economic activities therefore raising their income levels.

3.9: INSTITUTIONAL INFRASTRUCTURE FOR DEVELOPMENT

Politically, Laini Saba is found is a volatile area because of its history. Original residents here are Nubian squatters who were settled on this land after Second World War by the British Colonial government. On the other hand, there are squatters who invaded the land as a means of survival. The official Kenya government position is that this is government land and until recently, the land tenure policy regarding “illegal” settlements was that the government could not develop or invest on such land. The government has therefore not developed any infrastructure according to her policy on investment which states that this can only be done on legally owned land. This scenario pits the tenants of Laini Saba against slumlords who in most cases are not obliged to put up proper water and sanitation facilities among other community services in the area to match the rent they collect from the housing units. Urban interventions that address the issues of slums have been triggered by the external factors such as land development and speculation, health and safety threats to the wealth owned by external landlords, among others. This has therefore been mainly reactive rather than proactive to emerging

problems in the area of Laini Saba. Regardless of this case, there is an absence or failure of coordination mechanisms that set the roles and jurisdiction in the area effectively. Compounded by lack of clear policy framework, there are no effective government programs for meeting the needs of the residents. Poor water supply and sanitation, for example are among the most serious infrastructure problems. Notable interventions have only been received from other agencies such as Non Governmental Organizations and Community Based Organizations. Over five hundred different organizations (community-based, non-governmental or civil society) are registered with the government of Kenya in Laini Saba. Most of these organizations exist in the name to receive funds, but show little commitment to effective and efficient service provision within the community. Laini Saba residents have thus become weary of a “Non Governmental Organization-culture” that has become largely exploitive. The creation and management of a donor funded organization mostly by professionals has become widely seen as one of the few successful ways of rising out of poverty in Laini Saba. Poverty has become an industry driven by maintenance of a status quo to ensure a steady flow of donor funds.

Following the lack of land urban development policies in the unplanned slum areas, and the lack of laws affecting development, these areas are highly congested to the detriment of the housing conditions. There exists no political will in the area of Laini Saba to improve the infrastructural services in order to uplift the housing conditions and the result has been the poor quality of housing, poor healthy and unmotivated residents to work with an aim of raising their economic standards. Except for the various non-

governmental organizations and community-based organizations in whom the efforts to boost the inhabitants' housing and socio-economic conditions have been entirely left, the government has not been seen to work towards this effort.

Summary

Several issues have acted in concert to affect the social-economic development and economic activities in Laini Saba. Inferior infrastructural services or the lack of the same coupled with the lack of development controls in the low income areas have reduced them into slums with deplorable housing conditions. The lack of roads, sewer reticulation, water reticulation and reliability, waste disposal, poor drainage systems and the lack of physical infrastructure such as toilets, electricity, schools and healthy facilities not to forget institutional infrastructure for development have entirely contributed to the poor housing and economic conditions to the people of Laini Saba.

CHAPTER FOUR: SOCIAL-ECONOMIC ATTRIBUTES OF THE NEIGHBOURHOOD

4.0: INTRODUCTION

This chapter presents the analysis and findings of the study based on the questionnaires administered and field observations. A total of 105 questionnaires were distributed to the respondents out of which 90 responded by completing and returning the questionnaires. This gave a response rate of 85.71 per cent. The respondents were slum lords, tenants and representatives of non-governmental organizations operating from Kibera. Data analysis and presentation was based on the various objectives of the study.

4.1: SOCIAL - ECONOMIC ACTIVITIES

There are various social activities that the people of Laini Saba have engaged themselves into. They include pool games, drafts, and sports. Other people merely sit on the cliff along the railway line chatting. There are 5 rehabilitation centres as well. Households consist of up to 7 persons per housing unit with most of these households (67 per cent) being female headed. Income levels of the people averages Kshs.2, 100 per month, an amount that puts them below the poverty line of less than 1\$ per day. Resulting from such meagre incomes levels, several households have learnt ways of survival. Households averaging 2 joining together to rent a housing unit in order to share monthly rent which average to Kshs.800 is a common occurrence.

Table 4.1: Head of Household by Sex

Sex of Head	No of Respondents	Percentage
Male	70	66.7
Female	35	33.3
Total Respondents		100

Source: (Author's Survey, 2008)

Table 4.1 shows that out of 90 households that returned their questionnaires, 66.7 per cent were male-headed and 33.3 per cent female-headed. In most cases where a household was female-headed, the female head had either been separated (31 per cent), divorced (23 per cent) or were single mothers (56 per cent). The male-headed households were either living with their wives (19 per cent) or the wives were staying in their rural homes (49 per cent). The rest (32 per cent) were single men.

Table 4.2: Households' Monthly Income

Monthly Income (Kshs.)	No of Respondents	Percentage
Less than 1000	9	8.6
1001-1500	17	16.2
1501-2000	24	22.9
2001-2500	37	35.2
2501-3000	13	12.4
Over 3000	5	4.8
Total Respondents	105	100

Source: (Author's Survey, 2008)

Table 4.2 shows the income brackets of the households of Laini Saba with 35.2 per cent of these households earning an average monthly income of between Kshs.2, 001-2,500. While most of the concentration lies between brackets 1,001-1,500 and 2,501-3,000, less concentration is seen at the extreme over 3,000 and below 1,000. This means that

poverty level in Laini Saba is at the highest with only 4.8 per cent earning over Kshs.3, 000.

Table 4.3: Occupation of Household Heads

Occupation	No. Household Heads	Percentage
Carpenters	7	6.7
Tailors	13	12.4
Security Guards	15	14.3
Masons	7	6.7
Food Kiosks	13	12.4
Painters	10	9.5
Construction Workers	17	16.2
Shoe Makers	8	7.6
Market Vendors	10	9.5
Others	5	4.8
Total Respondents	105	100

Source: (Author's Survey, 2008)

The survey results showed that the household heads were employed in a wide range of occupations. Table 4.3 shows that above 95 per cent of the households heads fall in the category of general works. Due to their lack of specialized skills, they engage in manual works as casual labourers and other semi-skilled jobs such as carpentry, tailoring, painting and shoe-making. These have steady incomes but still in the low-income bracket as corroborated by Table 4.2. More and advanced training of these people will make them gain specialized skills in their fields.

Table 4.4: Building Materials

Building Materials	Materials	No. Household Heads	Percentage
Floor	Earth	56	53.3
Wall	Mud and Wattle	57	54.3
Roof	Sheets and carton	52	49.5
Windows	Wooden	60	57.1
Doors	Wooden	90	85.7
Total Respondents			

Source: (Author's Survey, 2008)

Table 4.4 corroborates that structures in Laini Saba are temporary with all the materials locally sourced from the hardwares in the village. Income levels of the people is too low for them to afford permanent materials of construction, besides people here do not own the land and therefore putting permanent structures will be unworthy. The poverty levels coupled with poor structures gives evidence of low traits in the neighbourhood. Plate 4.1 illustrates high development density alongside temporary construction materials. This presents an eyesore because they are not planned coupled with population which averages 2000 people per hectare.

Plate 4.1: Temporary Structures



Source: (Author's Survey, 2008)

4.2: MAIN ECONOMIC ACTIVITIES

Several economic activities are noticeable along the whole stretch of Laini Saba. They include the sale of second hand clothes, old electrical appliances, food kiosks, timber yards and work shops, roasting and boiling of green maize, water peddling, fish and other small hawking businesses. Amounts fetched from these activities only make the households meet their basic needs though there is evidence that some households can merely manage three meals per day (UNCHS, 1999). Adaptive measures by the households of meeting their needs include undertaking several income generating chores by a single individual such as being a watchman at night and a construction site worker during the day. Other households have also involved each household member including school going children in some sort of income generating activities. The man could be a watchman while the woman operates a food kiosk. The children, most of whom are out of school hawk various items ranging from sweets, nuts or roast maize along the railway line and other pedestrian walk paths as illustrated by Plate 4.2. The aggregate income is brought together and help the household meet its several basic needs.

Plate 9 below shows the sale of several types of grains as one of the many economic activities in Laini Saba.

Plate 4.2: A Grain Stall



Source: (Author's Survey, 2008)

4.3: ENVIRONMENTAL IMPACT ON CURRENT STATUS OF SOCIO-ECONOMIC DEVELOPMENT

The natural environment has been largely ignored in conventional accounts of economic processes, and the earth has been commonly regarded as a free reservoir and bottomless rubbish dump. In this regard, it would be precisely clear to state that in the recent years, there has been a mounting concern over the conditions of our environment. This has embraced a variety of environmental changes such as depletion of the natural resources, pollution, declining environmental quality and the extinction of various species.

Growing awareness of these critical changes has, therefore, encouraged the introduction of sustainable patterns of activity at all scales from both the local to the global world. Environmental issues are important in human development because of the centrality of natural resources in the enhancement of quality of life (UNDP, 2002: 61). This is particularly, so because environment is an integral component and plays an important role in the overall development including economic development which depends on the environment for raw materials, water and energy. Urban environmental problems are as old as urbanization itself and since man begun to live in the urban centres he has had environmental problems to some degree (Obudho, 1999). Among all species, modern man is singled out as the most powerful of the transforming agents because of the unique position at the top of evolution process, with the power to influence the various components of the environment. Management of the environment constitutes one of the most difficult but also one of the most important areas of planning intervention in the market economies. The ultimate objective of this management is to govern the allocation of environmental resources and quality in a manner most consistent with the goals and values of the society. However, serious urban environmental problems are largely felt in the large urban centres resulting from, among others, high rate of urban population growth, poor urban planning, scarcity of capital resources, high rate of industrial development and poverty. It is worse in the informal settlement of such urban centres.

Congestion in Laini Saba coupled with poor infrastructure provision has had a bad environmental effect to the area. There is hardly any space left for infrastructure

incorporation. Hardly is there any free space where infrastructural facilities such as roads, electricity, water and sewer, health, recreation, education and other social amenities could be located. Although the official Kenya government position is that this is government land and until recently, the land tenure policy regarding “illegal” settlements was that the government could not develop or invest on such land, the government will have to resettle the people if services were to be brought. The government has therefore not developed any infrastructure according to her policy on investment which states that this can only be done on legally owned land. This scenario pits the tenants of Laini Saba against slumlords who in most cases are not obliged to put up proper water and sanitation facilities among other community services in the area to match the rent they collect from the housing units.

4.4: INFRASTRUCTURAL SERVICES AS ENGINES OF SOCIO-ECONOMIC DEVELOPMENT

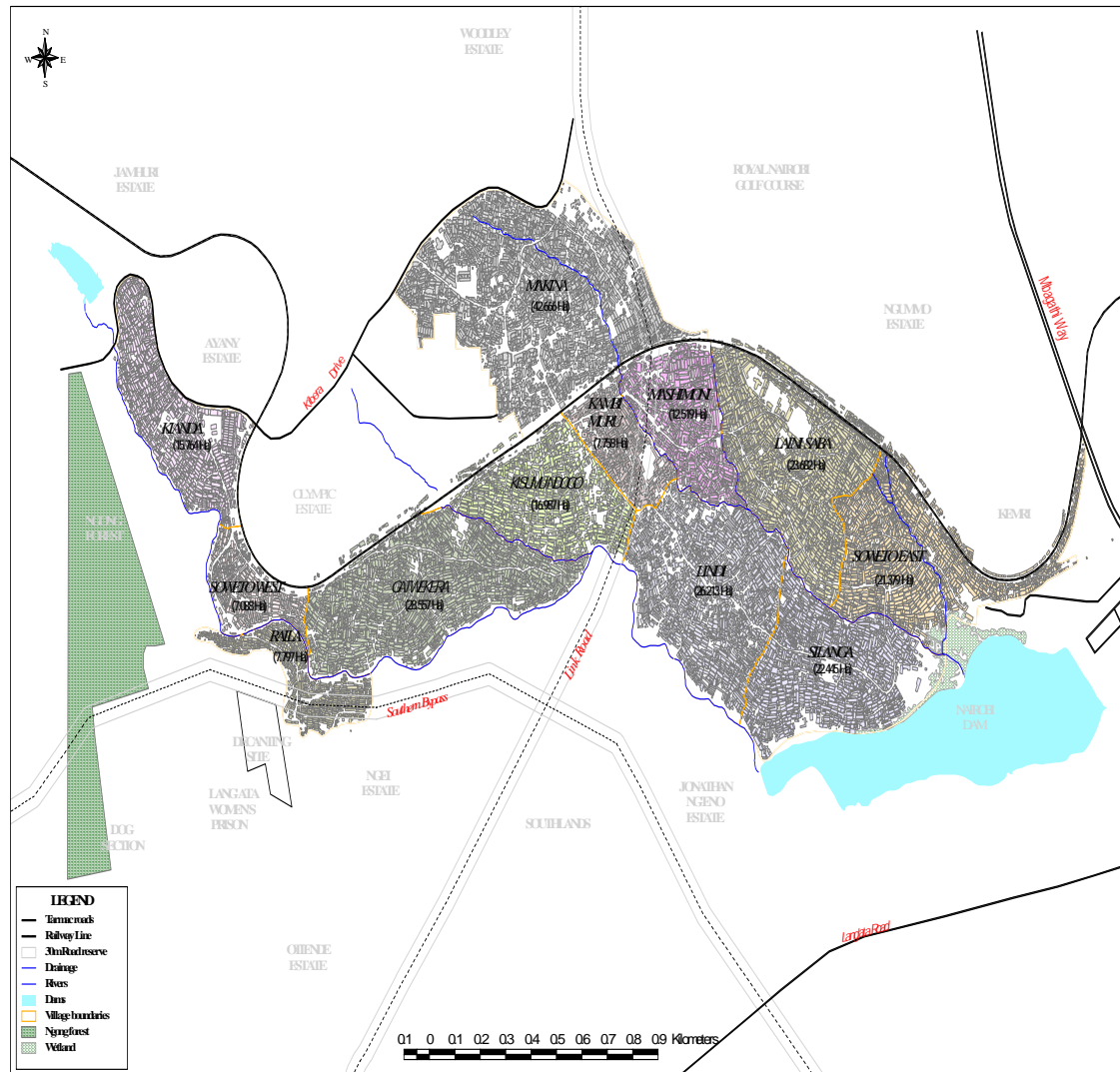
Housing is not just the structure as it entails public services and other infrastructural services like transport, water, sewer, education and health facilities among others. For housing to be complete all these necessary facilities that form part and parcel of it must be provided (UNDP, 2002).

4.4.1: Transport

Laini Saba is about 7 kilometres from the city centre and 8 kilometres from the central area of the major industrial area in Nairobi. About 25 per cent of the interviewed

household heads work within or near the village while 35 per cent work in the industrial area. The remaining 40 per cent work in the city centre. As seen earlier, the population of Laini Saba is very higher and there is need for efficient public means since 75 per cent of the people working in the city centre or in the industrial area use public means.

Map 4.1: Road Network in Kibera and the Surroundings



Source: (GOK, 2002)

Although the slum is served by the major railway line and is less than a kilometre from major roads of Ngong, Lang'ata and Mbagathi, there is still a problem emanating from the fact that over 45 per cent of the households can not afford the now escalated fares. As such a big number have turned into the use of bicycles and trekking to and from work. The rest depends on buses and *matatus*.

Plate 4.3: Modes of Public Transport Used in the Neighbourhood



Source: (Author's Survey, 2008)

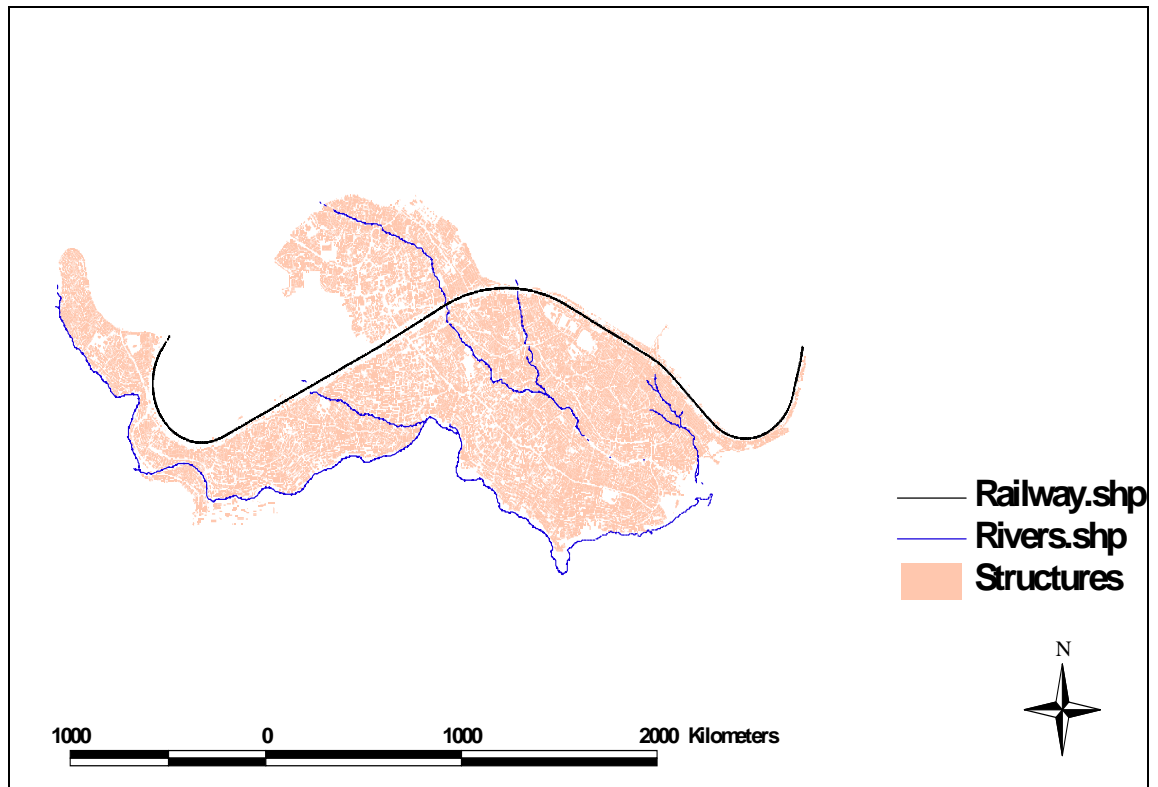
Table 4.5: Mode of Public Transport

Mode of Transport	No of Household Heads	Percentage
Buses	13	14.4
<i>Matatus</i>	10	11.1
Bicycles	18	20.0
Railway	16	17.8
Trekking	33	36.7
Total Respondents	90	100

Source: (Author's Survey, 2008)

It can be deduced from table 4.5 above that over 36 per cent of the residents of Laini Saba trek to and from their places of work. This results from their minimal incomes that can rarely meet the now sky-rocketed fares. The other major means of public transport include bicycles (20.0 per cent) buses (14.4 per cent), *Matatus* (11.1 per cent) and railway (17.8 per cent). Bicycles stand second from trekking meaning that residents prefer to save towards buying a bicycle which in the long run turns out to be cheaper than daily fares. There is therefore a high need for design and implementation of access roads to allow for easy movements of those who trek and those preferring to use bicycles.

Map 4.2: Railway Line Crossing Kibera Slum



Source: (GOK, 2002)

4.4.2: Water and Sanitation

Water is life and sanitation is dignity and this necessitates that access to safe water supply should be enhanced. The provision of water is usually the responsibility of the public sector although there are often complex relations within the sector with government ministries and agencies as well as local authorities playing various roles in controlling the source, treatment and distribution. In some circumstances, the private sector, in the form of private water boards or authorities performs one or all of these roles. The method of distribution of water at the neighbourhood level varies greatly. In some areas water is supplied to each separate property and in others it is distributed to water points located throughout the community. The type of system used depends on the capital cost and in low - income settlements the latter is usually chosen due to its lower cost. This system also offers opportunities for income generation as the water points are often franchised out to individuals who sell water by the bucket. In some cases water is purchased from the water sellers by "middlemen" who provide house-to-house delivery for a small extra cost.

The opportunities for income generation in this system are obvious. Another advantage is that poor households can buy what they can afford at the time instead of running up large monthly bills which become difficult to pay. It is also an advantage to tenants to be independent from their landlords at least in terms of the supply of water. Residents, however, pay much more per unit for water bought by the bucket than they do for water supplied to the house. This is a result of pricing policies and not intrinsic in the system.

If water vendors were charged a lower rate than individual consumers, the ultimate price to their customers would also be reduced.

From community needs assessment done in 2002 by KWAHO in Laini Saba, excreta disposal and water supply was the highest priority. Issues associated with water included, its source, cost, availability and distribution. Access and availability of water is limited. In this case, up to 85 per cent of the households draw water from kiosks (private and community owned) at an average of Kshs.5 per 20 litre jerrican. The average distance to the nearest Kiosk is 40 metres and consumption ranges from 16-20 litres per person per day. This translates to an average of 126 litres of water per household per day or Kshs.31.50 per household per day vis-à-vis the household average daily income of Kshs.45. Frequent shortages contribute to an increase in prices, distance walked and time spent. Within Laini Saba as a whole, the quality of water decreases significantly hence it is contaminated by infiltration of liquid waste into burst pipes. Therefore, there is always high risk of waterborne diseases within the community with shortages resulting from rationing by the City Council of Nairobi and burst pipes. Most pipes are made of low quality PVC and laid above the ground surface. While majority of water kiosks are owned by individuals, Kenya Water for Health Organization has established some which are owned by Community Based Organizations (CBOs).

Plate 4.4: Criss Cross of Water Pipes in Laini Saba



Source: (Author's Survey, 2008)

Residents here pay for water ten times what is paid by residents of the middle and high income areas. This is very expensive considering that an average adult requires about 180 litres of water per day in an urban setting for the daily functions. During acute shortages, queuing time may go up to four hours and although availability of the water increases at night, the risk of being mugged is very high.

Plate 4.5: Mothers and Girls Fetching Water from a Burst Pipe in Kibera



Source: (Author's Survey, 2008)

4.4.3: Sewage Disposal

Conventional waterborne sewerage systems are not only extremely costly but are also the most capital-intensive system both to install and maintain. Most Third World countries simply cannot afford to contemplate them for low-income housing and are currently exploring alternate methods which are economic and acceptable in dense urban settlements. Sewage disposal is one urban service for which many local authorities have all but abandoned responsibility and many millions of people live without any hygienic means of disposing of human waste. In many countries public authorities insist on high-cost systems for official housing projects while simply turning

a blind eye to the inadequate arrangements that the majority have to make for themselves. There are no sewered toilets in Laini Saba and most of the households have traditional pit latrines. These are inadequate and fill up quickly. Limited access to exhauster services has rendered about 30 per cent of latrines unusable. The shortage has been brought about by lack of space for new construction and landlords who are unwilling to incur the extra expense. Most of the interviewees indicated that up to 150 people or 21 households share a pit latrine while the lack of adequate latrines forces the residents to use alternative means of excreta disposal, such as polythene bags referred to as "flying toilets" (wrap and throw method). These are commonly used at night when residents consider it insecure to use latrines outside. Children defecate in small plastic buckets for cooking fat which are emptied by the mother either in the next pit latrine or sewer. Efforts to exhaust latrines are complicated by lack of access roads. An experimental exhauster service (Vacu-Tug) by KWAHO used to serve a small portion of the community with 80 per cent of the latrines being emptied manually by directing waste water into the drainage channels. Others are simply covered and abandoned.

Currently some governments, such as the government of India, have introduced policies which specify the use of low-cost sanitation methods in place of conventional water-borne systems in urban areas. These alternate technologies provide many income-generating opportunities. Local artisans and small-scale contractors can understand the technologies involved and in many countries the digging of pit latrines provides employment to artisans who specialize in the service.

Plate 4.6: Manual Emptying of a Pit Latrine



Source: (Author's Survey, 2008)

4.4.4: Solid Waste Disposal

This includes the disposal of human excreta and litter (human excreta has however been dealt with separately). The collection and disposal of refuse is a basic urban service which is usually the responsibility of local authorities. Solid waste management (collection and disposal), is the municipal service in which greatest attempts at privatization has been made. The management of solid waste in Nairobi has proved to be a good case study of the decline in the delivery of urban public services and private sector involvement in search of a sustainable solution. The earliest attempts at privatizing solid waste management services (SWM) in the City of Nairobi were in

1996 when a private company was contracted to sweep and clean city streets, collect garbage and provide street lighting. This company did not succeed in effectively executing these duties and the role had to revert back to the city council which initially performed this role relatively satisfactorily (Mbui, 1995). It has been estimated that cities in developing countries spend 30 - 50 per cent of their operating budgets on solid waste management (Mbui, 1995). Despite this, the problem of how to collect refuse efficiently from streets, vacant lots and clogged storm drains continues to elude most urban authorities. The most common way that labour is organized to perform this task is through a direct labour department of the local authority. The dilemma of many local authorities has been that the labour-intensive methods they conventionally employ do not seem to work. This has more to do with a combination of declining real revenues and poor management than with any intrinsic relationship between efficiency and the use of labour-intensive methods.

Table 4.6: Solid Waste Disposal

Mode of Transport	No of Household Heads	Percentage
Burning	37	35.2
Dumping outside Houses	68	64.8
Collected by the Council	0	0
Total	105	100

Source: (Author's Survey, 2008)

Table 4.6 shows that most of the waste is dumped outside the houses posing serious health risk to residents. There is no solid waste collection within the settlement and most residents dispose off solid waste by dumping it in open drains, along the railway line and in pit latrines. The closest collection point is on the main road outside the settlement. Lack of facilities for garbage disposal has lead to haphazard disposal of

refuse. Most households dump their garbage outside their houses and burn it during the dry season something which is risky especially due to congestion of houses. This also contributes to respiratory ailment and children also contract other diseases by playing in the dumps. During the rainy seasons, solid waste is washed into compounds in low lying areas and blocking the drains. Recycling and composting activities are limited due to mixing of organic and inorganic solid waste.

Plate 4.7: Dumping outside the Houses



Source: (Author's Survey, 2008)

Waste and faeces disposal is a health hazard in Laini Saba and it requires immediate attention from the local authority. The poor sanitation coupled with proliferation of roadside food stalls has often led to serious disease outbreaks. In most places there are no pit latrines with congestion over few that are available. Households with pit latrines in the area are 26.6 per cent with one latrine being shared by as many as 150 persons. In places where there are no latrines people use 'Flying Toilets' for disposing of their

faeces or use open spaces around their houses at night. The situation is further compounded by a fact that there is very poor access road system because of the congestion. This makes it difficult to empty filled up pit latrines, which fill up very fast because of the large number of users. Residents had suggestions to these problems: -

- i. Improvement of access to the few pit latrines accessible for exhaustor services.
- ii. Landlords should be required to provide adequate latrines for their latrines.

The area is prone to water borne diseases and is large without matching water and sanitation services having been put in place. The landlords of the housing units are not committed to putting in place such facilities due to the fact that land ownership is still an issue in Kibera because it still belongs to the Government. Collection points should be sited in all the villages of Kibera in order that haphazard dumping is minimized. Due to the risks posed by such dumping, the City Council of Nairobi or private garbage collectors should transfer waste to the main council dump site on a regular basis.

4.4.5: Education and Healthcare

Health is a basic human need and good health constitutes the total wellbeing of the people. Its achievement including those of education plays a crucial role in enhancing human development and so is the economy of any given country. On a larger scale, health and education facilities in the City of Nairobi are poorly managed with most of them served with dilapidated infrastructural facilities such as water, electricity, roads, street lighting. The situation is far much worse in the village of Laini Saba where most

of the health problems are directly associated with the quality of water and environmental sanitation. The top four illnesses indicated by the community are diarrhoea, malaria, intestinal worms and vomiting. Poor governance of these centres is the order of the day with most of them, if not all, prone to corruption, lack of sufficient personnel and resources to improve and/ or even increase their number to serve the exploding population. Challenges of overcrowding, shortage of personnel, poor sanitation and other related services within the facilities are common phenomenon. Mbagathi District Hospital is a kilometre from the village of Laini Saba while private clinics and over-the-counter drug purchase points are numerous.

Plate 4.8: Mbagathi District Hospital



Source: (Author's Survey, 2008)

There are several private clinics as well as traditional herbalists and government health facilities located 2-5 kilometres away. Such clinics are, however, first-aid providers and residents have to walk for about half hour distance for proper medical attention either at Kenyatta National Hospital, Lang'ata Health Centre or Mbagathi District hospital.

Case Study

Box 4.1: Situational Illustrations of Laini Saba

A cross-section survey done in 2002 on diarrhoea prevalence and risk factors in Laini Saba resulted in socio-demographic information revealing that overcrowding with each person occupying living area of 12.8 sq. feet. During the survey only 58 per cent of the respondents received health information from recognized health facilities. Prevalence of diarrhoea diseases was at 36 per cent while at least 2 children out of every 100 stood the risk of death due to diarrhoea while 79 per cent of pit latrines were filled up and evidently not in use. This problem had been aggravated by lack of access roads hence the community resorted to other crude and unhygienic methods of faeces disposal. The study concluded that diarrhoea is a serious health problem in the overcrowded Laini Saba and there is inadequate source of health information for the slum dwellers. Poor environmental conditions, poor methods of faeces disposal and high poverty levels expose the community to various health problems.

There are 18 nursery schools, 7 primary and secondary private and council schools within and outside Kibera. Although their conditions in terms of facilities and general repair and maintenance are poor, their number is satisfactory to the residents' children.

Table 4.7: Household Education Levels

Levels	No. Household Heads	Percentage
No formal education	18	17.1
Primary	46	43.8
Secondary	24	22.9
College	12	11.4
University	5	4.8
Total Respondents	90	100

Source: (Author's Survey, 2008)

Table 4.7 shows that most of the household heads (43.8 per cent) have primary education with only 4.8 per cent having university level of education. This explains why most of the households are semi-skilled with only little skills to allow them get formal employment.

4.4.6: Recreational Facilities

There is lack of recreational facilities in Laini Saba. Apart from the social hall located in Woodley built by the City Council of Nairobi, there are no other facilities for outdoor games. The social hall itself is not big enough to accommodate a variety of indoor games and other social activities. Considering the large population in Laini Saba, there is need for more recreational facilities to avoid children from playing in dump sites and/or engage in criminal activities.

4.4.7: Roads and Electricity

Generally, there are no adaptive public roads within Kibera. Considering that most businesses are along these dusty pathways, there is a lot of congestion making vehicular maneuvering difficult. However, Kibera is surrounded by major roads that feed the affluent estates of Lang'ata, Ngong, Woodley, Jamhuri and Karen. There is no power supply in the interior parts of Kibera and most of the residents use kerosene lamps and charcoal to light their houses. Reading at night becomes difficult for those children living in Kibera and Laini Saba in particular.

Plate 4.9: Pathways Used as Roads



Source: (Author's Survey, 2008)

The main roads to the slum are tarmac but feeder roads are inaccessible during rainy seasons. All the homesteads are only accessible through muddy pathways. The internal circulation within Laini Saba lacks proper all-weather roads and footpaths. During the wet season, internal movement is so muddy that the residents find it difficult to reach their houses. The roads and footpaths have been so much over trodden and eroded that large stretches have become gullies. Movement through these footpaths is not only difficult but dangerous and uncomfortable during the rainy season. There is therefore need for all-weather roads and footpaths.

4.5: EMERGING SETTLEMENT PLANNING ISSUES

Provision of health, water, sanitation, housing and transport top the list of poor urban services in developing countries and Laini Saba in particular. In 1990 for instance, 17 per cent of world's stock of housing was one room units, of which some three quarters were in developing countries. Some 42 per cent of the rural and 35 per cent of urban dwellings in Africa are single roomed mostly housing the poor. Recent statistics show that over 60 per cent of residents of Nairobi City live in informal settlements, which extensively lack infrastructure and other urban community services. Accessibility to basic urban services by the urban poor has been constrained by various economic, social, administration and political factors. The poor state and/ or lack of the above infrastructure have rendered the housing state of Laini Saba pathetic. The lack of proper waste management, sewer and water reticulation, poor roads and power supply, all have had a bad impact on the state of housing within the slum and as a result has slowed socio-economic development of the people. This also has had a negative influence to the socio-economic activities of the people with most of them engaging in businesses that do not depend highly on these facilities. Due to inadequate and lack of land, urban development policies and planning control in the area, residents are able to put up low income structures that they are able to afford or rent from the slumlords at lower rates. However, this has had the disadvantage of congestion of structures that are so dangerously squeezed that access by some services like fire fighting trucks is rendered difficult. The congestion has also eaten into the open areas left for recreation services and dumping areas. All these have resulted into a poor housing condition devoid of

essential basic services. In summary, the following is what describes Laini Saba, the area where Kenya Water for Health Organization (KWAHO), a leading Non-Governmental Organization has been implementing its projects since 1987 with the main objective of alleviating poverty and reducing suffering among the disadvantaged people in the informal settlement. The organization's major concern has been housing congestion, scarcity of water, environmental pollution, infectious diseases, lack of infrastructure, extreme poverty and insecurity.

CHAPTER FIVE

STUDY FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.0: INTRODUCTION

Employment, income and access to housing and associated services are correlated. However, the biggest constraint to developing improved housing for the urban lowest-income group is poverty because their incomes are either meagre or unstable to permit the commitment of scarce resources to shelter. Poor people first and foremost need to generate income or increase their earnings to improve their living conditions in general and their housing in particular. The majority of the populations of cities in developing countries is either employed in or derives income through small-scale enterprises and is housed in self-help settlements. These settlements not only provide a place in which to live, but also offer income-generating opportunities and an entry point to the urban economy. Laini Saba is vibrant with small businesses and one is unlikely to miss basic product or service within the area. As such, these people need low interest loans at minimum collateral to allow their businesses to flourish.

5.1: STUDY FINDINGS

Adequate housing means adequate privacy, space, physical accessibility, adequate physical security and security of tenure of the structure, structural stability and

durability, adequate lighting, heating and ventilation, adequate basic infrastructure such as water, sewer, energy supply, sanitation and waste management facilities, suitable environmental quality and health related factors, adequate and accessible location with regard to work and basic facilities all of which should be available at an affordable cost. On average, households in Kenyan urban centres spend between 15 to 25 percent of their total income on shelter although the share tends to be lower in some urban centres and also varies considerably between and within income groups (Government of Kenya, 1999). Inadequate housing in Laini Saba has manifested itself in many forms such as poor infrastructural services like roads, sewerage, water and sanitation and so on. The level of overcrowding both in terms of area and the number of separate rooms is a common sign of inadequate shelter and therefore lack of socio-economic development. As frequent as inadequacy of space is lack of services available to the large number of people of Laini Saba. The lack of services such as clean water supply, means of safe disposal of human and domestic waste has contributed to morbidity and mortality on massive scale. In general the poor are inadequately housed and the poorer a country is the less adequate are the shelter conditions at least for the low-income groups.

Individuals and households in Lain Saba are concerned about adequate shelter for socio-economic activities and for the advancement of the quality of life. Generally, the laxity of the City Council of Nairobi to provide services has hampered the capacity to provide basic shelter and allied services such as water and sanitation. The proximity of Laini Saba in relation to the city centre and the industrial area has

a huge significance to the housing conditions and economic activities in the area. The fact that residents are able to walk to the employment centres has resulted to the proliferation of housing units to meet the high demand. Most of these units are of poor quality and go for as little as Kshs.800 affordable to the people. As a result of the high density and lack of employment opportunities, a big number of residents have turned to small scale businesses of selling charcoal, water, vegetables, timber products, maize roasting in order to sustain their economic lives. Most of such activities are located on the railway line, road sides and others in stagnated market places such as the Toi and Kenyatta Markets located two kilometres and one kilometre, respectively from Laini Saba. The general rapid urbanization and inadequate shelter provision in areas like Laini Saba will continue to accelerate the growth of the informal settlements as housing deficit in nearly all over Kenya will continue to rise with population growth. Kenya has an annual demand for 150,000 urban housing units per year compared to the current rate of new residential developments of some 30,000 housing units per annum (UNCHS, 2003). This is because formal housing construction cannot keep pace with shelter needs of the rapidly increasing population. Laini Saba draws its inhabitants from all ethnic groups. The village is unplanned with poor environmental conditions of congested housing units, scattered solid waste and generally, little in the form of infrastructure that provides water and sanitation facilities. The few facilities that do exist are over 30 years old with little or no maintenance; most of them are dilapidated and hence not functioning. Human waste in Laini Saba, for instance, is not disposed of in a hygienic fashion. Most of the households share precarious and

dismal environment: overcrowded sub-standard shelters with inadequate clean water supply, lack of sanitation, paved roads and garbage collection services. Many of this population even though in Laini Saba, some of them are decently educated to secondary school level; many of them are either unemployed or are employed in the informal sector.

Laini Saba provides a scenario of undernourished and chronically sick. The socio-economic and environmental conditions of the slum are well illustrated by the intra-urban differentials in health. In Nairobi as a whole, the infant mortality rate in the year 2004 was 73 per 1,000 live births against 210 for Kibera. Neonatal mortality in Nairobi was 30 per 1,000 births, while it is almost 43 in the same slums. Mortality due to tuberculosis is four times higher in the slums than in the formal settlements due to rise in the HIV/AIDS epidemic in the neighbourhood. The greater prevalence of diarrhoea and various infections is associated with poor housing, water and sanitation facilities. The unplanned urbanization has resulted in acute shortage of housing and associated infrastructural services in many countries. In the developing countries, although the water supply to urban areas improved over the last two decades, in 1990 there were about 244 million people (18 per cent) of the urban population without clean water supply as compared to 33 per cent in 1970. The proportion with sanitary facilities did not improve over the last two decades. In 1990, approximately 377 million people in urban areas (28 per cent of the total population) did not have sanitary facilities; in 1970 the percentage was 29 per cent. Most urban centres in Africa have no sewerage systems at all (UNEP,

1992). Under such circumstances, rivers, streams, canals, gullies and ditches are where most human excrement and household wastes end up untreated. As for those cities with sewage system, rarely does it serve more than a small proportion of the population typically the affluent residential, government and commercial areas. In the developing countries, the garbage collection services are inadequate. An estimated 40 per cent of the wastes generated within urban centres are left uncollected. It accumulates in open spaces, streets and wetlands. Such unclean refuse, particularly in the tropics, constitutes a breeding ground for all sorts of vectors and pathogenic organisms. Crude dumping is almost universal in all the urban centres in Kenya and often supports a large army of scavengers, who extract various materials from the waste and sell. The grim realities of child labour and public health hazards must not be overlooked. Laini Saba is not recognized by the government as a legal human settlement and thus does not warrant provision of any services by the City Council of Nairobi. Most of the services from water to education are owned by privateers who charge exorbitant prices and are thus beyond the reach of the people. Given that the settlement is illegal, slumlords are not obliged to provide any services and therefore no hygienic latrines, sufficient clean water, electricity, garbage collection, totally inadequate housing with no repairs and maintenance leaving open sewers to be filled with stinking raw sewage.

There is very limited access to water, and where there is, is sold at exorbitant prices. Communal water taps from City Council of Nairobi by private individuals who sell water to residents is the common source of water. During the rain season,

water costs are reduced because households tap water from their roofs, otherwise the price of water is four times the cost at which the council sells to the vendors. Residents of Laini Saba pay more than twice as much for water as their counterparts in the middle and upper class residential areas with most households needing about 126 litres of water daily for cooking and washing. Whenever the families are financially pressed, they skip bathing while laundry is done occasionally. Others are compelled to use water from the nearby polluted Nairobi Dam currently choked by water hyacinth. In addition to water shortage, sanitation, drainage and refuse collection are other major problems in the village. Congestion in Laini Saba is a major problem that has led to scarcity of space for even essential services such as toilets. No sewage disposal services in Laini Saba and most of the houses have detached pit latrines serving 30 to 500 people. Under such circumstances, latrines are not regularly cleaned except for the water the household members pour irregularly and in cases where the latrine doubles as the bathroom. There are no refuse collection services apart from occasional burning or throwing outside the dwellings (UNCHS, 2000). Virtually 95 per cent of the residents in the village have no access to adequate sanitation facilities with more than 56 per cent of the residents lacking appropriate means of human waste disposal (Alder Graham, 1995). Most households lack proper bathrooms hence they use their one roomed units or toilets as bathrooms or bath outside their houses in the early morning or in the night. The drainage in Laini Saba is open earth canals which are constantly blocked and everywhere one sees stagnant, smelly water which provides a breeding ground for mosquitoes. During the rainy season, run off water in open

drains collect garbage, including human waste and poses a real health and general environmental threat to an even greater area.

The biggest problem in Laini Saba (many interviewees said) was the lack of housing. In most places, the housing units are congested which leads to the spread of diseases such as tuberculosis (TB), diarrhoea and typhoid. TB in particular is most common since it is an airborne disease. Respiratory Tract Infections (RTI) are also common due to congestion of houses and the dust. The village has hardly any piped clean water and the steel and plastic pipes that do exist are prone to contamination leading to water borne diseases like typhoid and diarrhoea. As such, at the health centres and clinics, the main health problems that are witnessed on a day-to-day basis are RTIs, malaria, amoebas and venereal diseases. A study by the UN Habitat on AIDS and other Sexually Transmitted Diseases found that 40 per cent of all residents of Laini Saba are infected with HIV. There are no government health facilities in the village and those nearby are overstretched beyond their limit in trying to meet the health demand of the residents. In most cases the provision of these services is left in the hands of a few NGOs and private individuals who provide them at a fee. Nevertheless, it is clear that most inhabitants in the informal settlements cannot afford health services and often rely on non-prescriptive medication or traditional herbs for treatment of their health problems. African Medical and Research Foundation (AMREF) is currently working with the community of Laini Saba. The project operates a health centre that aims to provide the underprivileged of the area with health services. In addition, the project ensures

that the inhabitants have access to clean and hygienic water for drinking and to decent sanitation. However, the NGO can only provide so much and therefore quite a big number of residents do not have access to these services. Mradi wa Afya ya Msingi na Maendeleo (MRAMMA) is the main support group in Laini Saba and is the main entry point for AMREF to support communities through their own initiatives. The project focuses on women of childbearing age, children and members of low income households through sustainable community based health care systems.

Generally, there are no adaptive public roads within Laini Saba and considering that most businesses are along the dusty pathways, there is a lot of congestion making vehicular maneuvering difficult. However, Laini Saba is surrounded by major roads that feed the affluent estates of Lang'ata, Woodley, Jamhuri, Karen and Ngong. There is no power supply in the interior parts of Laini Saba and most residents use kerosene lamps and charcoal to light their houses. Reading at night for the school going children becomes a problem. There are several pre-unit, nursery and primary schools within walking distances in Kibera. Private clinics and over-the-counter drug purchase points are numerous. Such clinics are, however, first-aid providers and residents have to walk for about half hour distance for proper medical attention either at the Kenyatta National Hospital, Lang'ata Health Centre or Mbagathi District Hospital. There exists a number of fruit and vegetable stands and kiosks which are at a walking distance of less than a minute from the housing units. Markets consist of temporary shacks and goods have to be laid out and

parked up every day. This is usually along the railway line, pathways and the famous Toi market which is a 30 - minutes walk from the village. Woodley Social Hall is within walking distance and it is the only one because most open spaces that could be used are either swampy, have been grabbed or are used as dumping grounds. There are various football clubs and festivals most of which are connected to religious areas such as churches or mosques.

5.2: CONCLUSIONS

Stemming from the above enunciation, rapid urbanization and poverty is one of the biggest limitations to acquiring decent shelter by the majority in the urban centres. Lack of access to serviced land, high cost of building materials, prohibitive planning and building regulations and rigidity in the underwriting criteria of the real estate mortgage markets are underpinning constraints in the provision of adequate shelter for all. The study has indicated that about 63 per cent of the households covered in the survey had income below the national average. The declining social housing development and the construction industry have become oriented towards satisfying the demands of groups with higher purchasing power, synonymous with privatization and restitution concepts which have found niche in the management of public affairs radically altering the housing market in the transitional economies such as Kenya. This has brought significant changes in the types of dwellings being constructed as private construction companies have

become more oriented towards the provision of housing for the high-income groups.

There is need for settlement upgrading projects, which should not only provide secure tenure and a range of basic urban services but also enable and encourage low-income households to improve their housing through self-help. A concrete national plan of action to collaborate between the public sector, private sector and the international community would be a necessity towards sustainable shelter provision strategy in Kenya. This would ensure the production of high volume quality housing, sufficient to meet the needs of new households and to facilitate upgrading the existing stock of substandard housing in urban areas. Further, the plan should involve the informal sector actors in harnessing their capacities to the national housing needs. This required *inter- alia* adequate knowledge of local conditions and needs, which could only be achieved through consultative process with all the stakeholders in the shelter provision sector.

5.3: RECOMMENDATIONS

Shelter problems in Kenya like any other developing country is due to high urban population growth rates resulting from urban natural growth, rapid rural-urban migration, a lag in urban infrastructure development to support shelter development, low purchasing power of the majority of the urban households, inappropriate building materials and various local authorities by-laws especially

for the low-income shelter in addition to unfocussed shelter policy (Government of Kenya, 1990). For example, housing in Nairobi has tended to mushroom without regard to services, yet shelter in reality should be backed by a package of services such as land, public facilities, access to employment and other social services as well as the dwelling structure itself.

5.3.1: Policy Framework for Shelter Upgrading for Socio-Economic Development

Notwithstanding the effort of various stakeholders, a number of policy constraints continue to inhibit the growth of sustainable informal settlements due to inefficient trickle down effects. It is on this note that this study has come up with various recommendations to address the sector's optimal development. In this endeavour, this study does not ignore previous proposals, which have been made by other researchers and scholars towards this direction. Effective responses to slum upgrading problems must consider affordability and employment needs of the dwellers combined with realistic standards of construction. The upgrading envisaged here entails both spatial as well as operational regularization. Towards this end, Kenyan scenario is that low income housing especially in the unplanned settlements and in the site and service schemes are generally constructed by landlords and by owner occupiers or squatters who normally improve their dwellings in stages while the tenants rarely make any significant improvements to their housing conditions. Public housing agencies have also rarely contributed to large-scale, low-income housing especially in the last two decades. Local authorities should be fully responsible for the broad

range of urban services *inter-alia*: primary education, health services, road construction and maintenance, water supply, sewerage, public housing, solid waste management, storm water management, markets and social services.

The recommendations, which the researcher has come up with, are broadly categorized as:-

- i. Proposals on the upgrading of the existing shelter with integration on informal sector and social-economic activity sites
- ii. Proposals on the land-use policies and infrastructure provision.
- iii. Proposals on the management structure and informal activity allocation.
- iv. Proposals on the environmental policies.
- v. Proposals on the assistance programmes to be adopted towards improving the economic welfare of informal sector workers.
- vi. Proposals on the improvement of legal and regulatory framework.

5.3.2: Proposals on the Upgrading of the Existing Shelter with Integration on Informal Sector and Social-Economic Activity Sites

Land in Laini Saba is currently government land and therefore the process of acquiring it for upgrading is not cumbersome. The upgrading envisaged herein entails creation of horizontal spaces for various clustering of activities. Where 100 or more households shall be affected by a development induced land acquisition, the

preparation of a Resettlement Action Plan should be done to ensure that the livelihoods of affected persons by the project are restored to levels prevailing before the inception of the project. However, if less than 100 households are affected, then an Abbreviated Resettlement Action Plan should be prepared to a lesser level of detail. As will be later indicated, location strategies are likely to be successful when they are premised upon an understanding of the residents' site preferences accompanied by positive policy measures such as land-use and institutional management structure. The policy issues recommended here entails, enhancing the security of tenure of the sites for the informal sector activities.

The Kenyan government has sought to pursue policies aimed at improving the housing standards for its urban poor with departure from the policy of mass construction of the 1960s to 1970s, which is viewed as having encouraged obsolescence of the housing stock. In endeavour to raise the level of housing stock in Laini Saba, the government ought to consider the equilibrium between the construction and the space standards per person and the common community areas due to massive population pressure currently being experienced in the major urban centres of the country, while the same has little public utility land left and limited resources to meaningfully undertake public housing construction. The use of development wave for tackling the problem of obsolescence involving systematic demolition and reconstruction should be adopted as a strategy for the realization of adequate shelter and making regeneration possible in Laini Saba. In this regard, programmes such as temporary relocation of occupants of one block as the block is

being demolished and reconstructed with modern designs should be pursued. As soon as the block is through, the original occupants are brought back and settled as the occupants of the next block are relocated and the process is repeated till the programme of upgrading is fully undertaken. The plot coverage and ratios should also be revised under such designs so that high-rise development is encouraged rather than single-family dwellings consuming massive spaces while accommodating small proportion of population. The areas between the blocks should be utilized and redesigned to either increase space standards so that the replacement blocks are larger than the initial units or to provide well planned commercial courtyards. The designs of the commercial enclaves must take cognizance of the diversity of goods and services merchandised in the neighbourhood, sources and cost of the raw materials and accessibility.

Once the upgrading process has been completed, it is recommended that the relocated residents are given the priority to occupy the units. Sectional Properties Act should be applied to ascertain that residents have ownership rights on the units. On this regard, it is recommended that sites be allocated for various informal sector activities. These activities require relatively large spaces, but due to the fact that the value and demand for these spaces are high, the recommended space size should be convenient. However, the council should ensure that residents do not lease out their units and/ or business spaces to outsiders. With a view of strengthening the linkages, it is recommended that the clustering of activities in various sites should be adhered to. This will further enhance the collective efficiency of the informal settlement organizations. The proposed clustering should be centered on particular specialization

such as metal workers, timber dealings and carpentry. The perceived advantages of clustering includes; gains arising from sharing of equipment, lending of tools, shared knowledge of new products, design and co-operation in fulfilling larger orders. The clustering of similar and related enterprises will serve as target for buyers who wish to place orders, greatly facilitating the marketing of informal sector products. This will further enhance economies in the provision of infrastructure and services by council authorities such as garbage collection. It is also an obvious vehicle for channeling promotional assistance of different kinds, including the dissemination of new products, training and credit schemes. The design of the clustering should be done by the council in collaboration with the residents who should form themselves into well organized informal settlement organizations. The clustering should be as flexible as possible to conform to the real situation on the ground. The informal sector is very dynamic and as such it is important to take precautions of accommodating the activities in future should their number exceed the capacity of the main proposed sites.

5.3.3: Proposals on the Land-Use Policies and Infrastructure Provision

The council should enact policies to ensure that the informal settlement organizations remain in the allocated sites and that only the displaced residents get back the units after the upgrading process is over. Location strategies are likely to be successful when they are premised upon an understanding of the informal sector workers site preferences accompanied by positive policy measures such as land-use and institutional management structure. The policy issues recommended here entail:-

- i. Enhancing the security of tenure of the sites for the informal sector organizations. This can be achieved through the site leases ranging between 3 years to 6 years with restrictions on use.
- ii. Incorporating the informal sector organization zones into the future design of housing schemes along side the conventional shopping centers.
- iii. Revision of development control and regulations to allow multi-storey structures in the settlement to be used by informal sector traders.
- iv. Economic incentives to those who comply with the site regulations such as rent breaks.
- v. Provision of infrastructure into the sites such as access roads and foot paths, water, drainage, power supply and garbage collection bins. This is proposed in recognition that such infrastructures are essential for supporting economic activities. Other forms of infrastructure may include sheds, which must be designed in close consultation with the users.

Even though the land-use policies recommended above are meant to promote the well-being of the informal sector workers, it is important for them to share costs, or at least pay nominal charges for various reasons. First, this will give increased rights to the informal sector workers, as they will no longer view the service as a gift but rather paid for, and secured. This will have an added advantage of moving the management of the project into the hands of the beneficiaries. Further, this approach will remove burden from the city council and reduce paternalistic relations. The ideals of sustainable neighbourhood development should encompass

infrastructure provision as well as the use of appropriate construction technology. Broadly, this should translate to increasing accessibility within neighbourhood, safe water supply and the improvement of waste disposal systems. Rationalizing the use of imported energy by finding cost-effective alternatives through developing and promoting the role of renewable energy sources should not be divorced from this endeavour. This can be achieved through capacity building programmes in management of infrastructure and services at the local authority level.

5.3.4: Proposals on the Management Structure and Informal Activity Allocation

This study established that sole proprietorship is the major mode of enterprise ownership under the informal sector. The workers here are independent traders not affiliated to any organization. In as much as this mode of ownership is advantageous, the researcher contends that the informal sector workers should be organized into semi-formal groups. This will enhance the opportunities of the informal sector workers to have access to credit facilities as well as for effective capacity building. It is therefore recommended that such organizations should be registered with the council. This should be done in such a way that members of an organization should be in similar trade in the neighbourhood. For instance, the carpentry and timber dealers from Laini Saba should be registered as one group. The site should be allocated to *bona fide* residents of the settlement and the allocation procedure should be done on the basis of applications.

5.3.5: Proposals on the Environmental Policies

Environmental policies must be enacted to support informal sector activities. Over the years, it has been realized that the informal sector has considerable impact on the environment both individually as well as collectively. Indeed, in terms of environmental impact per unit of production, the informal sector activities equal or/ in many circumstances surpass bigger industries. Therefore, its environmental impact is as much a concern as is the environmental impact of the larger formal industries. Indeed the environmental impact is a concern, which should be addressed not only at the national policy level but also at the micro level of the enterprise management. It is thus recommended that the followings be put in place:-

- i. **Consultations:** Rapid assessment should be conducted and environmental issues clarified through the support of public health officer of the council.
- ii. Formation of the environmental management groups comprising all the stakeholders in the informal sector development.
- iii. Integrating informal sector organizations into environmental policy. This can be achieved through locating low cost collection facilities close to the informal sector sites. Further, the city council should come up with training workshops to the informal sector workers on the value of environmental conservation.

- iv. Actively adhering to environmental conditions on the sites before allocating a plot to a particular informal sector worker.
- v. Use of fiscal and financial incentives such as extending tax relief and other benefits to encourage businesses to use environmentally friendly technologies while imposing penalties to polluters.

5.3.6: Proposals on the Assistance Programmes

Issue-focused towards the realization of sustainable Kibera neighbourhood development goal must focus on economic wellbeing of the residents. It is a widely recognized fact that Kenya, through government documents, the promotion of informal sector activities is a viable and dynamic strategy for achieving national development goals such as employment creation, poverty alleviation and industrialization by the year 2020. This is corroborated by a number of sessional papers, which the government has produced towards addressing the sector. Sole proprietorship is the major mode of enterprise ownership under the informal sector. However, in as much as this mode of ownership is advantageous, the informal sector workers should be organized in semi-formal groups. This will enhance the opportunities of the informal sector workers to have access to credit facilities as well as for effective capacity building. Such organizations should be registered with the local authority and should be made simple with each trader getting a number to display on his or her stand. This should be done such that members of an organization are in similar trade within the neighbourhood.

The main factors hindering commercial development in Kibera are inadequate financial endowment, lack of training in business management, marketing and technology and infrastructure provision. The assistance programmes recommended in this study are therefore financial, training, business management, marketing, and technology and infrastructure provision. In this regard, the assistance programmes should vary among the sub-sectors because each has its own unique business requirements. In the tailoring sub-sector the appropriate assistance programme should focus on credit provision, technical training and equipment provision, while in shoe making and repair, the appropriate assistance recommended should be a combination of management, credit, marketing and technology. The tinsmith and metal work, carpentry can enhance sales volume if they are adequately provided with credit, management, marketing and technical training. In the service sub-sectors like electrical repairs, hair saloons, and food restaurants extension of credit, management and infrastructure assistance should be considered the most appropriate. From the above analysis, it is clear that different sub-sectors require different assistance programmes for their development. It is thus imperative that sectoral approach to the informal sector development be emphasized when formulating and designing assistance programmes. It is the researcher's view that the assistance programmes should target the service sub-sector as currently they are the major employers. Further, the assistance programmes should strive to be gender balanced by targeting female informal sector workers. However, it is important to channel the assistance programmes through the various informal sector organizations.

5.3.7: Proposals on the Improvement of Legal and Regulatory Framework

The problem of the by-laws and regulations lies in the way they are interpreted and implemented, partly due to the informal sector operators' lack of awareness about the legal requirements and partly due to negative attitudes of policy makers and law enforcement officers on the informal sector. Therefore, there is a need of promoting conducive legal and policy environment towards the informal sector organizations. This can optimally be achieved by putting the following in place: -

- i. Existing administrative responsibilities for the informal sector spread over many government departments. They should be integrated under the council to form part of a larger department concerned with these organizations.
- ii. Provision should be made for the informal sector organizations in the next city's strategic structure plan by institutionalizing a two-tiered system in which formal and informal sector activities can co-exists in the informal settlements.
- iii. While all administrations are concerned with law and order, a flexible system of control should be introduced through the use of flexible licensing system, particularly in the informal settlements.
- iv. The council should be allowed by the central government to adopt by-laws to respond to the existing situation on the informal sector organizations.

- v. The council should be strict in enforcing the by-laws pertaining to allocated sites, environmental matters as well as simplification of by-laws on minimum standards in the informal settlements.

The council plays a major role in the delivery of infrastructure for the informal settlements and is the main regulatory enforcement authority. It is therefore recommended that the council formulates an integrated urban management strategy which embodies long-term goals and short-term targets for the informal settlements. These should be designed in consultation with the stakeholders in the informal settlements. The council should develop a network with various NGOs, CBOs, donor agencies and other government departments which are capable of providing assistance, such as provision of infrastructure, training workshops, credit facilities and marketing assistance among others in the informal settlements. Through such networks, the council can improve on methodologies and support for influencing change in the settlements. The council should consider increasing coordination with stockholders and further consider construction of better roads which may periodically be used as informal sector sites for the hawkers within the informal settlements such as Laini Saba.

5.4: Area of Further Study

Due to the small size of the sample and the lack of sufficient resources to conduct a wider survey, this study does not pretend to be scientific in the findings. However,

it is presumed that the findings are somewhat accurate reflection of the level of economic aspects of informal settlements. The findings apply to the sample surveyed, but could apply to slum populations within the city as a whole as the sample was representative of the total population from which it was drawn. A thorough investigation and analysis of the full economic potential of informal settlements vis-à-vis that of the entire economy would therefore be necessary in order for the government and other stakeholders to understand what measures to put in place in these areas. This is because if the current rural-urban migration rate persists, then informal settlements are here to stay and these can only be improved (in terms of infrastructure provision) and not eradicated.

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APPENDICES

APPENDIX 1A
QUESTIONNAIRE TO THE HOUSEHOLDS
SOCIO-ECONOMIC ASPECTS OF HOUSING

Economic theories of the household try to capture the complex structures of households and their behaviour. Information on housing, demographic structure, decision making process, resource allocation, employment and income earning mechanisms, community facilities, humane human development and household size and composition is the main concern of this questionnaire.

1.0 HOUSEHOLD INFORMATION

1.1 Questionnaire Number _____

1.2 Date: D/M/Y _____

1.3 Name of Respondent _____

1.4 Age of the respondent _____

1.5 List all the household members and any other person whom you live with__

No	Residence Status	Relation to household head	Sex	Marital Status	Age (yrs)	Education Level	Cost of Education	Employment Status
1								
2								
3								

Relation to Household Head

Marital Status

I. Head

2. Husband/ wife

1. Married

2. Widower/ Window

3. Son/ daughter

3. Separated

Formal Education

Employment Status

a. None

1. Self-employed (informal)

b. Primary

2. Employed (formal)

c. Secondary

3. Employed (informal)

d. Tertiary

4. Unemployed

2.0 INCOME, EMPLOYMENT AND EXPENDITURE

2.1 What economic activity are you engaged in?

a. Permanent employment/ _____ Temporary employment/ _____

b. Where do you work? _____

c. How far is it from your house? _____ (Kms)

d. Means of transport used to work

i. Bus/ *Matatu*

ii. Bicycle

iii. Trekking

iv. Train

2.2 Is it convenient to work at home? Yes/ _____ No/ _____

2.3 What is your income per month? _____ (Kshs.)

a. Do you have any other source (s) of income? Yes/ _____ No/ _____

b. If yes, please specify the source and amount per month.

Source (s)	Income per Month (Kshs.)
Other Household members	
Businesses (Please specify)	
Farming	

2.4 How have children working in gainful employment helped you meet your household expenses? _____

2.5 What is the average expenditure in Kshs. on the following per month?

Items	Amount (Kshs.)
Housing	
Education	
Food	
Transport	
Recreation	
Extended family	

2.6 How much do you save per month? _____(Kshs.)

2.7 To what extent would you say housing in Laini Saba has encouraged home based production of goods and services? _____

2.8 Do you own any income generating premises in the slum? Yes/_____ No/_____

If yes, please specify _____

2.9 Do you have properties in Nairobi? Yes/_____ No/ _____

If yes, please specify what they are and where they are situated _____

Property

Location

a. _____

b. _____

3.0 HOUSING UNIT INFORMATION

3.1 Do you own or rent this house? Own/ _____ Rent/ _____

3.2 What materials have been used for the construction of the housing unit?

Housing unit	Materials used	Source of materials
Floor		
Roof		
Doors		
Windows		
Walls		
Foundation		

3.3 How long have you lived in Laini Saba? _____ (Yrs)

3.4 Why did you move to Laini Saba? _____

- a. Low rent
- b. Convenience to work
- c. To be close to relatives
- d. Others

3.5 How frequently do you visit your rural home? _____

3.6 Do you send money to your rural home? Yes/ _____ No/ _____

If yes, how much per month? _____ (Kshs.)

3.7 How much rent did you pay per month when you moved in? _____ (Kshs.)

How much do you pay now? _____ (Kshs.)

3.8 Are you sharing the room with anybody? Yes/_____ No/_____

If yes in the above case, do they contribute to rent payment? _____

4.0 EDUCATION AND EDUCATION FACILITIES

4.1 What is your level of education? _____

4.2 Are your children in school? Yes/_____ No/_____

4.3 If not, or for those that are not, in what kind of economic activity are they engaged in? _____

Economic Activity	1	2	3	4
Selling of charcoal				
Selling of second hand clothes				
Street hawking				
Working at a construction site				
Operating a food kiosk				

4.4 How far is the school located in relation to the house? _____ (Kms)

4.5 Is the school convenient in terms of distance, reading and recreational facilities? Yes/_____ No/ _____

4.6 Is it convenient for the children to read at home? Yes/_____ No/_____

5.0 COMMUNITY SERVICES

5.1 Do the following services exist in Laini Saba?

Service	Shared? a. Yes b. No	If shared, no. of households	Provided by	Condition a. Good b. Bad
Water				
Toilet				
Health facility				
Electricity				
Roads				
Fire services				
Solid waste				
Sewer/Drainage				

5.2 Whose responsibility is it to provide and/ or otherwise improve the above facilities? _____

5.3 How do the above services enhance or otherwise discourage home based economic activities? _____

5.4 What do you think should be done to improve the community facilities/ services above? _____

5.5 What would you say about the density of this neighbourhood (i.e. the concentration of haphazard housing units)? _____

- a. Congested and overcrowded
- b. Not congested

5.6 How far are the following facilities in Km, if any? _____

Facility	Distance in Km	Number	Provided by	Condition a. Good b. bad
Nursery School				
Primary School				
Secondary School				
Health centre				
Social hall				
Shop				
Market				

5.7 How and who do you think has the responsibility of improving the above facilities? _____

5.8 If there are no refuse/ solid waste collection services in the neighbourhood, what do you do with your garbage? _____

5.9 To what extent would you say housing in Kibera Laini Saba has contributed to economic development? _____

Comments

Do you have anything you would like to add and/ or say and which you have not mentioned above? _____

APPENDIX 1B
QUESTIONNAIRE TO THE NGOs/ CBOs
SOCIO-ECONOMIC ASPECTS OF HOUSING

Non-governmental and community based organizations have taken centre stage in providing various services in the informal settlements. Such services have been known to various economic impacts within these areas and therefore information on their contributions will be the main aim of this questionnaire.

1. Questionnaire Number _____
2. Date: D/M/Y _____
3. Name of the NGO _____
4. Name of Respondent _____
5. For how long have you been in operating in Laini Saba? _____ years
6. What are your objectives? _____
7. What service(s) do you offer to the community of Laini Saba?
 - a. Housing
 - b. Water
 - c. Toilets
 - d. Drainage, solid and liquid waste
8. How many water points and/ or latrines have you managed to set up for the people of Laini Saba? _____
9. What challenges do you face in your project implementation and how have you managed to resolve them? _____

10. What are the achievements?_____

11. What contributions does the community offer in the various activities that you engage in?

- a. Financial
- b. Labour
- c. Professional expertise

12. Can you say that you have met all your objectives? Yes_____/ No_____

13. What in your view are the major housing problems in Laini Saba?_____

- a. Housing congestion
- b. Environmental pollution
- c. Scarcity of safe water
- d. Infectious diseases
- e. Lack of infrastructure
- f. Insecurity

14. To what extent would you say housing in Kibera Laini Saba has contributed to economic development in the area?_____

Comments

Do you have anything you would like to add and/ or say which you have not mentioned above? _____

APPENDIX 2
INTRODUCTION LETTER TO RESPONDENTS

Department of Architecture and Building Science,
School of the Built Environment,
University of Nairobi,
P.O. Box 30197,
NAIROBI.

Dear Respondents,

RE: INTRODUCTION LETTER – KATIKU BENSON MULU.

Mr. Benson M. Katiku is a masters student in the above department in pursuance of a masters degree in Urban Management. He is conducting a study on the **“Model for Socio-Economic Activities Development in Laini Saba Neighbourhood of Kibera – City of Nairobi”**. You have been selected to be part of this study and as such you are kindly requested to complete in the questionnaire which forms an integral part of the research project. However, any additional information you might feel necessary for this study will be highly appreciated. The information and data required so provided is needed for academic purposes only and will be treated in strict confidence.

Thank you.

MAURICE O. OYUGI.