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URBAN LAND USE PLANNING  
POLICIES FOR THE PHYSICAL DEVELOPMENT  
OF PERI-URBAN AREAS - CASE STUDY OF  
SHIRERE - KAKAMEGA //

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BY

A. N. SHIBIRA

A THESIS SUBMITTED IN PART FULFILMENT FOR THE  
DEGREE OF MASTER OF ARTS (PLANNING) IN THE  
UNIVERSITY OF NAIROBI

JUNE 1978

D E C L A R A T I O N

This Thesis is my original work and has not been presented for a degree in any other University.

 .....

C A N D I D A T E

This Thesis has been submitted for examination with my approval as the University Supervisor

 .....

S U P E R V I S O R

A B S T R A C T

The Physical Development of peri-urban areas has raised considerable concern in planning policy for the urban areas in Kenya. These peri-urban areas have shown considerable inconsistency with the orderly planned development of the towns in which they are found.

A case has been made that the peri-urban problems in Kakamega intensified following the Municipal boundary extension of 1971 that included these areas. Although it has been argued that one way of controlling fringe areas is by extending the town boundary to include these areas, we have found that mere boundary extension does not automatically eliminate the problems of uncontrolled developments in the fringe areas. We found that the boundary extensions without proper policing machinery creates a fertile environment for and speculation. Urgent measures have therefore been called for to deal with these areas.

We set out to examine the nature and extent of the current peri-urban problems in Shirere, the ultimate aim was to propose policy measures that would help promote orderly physical development in these fringe areas at minimum social and economic costs.

Although the current rate of rural-urban migration may be said to be the driving force of peri-urban problems, this has not been serious in Kakamega, where in-migration

rate is rather low, the cornerstone of the current problems in Shirere has been the land tenure system in the area and the current housing shortage in the town area, that has led to intensification of sub-standard housing in the fringe areas of the town, there is notable absence of policing the areas and hence the freedom of the land owners to carry out urban type of developments without official guidance.

It was felt that Shirere area would serve as a basis for making appropriate land use policies since most of the fringe problems have surfaced in the area. Shirere sub-location is situated to the south and south-west of Kakamega town and covers a total area of 19 sq.km., about 50% of the total municipal area.

An analysis of the current problems in the area has been split into, physical, social, economic and legal aspects, these broad categories have been used to examine the current problems, their nature, extent and implications to the development of the area under study and the town as a whole.

Many and varied problems have surfaced in Shirere, there are problems related to land tenure system, speculation, lack of co-ordination in the provision of services, inefficient control measures and acute deficiencies in the provision of in services and desired

community facilities. One of the serious problems that has emerged is lack of appropriate measures to control the ongoing developments, this has led to mixed land uses <sup>and</sup> /an undesirable rate of uncontrolled developments. These shortcomings have been attributed to lack of resources to deploy the needed manpower for policing these areas.

It has been found that there are certain factors that have contributed to an influx of people into Shirere as opposed to other fringe areas, these factors are for example, the nearness of the area to the town, water availability, availability of cheaper housing and the fertility of the soil.

It has therefore been considered that appropriate land use policies must be designed to create a better environment in fringe areas where people are happy to work and live in. Stringent legal measures have been suggested which will help to strengthen the current weakness in the administration and management of the fringe areas.

Policies for the improvement of fringe areas have been given, though it has been noted that some of the envisaged policies can best be approached from the National level. Policies have been suggested which call for additional facilities in Shirere, an agri-residential suburb has been suggested, some policies that aim at curbing speculation have also been given. Legal enactments with greater powers of control to the local authorities

have been given.

Having recognized that there is need to realign land use planning policies to deal with the immediate needs in Kakamega as well as its peri-urban areas, the study has concluded by recommending comprehensive planning not only for all the areas within the municipal boundary but also for the areas that fall immediately on the town borders, This will eliminate any disorders in development in the event of a boundary extension and will have the effect of minimizing the problems compared to what has hitherto been observed.

A C K N O W L E D G E M E N T S

In the preparation of this work, I have received considerable assistance and co-operation from several people and organizations, but due to limited space it is not possible to record all of them here.

First and most important, I am indebted to my Supervisor, Mr. M. K. Miringu for his assistance, encouragement and his patience throughout the preparation of this work, which has been a fruitful experience indeed.

I must also thank the entire staff of the Department of Urban and Regional Planning for any assistance offered and especially the moral encouragement of the Chairman, Professor Subbakrishniah.

To my wife, Uniter and the two children Gaireth and Jimmy, I must register my thanks for their patience throughout the period of preparing this work.

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( viii)

I must also register my thanks to Mrs. R. Obwogi for kindly typing this thesis.

Lastly, I would like to absolve the individuals named, of all responsibility for the ideas, opinions, errors, and any shortcomings of this work, this remains my responsibility.

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Department of Urban & Regional Planning  
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June 1978.

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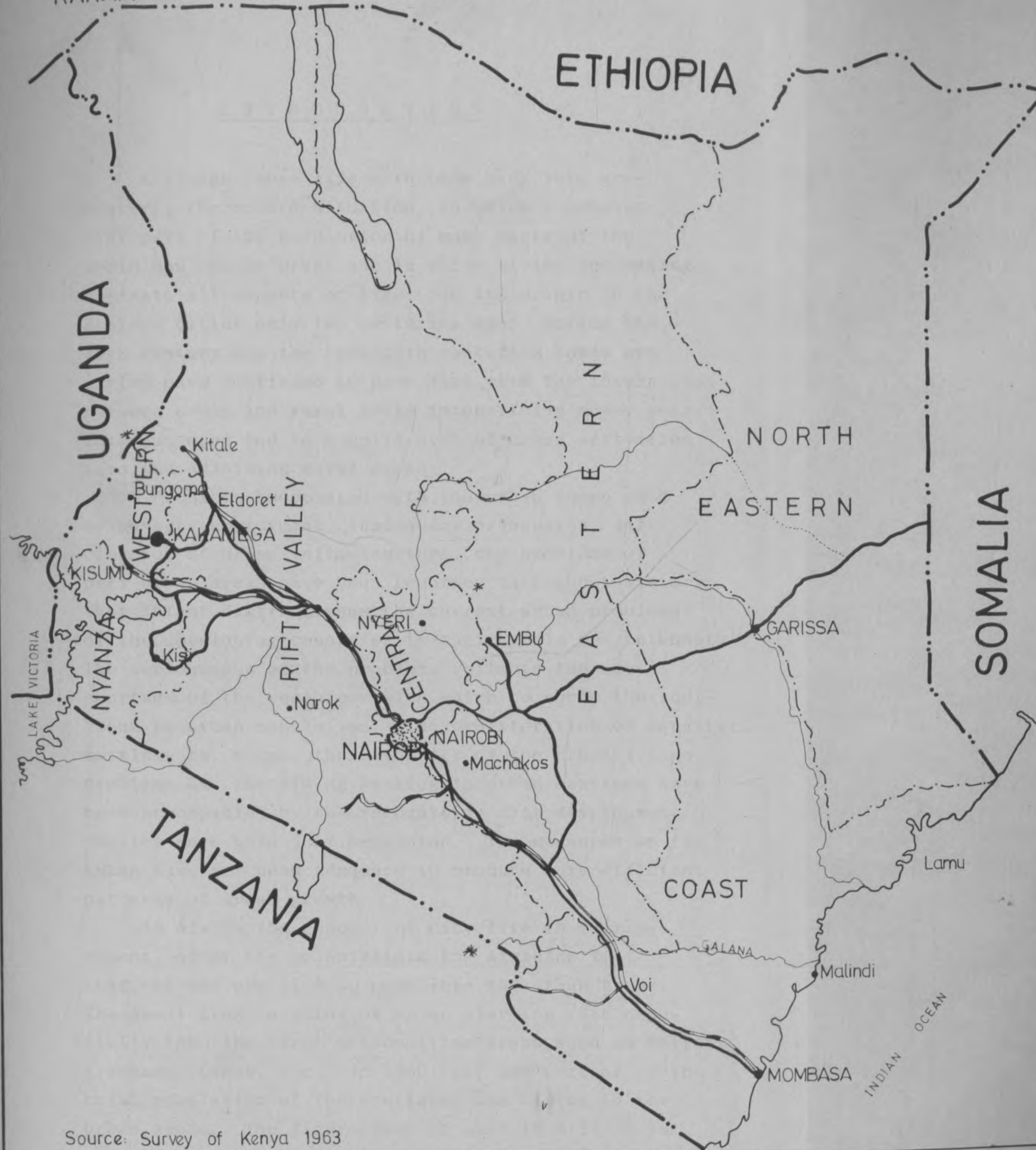
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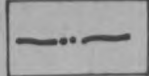
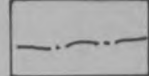
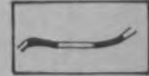
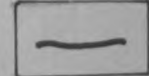
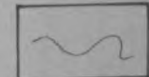
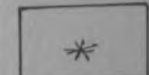
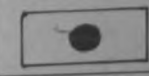
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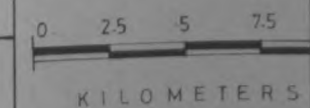
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-  Provincial Boundary
-  Railway Line
-  Roads
-  Rivers
-  Mountains
-  Study Area

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MAP No.1

Source: Survey of Kenya 1963

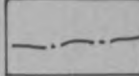
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KAKAMEGA TOWN - NATIONAL CONTEXT

ETHIOPIA

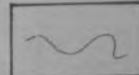
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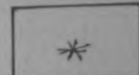
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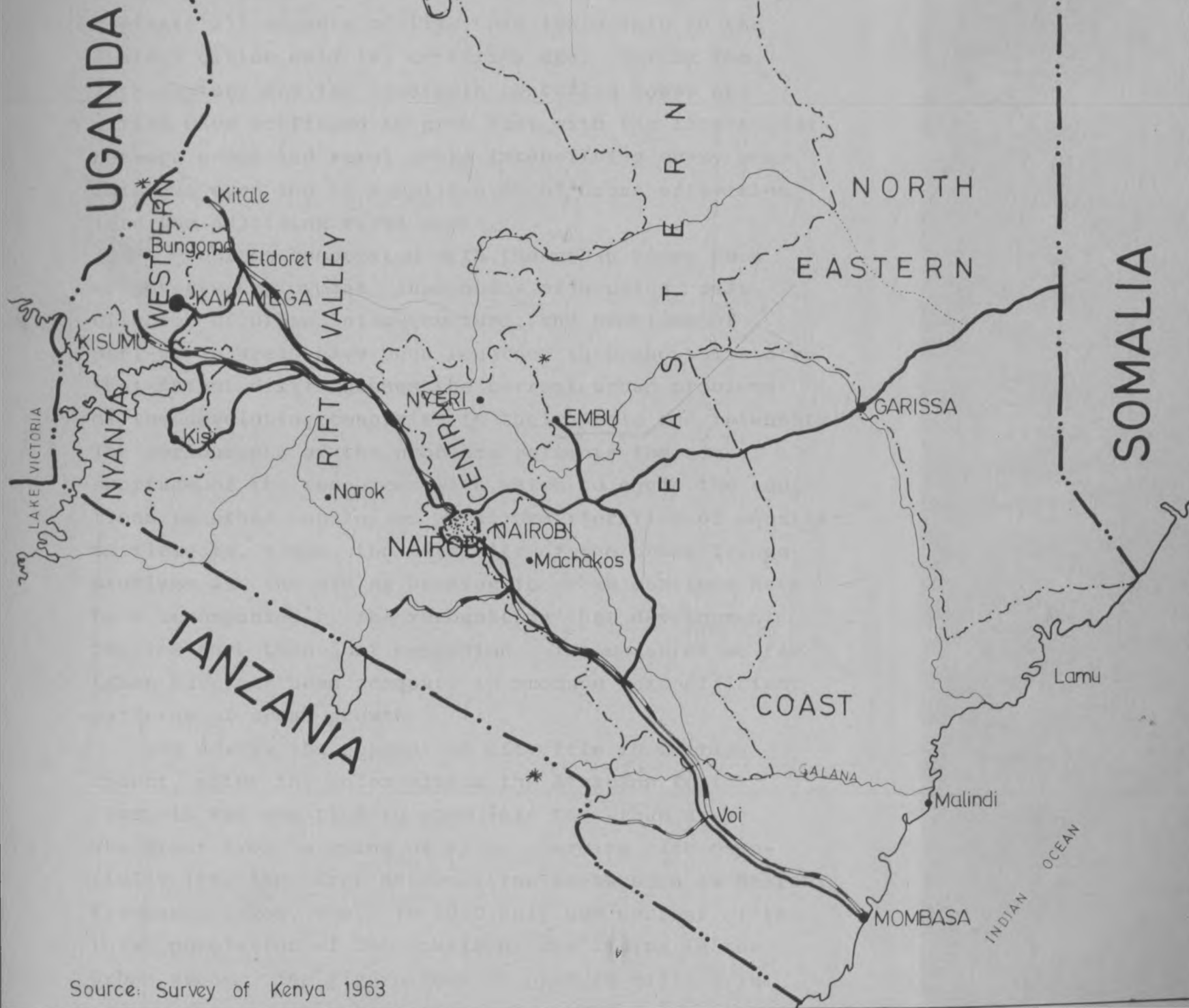
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MAP No.1



Source: Survey of Kenya 1963

URBAN LAND USE PLANNING POLICIES FOR THE PHYSICAL DEVELOPMENT OF  
PERI-URBAN AREAS - CASE STUDY OF SHIRERE KAKAMEGA

## I N T R O D U C T I O N

Although urban life stretches back into pre-history, the modern situation, in which a substantial part of the population of many parts of the world has become urban and in which cities increasingly dominate all aspects of life, had its origin in the Western cities only two centuries ago. During the 19th century and the twentieth centuries towns and cities have continued to grow fast with the interaction between urban and rural areas intensifying every year. This has even led to a spill over of urban activities into the adjoining rural areas.

Problems associated with the urban scene such as poverty, employment, inadequacy of housing, deficiencies of urban infrastructure, the problems of peri-urban areas have been recorded throughout history. What in fact distinguishes the current urban problems of the developing countries is their scale and intensity<sup>1</sup>. The seriousness of the problems reflects the acute shortage of the resources with which to equip the additions to urban population. The proliferation of squatter settlements, slums, the diversity of the urban fringe problems and the rising backlog in urban services have been accompanied by the recognition that development implies more than just expansion. The measures so far taken have not been adequate to produce more efficient patterns of urban growth.

In Africa the concept of city life is fairly recent, after the colonialists the Africans felt that, it was now time to move into the urban areas. The great trek is going on at an alarming rate especially into the large metropolitan areas such as Nairobi, Kinshasa, Lagos, etc. In 1900 only one percent of the total population of the continent was living in the Urban areas. The figure rose to over 10 million in

the 1950's an increase of 5,2%, and in the 1960's the figure had increased by 8,1%,<sup>2</sup> Given the same trend, it is possible that the population in major cities has doubled. This shows that, the population growth in the developing countries of Africa in the urban areas is faster than the respective economies can provide services for.

Although to conclude that, the continuous population increase in the urban areas is the main factor behind most deficiencies in the urban areas would be misleading and pretentious, it nevertheless has a very strong bearing. The colonial tradition only paid attention to gazetted towns in terms of planning, and in fact it was the layout design and the structural quality of the urban areas that was taken into account. Emphasis was laid to areas only within gazetted town boundaries and in fact ignored the areas just outside the boundaries, many of these areas are now densely populated and apparently urban, but there are no essential urban services. To aggravate the problem further, the type of development control that exists does so only in paper leaving too much room for uncoordinated developments to spring up.

There have been attempts to cope with the control of such areas, such as provision of water and latrines in the case of Mathare in Nairobi, the demolition of Majengo in Mombasa, and recently in 1977 the squatter clearance along the Nairobi river. These measures have proved sporadic and inconclusive because there is no attempt to solve the problem from its roots evidenced by the recurrence of the problem time and again.

Problems of the urban areas are many and varied, those that are prevalent in developed countries need not necessarily be the same in developing countries. Their

intensities differ, the nature and extent of the problems also vary in the developing countries.

It is not possible to examine all problems of our urban areas at the same time. This study therefore focuses its attention to a particular problem in one of the smaller Towns of Kenya, thus Kakamega. The problem at hand focuses on the peri-urban Development of the Town.

#### 0.1 The Problem and Its Significance:

In the immediate past colonial era, there was no declared policy on urban development, this was because attention was mainly focused on economic development. This lack of recognition of the need for an urban development policy in the general framework of the National Development Programme was so obvious that it was alluded to in a recent study<sup>3</sup> as the "overlooked phenomenon".

In the 1964/70 Plan there was only a brief mention of Settlement Policy but this was in respect to agricultural re-settlement. The revised National Development Plan 1966/70 was based on the same principles in which rural re-settlement was emphasised. It was however recognised that the increasing level of rural-urban migration intensified the already existing shortage of housing in the urban areas resulting in overcrowding among the African population. The objective was then to alleviate the problem of housing shortage by activating house building through various forms of assistance, yet a comprehensive urban development policy was still not mentioned.

The 1970/74 plan recognized the need to integrate physical planning and economic planning. The plan went on to review the pattern and characteristics of urbanization in the country and concluded that the trend would

continue which in economic terms spelt a welcome sign to economic development. The imbalance between Nairobi and Mombasa and other towns was highlighted. In the same plan there was a note to the effect that attempting to decentralise at an early stage was a danger. Nairobi and Mombasa were to continue to expand as they had not attained their optimum sizes, but at the same time it was noted that some medium sized urban centres which already possessed certain levels of infrastructure were designated as centres for industrial and growth namely Kisumu, Nakuru, Thika, Kitale, Nyeri, Embu and Kakamega. Industrial and commercial development were to be directed into these scheduled areas. The 1974/78 plan generally reviewed the progress in the implementation of the 1970/74 strategy.

Such is then the trend of urban development in Kenya. It is estimated that some urban areas like Nairobi are growing at a rate of 7% per annum and their populations are expected to double at the turn of the century.

There has been a growing interest in examining the urban problems from various disciplines, by economists, geographers, sociologists, planners and others, regardless of the background of the individual conducting the research. One tends to be biased depending on the implications of the problem he is looking at. One area in which the urban scene has been of much interest to various disciplines is the peri-urban areas of various Urban structures, As outlined earlier the emergence of these peri-urban problems came as a result of a lack of clear land use policy. A planner finds the peri-urban a point of interest, because he is concerned with co-ordinated development for the entire urban area. It

has been noted in Kenya that the landless and the land poor have made their appearance in our towns leading to crowding in the few houses that there are or just manage to built any form of a house as squatters on cheap land regardless of whether there are services or not. This is often in the peri-urban area. Obviously such developments constitute a serious health hazard to the inhabitants and in the future can create obstacles to the orderly and economic expansion of the Town.

There has been an emphasis of study on the peri-urban areas of Nairobi, Mombasa and recently Kisumu<sup>5</sup>. It is our observation that not sufficient attention has been given to the problems of the smaller towns and especially the newly gazetted municipalities of Nyeri, Embu, Meru and Kakamega. This may be due to lack of the realization of the existence of the problem, or due to shortage of staff and initiative from the researchers. Even in the cases of Mombasa, Nairobi and Kisumu, the studies commenced after the problems had surfaced.

Not all the problems in the peri-urban areas are caused by squatters at all, in some cases the problems are accelerated by the individual land owners.

Kakamega started as an administrative post for the colonial government when Mumias the then British Administrative Post proved unhealthy,<sup>6</sup> until the time when Gold was discovered not much developments took place. In 1930's to 1940's the Gold discovery stimulated the development of the town, which also lost the momentum after the closure of the Gold mines. The town remained dormant until its elevation to Provincial Headquarters in 1963. An event which may be said to be the corner stone of the current peri-urban problems is the Municipal Boundary extension that ensued in 1971, and revised the boundaries which had been fixed in 1930.

The planning of Kakamega town has had a very brief

history indeed that stretches from 1950's. Formerly the planning of such small towns had been the responsibility of the District Commissioner. The first development plan came in 1950, followed by other plans in the years 1956, 1959, 1961, 1963 and the 1970 long term plan, which has now been followed by the 1972 short term plan. Since the long term development plan has not been gazetted <sup>7</sup> it cannot be taken as the official guidance of Kakamega's development. This is the plan that covers the entire municipal area, but it is not a legal document. The only effective plan that so far exists for Kakamega town is the 1972 short term plan that covers only 8 sq. km. of the old township area and does not include the 41 sq. km. included in the municipality in 1971. In the short term development plan it is noted that "the Government and the Municipal Council should ensure that urban type of developments should not take place in the municipal extended area until the old township area has been used up <sup>8</sup>". It is lack of this official guidance to development that has given momentum to developers in the peri-urban area to develop their land in whichever way they find fit. With no plan for guidance, the Municipal authorities and the Government can in no way stop developments, because they will have no basis on which to do that.

The peri-urban areas of Kakamega are freehold land, in which the owners use may be said to be exclusive and not absolute as the case is now. This is the other gap



that has rendered the land vulnerable to haphazard urban type of developments. Although there exists legislation to the effect that land in the immediate surrounding of a township or municipality within five miles be gazetted<sup>9</sup>, this has not been the case and hence the emergence of the peri-urban problems that are now prevalent in our gazetted townships and municipalities. This is an area of study that has not in the past been given emphasis.

We note that there lacks a comprehensive machinery to deal with associated problems in the peri-urban areas of Kakamega. By extending the municipal boundary the Municipal Council should exercise control of the area in order to minimize future compensation, this control is so far ineffective, no policy approaches have so far been formulated and implemented to promote co-ordinated growth in the peri-urban areas of Kakamega. It is evident in Kakamega that the present planning policies do not appear to be sufficiently cognizant of the current needs in the settlement as well as its peri-urban areas. The significance of this is such that the insight gained through the study of the peri-urban development will greatly assist in the formulation of future urban growth strategies for the town which will help to avoid last minute attempts to solve the problem.

## 0.2 OBJECTIVES OF THE STUDY

This study has been undertaken with the following objectives.

- (i) To examine the origin and extent of the identified peri-urban problems.

- (ii) To examine the impact on land use and the consequent implications to planning as a result of the municipal boundary extension.
- (iii) To establish the extent to which the freehold land tenure system influences the activities in the peri-urban areas of Kakamega.
- (iv) To propose policy guidelines for co-ordinated physical development of the peri-urban areas in Kakamega.

### 0.3 STUDY ASSUMPTIONS

The following assumptions have been made with regard to the study.

- (i) That the population of the town will continue to increase in the foreseeable future through natural increase and in migration and that this extra population shall spread into the peri-urban areas.
- (ii) That there will be an expansion of economic activities thereby creating more employment opportunities and hence a consequent increase in the population size of the town.
- (iii) That the Municipal boundary extension has not been followed with the extension of legal powers into Shirere and hence lack of proper development control.
- (iv) That the pattern of development in Shirere has been significantly influenced by the difference between the land tenure system in the area and that in the old township area.

- (v) That the provision of a clear land use plan would help improve land use utilization in Shirere than is the case now.
- (vi) That the shortage of housing in Kakamega town has significantly influenced the rapid unplanned housing developments in Shirere.

#### 0.4 DEFINITION OF TERMS

It is important to try and define the terms urban and peri-urban in order to place the study into a proper perspective. This will help clear doubts that may be raised. There are various definitions of the urban area, depending on who is looking at the urban scene. The aim here is to show what other definitions exist and then try and give a definition that will be adapted in this study.

The term 'urban' has been used by various people to mean different things. To an economist an urbanized area is that which, its economy has been transformed from primary economic activities like agriculture to industrial and commercial activities. A geographer views the urban area, as that whose land use has changed from rural use to urban use, this is normally seen in terms of greater intensity of population concentration, but this raises doubts as to whether a mere population concentration constitutes what we may call urban or the process of urbanisation.

A sociologist differentiates an urban area in terms of population change and composition, their behavioral patterns, their way of life and their values.<sup>10</sup> To the layman and the architect the urban environment is simply the built physical environment, it is therefore seen as a physical plant and a container of human activities.

In legal terms, the entire gazetted area can simply be referred to as an urban area, regardless of the activities that are being carried on.

Pryor R.J.<sup>11</sup> contends that in practice it is not easy to define the urban fringe. It is possible to give the term a more precisely defined means based on the proportion of the total land area under urban use and to subdivide the fringe zone into rural-urban and 'urban rural' components. It is not easy to define precisely the fringe of a town, we can say that it is in effect a zone where more scattered urban expansion is taking place.

In geographical literature the term urban fringe is used in a more general sense and normally refers to the area in which sub urban growth is taking place and where rural and urban land uses are mixed together to form a transition zone between town and country.

In this study we shall adopt Caters definition of the Urban Fringe, thus 'the space into which the town extends as a result of the process of urbanisation.' This will be so because the transitional area around the outer edge of the city is the result of forces which operate in a variety of ways throughout the whole urban area, for example, population growth at the fringe is merely a part of the more complex flows involved in infra-urban population movements.

We also consider the urban fringe as a distinct city region with its own characteristics quite different from those that occur in the rest of the town. In Kakamega the peri-urban area has been further taken to mean, the areas that were formerly outside the Municipality but were included in the Municipality following the Municipal Boundary extension of 1971. It is the mixed land use characteristic, the haphazard urban type of developments that makes the

area resemble a peri-urban settlement. We should note here these peri-urban developments concentrate along the road (ribbon developments) that runs through Kakamega town from Kisumu to Webuye.

Lastly it should be reiterated that the definition of an urban fringe depends on the country under study and the field of specialization of the urban researcher. What constitutes an urban fringe may not be so in one country. We associate fringe areas in developing countries with disorder and service deficiencies as well as areas of the low income areas. This is however not true in the Western world, where people in the fringe areas are high income earners.

#### 0.5 RESEARCH METHODOLOGY:

The study has drawn information from various Governmental offices that influence or are likely to influence developments in the study area. Interviews have been conducted with officers in the following places: Office of the Commissioner of Lands, the Department of Physical Planning, Survey of Kenya, Ministry of Local Government, Ministry of Agriculture, Ministry of Water Development. The most important source of information has been the Municipal Council of Kakamega. Relevant data to the study has been provided analysed manually and used in the study to support observed or expected occurrences.

At the Local level, informal and formal interviews have been conducted with leading personalities such as the Town Clerk, the area Chief, the Assistant Chief of the study area, leading Church Elders, village elders etc. The assumption has been that, the leaders know better than the people they rule what is good for the community. The views expressed by those interviewed have then been interpreted for the common good of the entire town population. It is up to the urban researcher

and especially the planner to interpret the views of both civil and political leaders into practical and use patterns. This proved to be a reliable source of raw data, that was openly given.

We also conducted some interviews based on individual households in the area, and the second questionnaire was used in cases where some workers from the town rent living units in the study area.

It has been estimated that the population of Shirere is approximately 12,000 people with an average household size of 6, this gives about 2,000 households in the study area, we took a 10% sample for our household survey, which was 200 household questionnaires. This was done on the basis of stratified random sampling. Although a larger sample size could not be taken, it is assumed that the sample taken is representative of the entire peri-urban areas of Kakamega. Not all the Shirere area has urban characteristics, some of the areas still are basically rural. With the use of Survey of Kenya, registration<sup>12</sup> sections particular areas of problems were identified, plotted and interviews were concentrated in these areas only. All the areas adjoin the old township and in some cases adjoin the Kisumu Kakamega road. About two hundred tenants were also interviewed in the area, in all cases the tenants happened to be on the same plot as the owner of the household interviewed as part of the household survey. The questionnaire was written in English but the actual interviewing was conducted in Luhya or Kiswahili since most of the dwellers were predominantly Luhya, and in a few cases, Luos who migrated to Kakamega in the early 1930's or 1940's.

An important aspect of this study is therefore identification of those factors which will form the basis for the study of the development of the peri-urban areas. The choice of factors to be used as diagnostic indices

have been based on the fact that the factors must be readily easy to identify and measure.

The factors that have been selected as indices for studying the problems of the urban fringe in Kakamega and which were all incorporated in the questionnaire were as follows:

#### 0.5.1 POPULATION

Since the urban area is a forum for human communication and interaction and given that population studies are basic and essential requirements for land use planning and the eventual use in forecasting the growth potentials of an area and for estimating and planning general land use. Population forms an important basis for understanding the ongoing activities in any part of the urban area. Population studies also focus on peoples places of origin an important indicator of in-migration that lies behind the peri-urban problems.

#### 0.5.2. SOCIO ECONOMIC FACTORS:

We should like to explain the activities of the peri-urban area against the background of both social and economic factors such as employment, industrial potential etc. So as to be able to clearly appreciate the problems fo the town in relation to the study area.

#### 0.5.3 LAND USE:

This will enable us to compare the co-ordinated development in the planned old township area and the unplanned developments in the peri-urban areas of Kakamega.

#### 0.5.4 LAND VALUES:

Land values are so closely associated with the socio-economic activities of an area. This study will enable us to show the general level of prosperity

# SHIRERE IN RELATION TO THE OTHER MUNICIPAL AREAS

## LEGEND



The Study Area



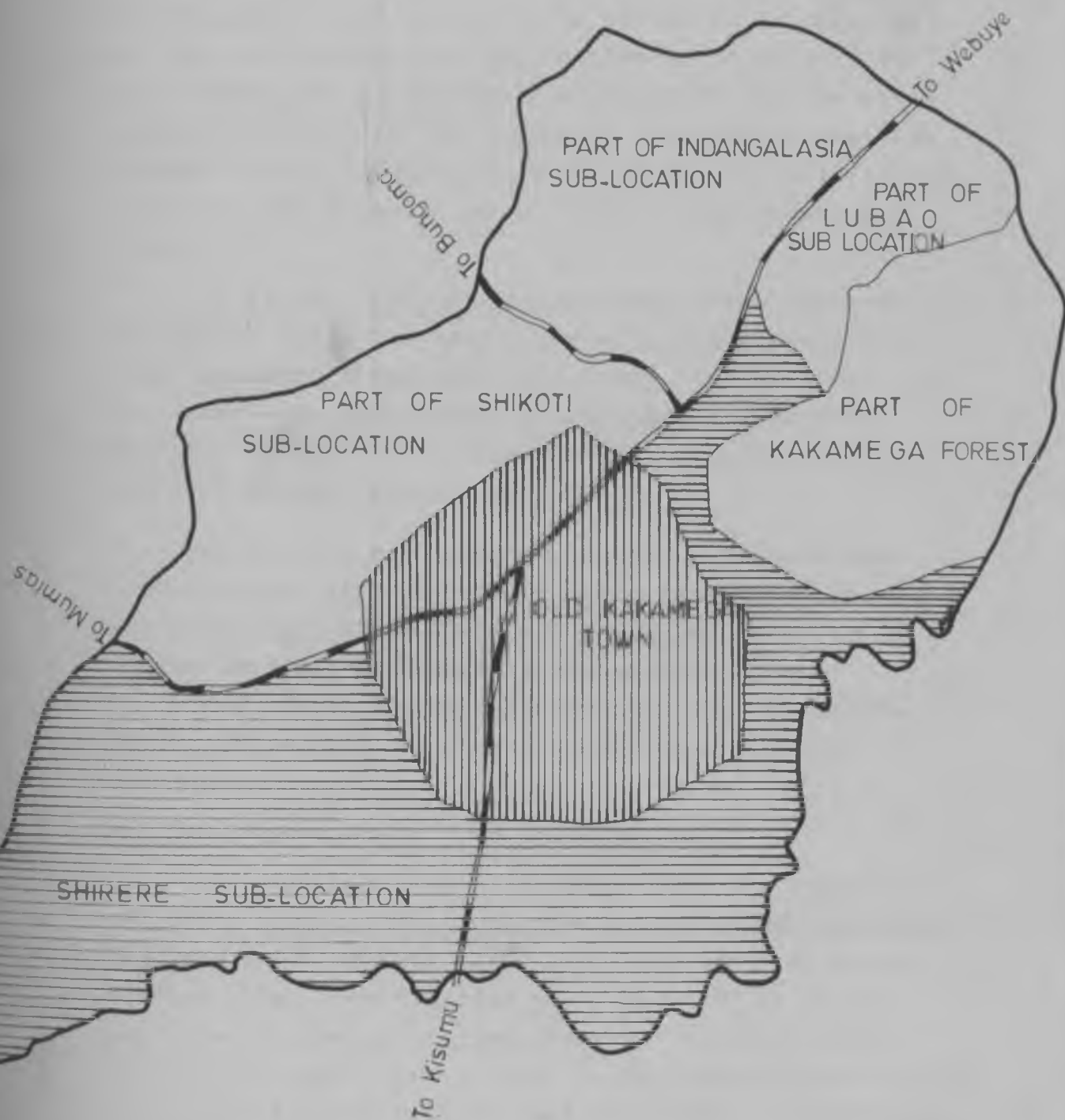
Other Municipal areas



Main Roads



Old Township area



Name: A. N. Shibira

Dept. of Urban & Regional Planning, University of Nairobi.

Year: 1977/78



Source: Survey of Kenya

URBAN LAND USE PLANNING POLICIES FOR THE PHYSICAL DEVELOPMENT OF PERI-URBAN AREAS CASE STUDY OF SHIRERE KAKAMEGA

0 1 2  
Kilometers

MAP No. 2



level area.

It is to be noted that the present planning policies of Kakamega do not appear to be sufficiently cognizant of the current needs in the settlement as well as the peri-urban area of Shirere. Although the entire peri-urban area shall not be examined, it is hoped that the insight gained through the study of Shirere will greatly assist in the formulation of future urban growth strategies.

It is the intensity of the peri-urban problems in Shirere vis-a vis the problems in other parts that have warranted the bias of the study, the proximity of the study area also makes it enjoy advantages from the town as opposed to other peri-urban areas that are far removed from the town.

The area is also notable for the intensive subsistence agriculture that forms the livelihood of existence for the people. Due to the attractiveness of the land and intensity of activities, Shirere has a population density of approximately 767 persons per ha as compared to the township density of 400 persons per ha.

#### 0.7 SCOPE AND LIMITATIONS OF THE STUDY:

This study has been organised in eight chapters including the introduction. The introduction considers the problem in general terms and tries to look at the problem under investigation as a result of the rapid urbanization process in the country. The definition of the terms which are crucial to the study is also given. It is also in this section that an attempt will be made to consider other related works either from the local experience or from the western world. The aim here is to discover either deficiencies of the study or the

achievements of the studies which will prove useful in the final stages of this study, while drawing policy proposals.

In chapter one, the study will concentrate on the historical development of the town over time, its evolution in the Regional Context, the relationship of the town and its hinterland. The chapter will also examine the current land uses in the town. It is in this chapter that we hope to discover the general problems of the town throughout its existence. Special reference in terms of the town's problems will be concentrated on the planning problems that face the town. It is also at this point that the peri-urban problem shall be highlighted and its possible consequences to the development of the town. It will be important to examine the functional relationship of the town because what may be taking place in the peri-urban area may have a direct bearing to what is going on in the town.

In chapters two, three, four and five the study will focus mainly on the Study Case thus Shirere Sub-Location, Chapter Two will concentrate on the physical base, whereas Chapter Three will emphasize on the social aspects of the area. Chapter Four attempts to analyse the economic base of the study area. The whole exercise of considering physical, social and economic aspects of the community will avail us with the required information that will help point to various policy issues that may be necessary to promote co-ordinated growth of the entire town. It is through these chapters that most of the problems in the study area will come to surface.

In Chapter 5 we intend to examine all the relevant legislation that affects the study area. Legislation shall be looked at as an instrument of Development Control. Areas of weaknesses and where future emphasis

will be required will be highlighted in this Chapter. The implications of freehold land shall be examined in the light of how they influence development in the area. It will be necessary to look into the problem of land acquisition as has been suggested time and again. To what extent is acquisition an answer to the peri-urban problems? What are the powers of the local authority with regard to freehold land? If the powers of control are there, why is there a failure in enforcing the laws? We should be able to resolve such questions in the end.

In Chapter Six an attempt will be made to look at the problems identified in the study area, their past, past present and future implications to the development of the area of study. We should be able to show to what extent this affects the co-ordinated development of the entire town.

Lastly this study will propose policy guidelines both at National and Local levels, with specific policy strategies for the area, with specific policy strategies for the area under study.

Although the study focuses on a particular area, it has got its limitations that could not be overcome just like any other factor.

The time taken in the field was only three months, a very short time indeed given that it was the author who conducted the interviews single handed. This did not allow for taking a large sample size. A larger sample size would have meant employing some assistants and yet there was no finance to meet this extra expense. The size of the sample taken therefore has not been realistic in terms of providing a basis for population projections. The population figures will therefore be derived from Base Population Statistics as per 1969 Census.

Just like what has been experienced in most of the Urban researches in developing countries in terms of

scarcity of data, this study is no exception. It has been observed that there is lack of relevant data in Kakamega, especially when one is looking at a problem that has not been studied before. In a few cases where such data are available they are often not complete or up to date. Furthermore statistical information especially where obtained from different sources may not be relevant.

Any attempt therefore to rely on statistical approaches or to develop mathematical models of trends based on insufficient and not entirely reliable statistics would in these circumstances appear very unrealistic. Statistics will therefore be used cautiously only to reinforce or support general observations where possible.

We should also emphasize that our prime objective is to draw policy guidelines for the peri-urban areas of Kakamega. But owing to limited time it has not been possible to investigate the activities going on in the entire peri-urban areas, concentration has been focused on Shirere sub-location; with the basic assumption that Shirere Sub-location is representative of the entire urban area. It will not be possible in a study of this nature to draw a detailed development plan; first due to the limited time and secondly due to limited financial resources.

Lastly there was a problem of suspicion among the peri-urban dwellers. Some responded with sheer disinterest and some simply chose not to be interviewed, because of this it would be misleading to rely on all the results of the sample. Some people were reluctant in disclosing their monthly income. It was therefore up to the interviewer to ask some leading questions which could in the end indicate the monthly income of the respondents.

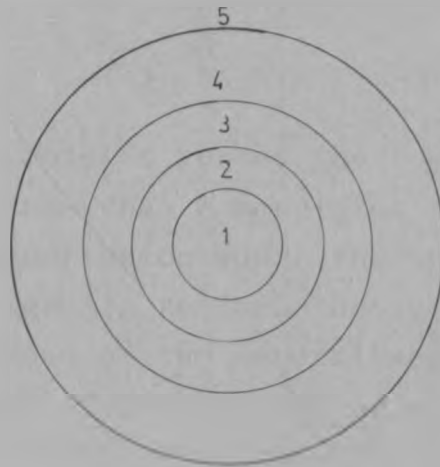
It is within the confines of the foregoing limitations that we now proceed to examine the study area.

#### 0.8 LITERATURE REVIEW:

In this section we shall review some of the theories and models that have been developed for describing and analysing the urban physical form. It is hoped that these theories although based on Western studies will put the study into international perspective. It does not necessarily follow that the way cities grow in either western or eastern world is the same in the developing countries. The differences noted will help to explain the dissimilarities that exist in peri-urban areas of the different continents. We shall also examine the suburban developments in developed countries vis-avis the developing countries and lastly an attempt will be made to review local literature on urban development in Kenya.

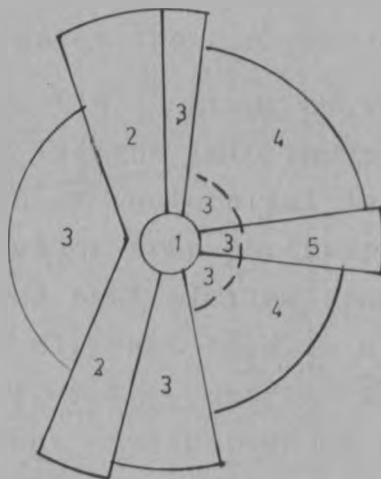
Burgess<sup>13</sup> has developed a model based on an empirical Case Study of Chicago to explain the ecological process in the city and the resulting land use forms. A city has been conceived as a series of five concentric zones (see figure below) the first zone contains the central business district as well as other central area activities like entertainment, hotels, etc. Zone two is shown as the transitional zone that is characterized by the variety and changing form of use often containing slums. Zone three contains the lower income, high density housing district, whereas the fourth zone contains the large residential areas of the city where the middle class families are found. The

## Concentric Zone Concept



1. Central Business District
2. Zone of Transition
3. Zone Of Workingmens Homes
4. Zone of Better Residences
5. Commuter's Zone

## Sector Concept



- 1 Central Business District
- 2 Wholesale Light Manufacturing
- 3 Low-Class Residential
- 4 Medium-Class Residential
- 5 High-Class Residential

FIGURE 1.

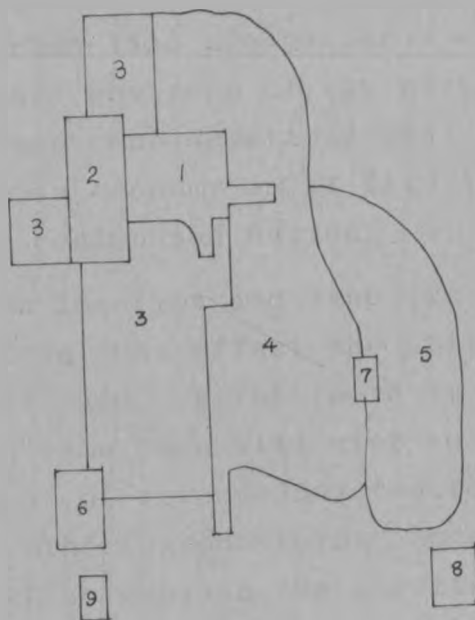
Source Generalized Explanations Of the land use patterns of cities by Chauncy D Harris and Edward L Ullman "The Nature of Cities" The Annals of the American Academy of Political and Social Science, November 1945.

fifth and final zone is termed the commuter zone in which there are sub-urban communities found along the arteries of transportation where the upper-middle class and upper income groups reside. He further explains that each inner zone of the generalized diagram tends to invade the next outer zone in the process of urban growth through a sequence of invasion and succession. This depends on population growth and economic expansion of the City. When urban areas are decreasing in population the outer zones tend to remain stationary but the inner fringe of the transitional zone may recede into the commercial district. This explanations of Burgess are highly theoretical and lack universal practicability.

Sjoberg<sup>14</sup> studied the city prior to industrialization and showed that pre-industrial city displays a patters that negates the concentric zone scheme.

Homer Hoyt's<sup>15</sup> study of residential areas provided some new insight into the patterning of land uses. The pattern of residential land uses in the city centre along the major transportation lines was observed. The theory observed that similar uses originate near the centre of the city and tend to migrate within the same sector away from the centre. This theory (sector) provides a different explanation of residential patterns of land use from that explained in concentric zone theory. The multiple nuclei concept of urban growth first suggested by Mackenzie<sup>16</sup> is built on the assumption that there are often a series of nuclei in the patterning of urban land uses rather than the single centre uses in the above theories. Harris and Ullman<sup>17</sup> have expanded this concept have observed that various nuclei were distrinct centres in the origins of metropolitan areas which persist as nuclei as growth fills in the areas between them. These nuclei appear

# Multiple Nuclei Concept



- 1 Central Business District
- 2 Wholesale Light Manufacturing
- 3 Low-Class Residential
- 4 Medium Class Residential
- 5 High Class Residential
- 6 Heavy Manufacturing
- 7 Outlying Business District
- 8 Residential Suburbs
- 9 Industrial Suburb

FIGURE 2

Source: Same as figure 1



in various forms e.g. sub-urban centres, specialized centres for functions such as wholesaling, industries, etc. Multi nuclei come as a result of certain activities which are interdependent clustering in the same locality. Segregation of uses, effect of high land values in attracting or repelling uses in the process of nucleation.

Chapin<sup>18</sup> notes that the economic forces which contribute to shape urban land use patterns extend far beyond the immediate environs of any particular urban area. It involves considerations and functioning of the urban economy as it fits into the larger economy of the region and nation.

Alonzo<sup>19</sup> in his work on location and land use has introduced two variables that affect the utility of any given parcel of land. First there is the quality of land which each user will wish to acquire and secondly the amount of revenue devoted to land and travel costs and other expenditures. Location theory therefore seeks to explain the question of the most rational location on pattern of land use.

Richard Ratcliff whose major preoccupation in urban land use is mainly based on the interplay of market forces also recognises that economic activities in each community directly serve its population and are influenced by the nature of that population, and that population tends to influence future land use in urban areas and overspill is felt in the peri-urban areas.<sup>20</sup>

In his generalized study of urbanization in developing countries Gerald Breeze<sup>21</sup> identified two major land use problems in these countries. The first problem was the provision of space for the new immigrant and swelling population in the city and secondly the failure of these countries to establish effective land use and land value control

measures, although these conclusions were based on Indian cities, they are still applicable to African cities over where urbanization and planning experience are less well established.

William Hance<sup>22</sup> has carried out surveys of selected African cities, these includes a cross section of cities of various categories, some which were basically traditional like Ibadan, Addis Ababa, etc, a number of them colonial creations like Khartoum, Abidjan, Nairobi, Kampala and other precolonial cities like Accra and Lagos. These surveys have revealed a number of problems that occur, such as the high rate of population pressure from the rural areas. The common problems that relate to uncontrolled developments and the inadequacies of the economic bases of these cities to cope with ever increasing demands of services on them.

Professor Mobagunje<sup>23</sup> strongly asserts that that there is a recurring urban land use patterns in African cities, prevalent amongst this, to the considerable growth of unauthorized squatter settlements. This is due to the ever increasing rate of rural-urban migration where the new immigrant unable to afford the relatively expensive accommodation within the urban areas, drifts to the outer fringe of the city. This peculiar pattern of development in African cities contradicts the western based theories where suburbs of cities are generally assumed to be areas for high class and low density developments.

R. Benjamin<sup>24</sup> in his survey on squatter developments of Dar-es-Salaam observed that squatters have very little choice in terms of the general location in which they find themselves, and that many of the squatter areas are former sub-urban villages that have simply been swallowed by the expanding city. The squatters in settling the fringes of old villages have often maintained

and extended the existing structure. He argues that, it is due to the inability for the authorities to cater adequately for the new immigrants that there is a role for an institutionalized form of squatter development as an acceptable alternative in the short run

S.S. Yahya<sup>25</sup> carried out a study into patterns of land use and land values in sub-urban Nairobi and noted that the Nairobi fringe area exhibits peculiar characteristics such as:

- Land use contrasts in the form of inter-mixture of agricultural, industrial, recreational and commercial uses.
- Sectorial differentiation in the city structure with racial composition of the residential areas showing a strong relationship with population densities, population growth and household characteristics.
- Generally land values get lower with increasing distance from the city centre.

In effect Yahya comes to the conclusion that socio-economic forces are instrumental to the changing pattern of land use and land values in the outer fringes of the city. A consistent theme in most of these studies has been that, what goes on in the urban area directly affect the areas adjoining it as a result of the interplay between social and economic factors.

S.S. Yahya<sup>26</sup> in his Ph.D thesis carried out detailed studies in four selected urban centres, of Makueni, Mombasa, Mumias and Bamburi, the running theme was lack of effective urban land policies that are necessary for co-ordinated development of the urban areas, he further noted that there was scarcity of land, infrastructure information, legal instruments, capital etc. in the urban centres in Kenya. It is indeed

these edficiencies in policy instruments that peri-urban problems find fertile ground on which to spread.

Chege J.N.<sup>27</sup> in his recent study of 1977 on Nyeri town, came up with findings that, there is shortage of land for urban development and yet in 1972 large peri-urban areas were included in the municipality. No better explanation suffices other than the explanation that the boundaty extension appears to have been due to political reasons other than economic viability. He further notes that mere extension does not serve any purpose unless the land is acquired, but he does not tell us any alternatives open to the people affected. Acquisition may cause so much hardship that most people would be rendered destitute.

#### 0.8.1 WESTERN BASED CONCEPTS OF FRINGE CHARACTERISTICS

Much of the present thinking about the urban fringe is rooted in the work of Wehrwein published in 1928. He noted in his paper that railways were the first decentralizers of urban population and urban land use, and since this means of transport radiated in all directions whenever physical features allowed, it became obvious that the urban fringe appeared like an area perced by fringe like projections of urbanized land uses. Wehrwein identified some important characteristics of the urban fringe such as, rapid residential growth, sporadic subdivisions, speculation, juxtaposed land uses.

According to Taylor<sup>29</sup> he fond that, the reasons why people move to the urban fringe are, an open-country environment for raising the children, low rents, nearness to family and friends, open

country hobbies, and a healthy place for retirement. He concluded by pointing out that, there exist social problems in the fringe areas such as high transportation costs, transportation congestion, deficient utilities, inadequate government, and quite often inadequate schools. It is also noted that although people seek certain amenities in the fringe areas in America, even when achieved these amenities are ephemeral.

Some fringe characteristics have also been observed in the city of Sydney in Australia. In his extensive study Golledge<sup>30</sup> has identified seven characteristics of the urban fringe, thus fringe areas are seen as regions with a constantly changing pattern of land occupation, although farms are small, crop production is very intensive, population is mobile, residential expansion is fast, there is incomplete provision for services and public utilities and lastly Building and Land speculation is common.

#### 0.8.2 THE CASE FOR DEVELOPING COUNTRIES:

We have observed from the foregoing discussion that, fringe areas in the developed nations are areas associated with high standard of living. This is not so in developing countries and especially in Kenya where fringe areas are associated with acute deficiencies and disorders in various aspects, such as lack of proper housing, crime and delinquency, inadequate infrastructure, poor sanitation, low incomes, uncontrolled and unplanned developments. Gans, H.J. in an essay on "urbanism and sub-urbanism as ways of life"<sup>31</sup> notes that residential areas in American sub-urbans are made up of single family rather than multi-family structures which results in low densities, this is contrary to what we

observe in the fringe areas in Kenya where we find as said before, poor and inadequate housing facilities, high population densities and with the low income group. This then is the situation in Kakamega Urban Fringe.

#### 0.9 URBANIZATION IN KENYA:

It is only recently that urbanization has assumed some importance as a problem, it is unfortunate that the current planning has not lived up to the challenges posed by urbanisation. The real thrust of urbanization came immediately after the Second World War and secondly municipal administration was handled fairly well for modest urban centres of pre-independence days <sup>32</sup>.

The urban phenomenon in Kenya originated with the establishment of colonialism. Other than the Coast there were hardly any towns in East Africa prior to the colonial administration establishment. These were a number of concentrations in the interior that surrounded the Palaces of hereditary chiefs, but there had no resemblance of permanent urban centres as we know them today. Foreign contact with East Africa began with the Portuguese as early as the 15th century, although Arabs were indeed the very first people to establish a permanent foothold on the Coast.

The colonial penetration started in 1895 with the completion of the Railway which reached Kisumu in 1902. With the completion of the Railway it was found necessary to invite European farmers in order to operate the railway economically. The years between 1902 and 1948 witnessed an influx of white farmers in Kenya Highlands. There followed rapid establishment of new towns within the interior especially along the railway line, eg. Nairobi, Naivasha,

Nakuru etc. Nairobi infact started as a railway depot, then later on became the largest as well as the capital city of Kenya. Other towns grew purely as administrative posts, such as the case of Kakamega, which did not have the railway as its backbone of establishment.

Till 1948 no attempt had been made to assess the level of urban development in Kenya, the last census was taken in 1928. It was untill 1948 when the census was taken that an attempt was made to assess the level of urbanization in the country. An urban centre was defined as any compact and gazetted settlement with a population of 2,000 and over. Since 1948 the pace of urbanization in Kenya has continued to accelerate, see table below.

TABLE 09  
POPULATION IN MILLIONS

| Year | Total Pop. | Urban Pop. | Urban Pop as % of Total | Urban Pop Inc. | Growth Rate of Urban | Growth Rate of Total |
|------|------------|------------|-------------------------|----------------|----------------------|----------------------|
| 1948 | 5.4        | 0.285      | 5.3                     |                |                      |                      |
|      |            |            |                         | 0.385          | 6.6                  | 3.1                  |
| 1962 | 8.6        | 0.670      | 7.8                     |                |                      |                      |
|      |            |            |                         | 0.408          | 7.1                  | 3.4                  |
| 1969 | 10.9       | 1.07       | 9.9                     |                |                      |                      |

Source: Based on 1948, 1962 and 1969 Kenya Population Censuses - Ministry of Finance & Econ.Planning.

The National rate of urbanization during the two intercensal periods of 1948-62 and 1962-1969 were 6.6 and 7.1% per annum, this could probably be more by now but it illustrates that the urbanization process is bound to continue in the near future.

Kakamega population growth has not been a smooth one, in 1928 the population was 598, there was a sharp rise in 1948 to 4,978 due to the exploitation of gold that was taking place. In 1962 there was a fall in the population to 3,939 following the closure of the mines. The town showed a recovery in 1969 when the population was recorded as 6,244, the current population is estimated at 9,500 showing a fast rate of growth.

The functional relationship between urbanisation and creation of the urban rural fringe is well illustrated in the definition of the urban fringe that "it is the space into which the town extends as a result of the process of urbanisation.

This study is therefore pre-occupied with the problems of the peri-urban areas of Kakamega, having noted the urbanization process significantly influences activities in the peri-urban areas.

#### FOOTNOTES:

1. Sector working paper: Urbanization, World Bank 1972
2. Akin L. Mabogunje - Urbanization in Nigeria 1969
3. Luigi Laurenti, Urbanization in Kenya, New York, Ford Foundation 1972.



4. The Nairobi Urban Study Group 1971
5. (i) Various studies by the Housing Research Development Unit, University of Nairobi.  
(ii) Unpublished M.A. thesis, University of Nairobi 1975 - Eunice Owino.
6. Unpublished B.A. dissertation by Z. Maleche, a geographical interpretation of the present day structure of Kakamega Town 1968.
7. For a plan to be official, it must be approved by the Commissioner of Lands on behalf of the Minister for Lands and Settlement and must be gazetted.
8. The short term development plan: Kakamega 1972.
9. The town planning ordinance chapter 134,1930  
(now Town Planning Act)
10. J.P. Gibbs on Demographic attributes of Urbanization in J.P. Gibbs Ed. Urban Research Methods, London,DO Van Nostrand.
11. R. J. Pryor, 'Definint the rural-urban fringe, Social Forces P.47,1968.
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## CHAPTER ONE: BACKGROUND INFORMATION ON KAKAMEGA

### 1.1 SITUATION AND ENVIRONS

Kakamega is located approximately on latitude  $0^{\circ} 17'$  North and longitude  $34^{\circ} 45'$  East. The town lies approximately 52km north of Kisumu municipality on the shores of Lake Victoria, a fast thriving industrial town; Kakamega is about 90 km. east of Busia town on the Kenya Uganda border, 112 km. south of Kitale town, 72 km. south west of Eldoret town a fast growing industrial town. Just to the North of Kakamega about 32 km is Webuye which has attained prominence as an urban centre due to the Pan Africa Paper Mills located there. To the south west of Kakamega is Mumias town with a sugar factory complex.

Kakamega is located on the international trunk road that runs through the town to Kisumu and continues to Tanzania. There is also a diversion from the International trunk road that runs from Nairobi to Uganda which passes through Kakamega and joins the same trunk road near Webuye and continues to Uganda. Kakamega's connection to Mumias and Bungoma is by a national standard all-weather road. Viewed from these regional connections the Municipality appears to be ideally served with roads and hence easily accessible from its hinterland.

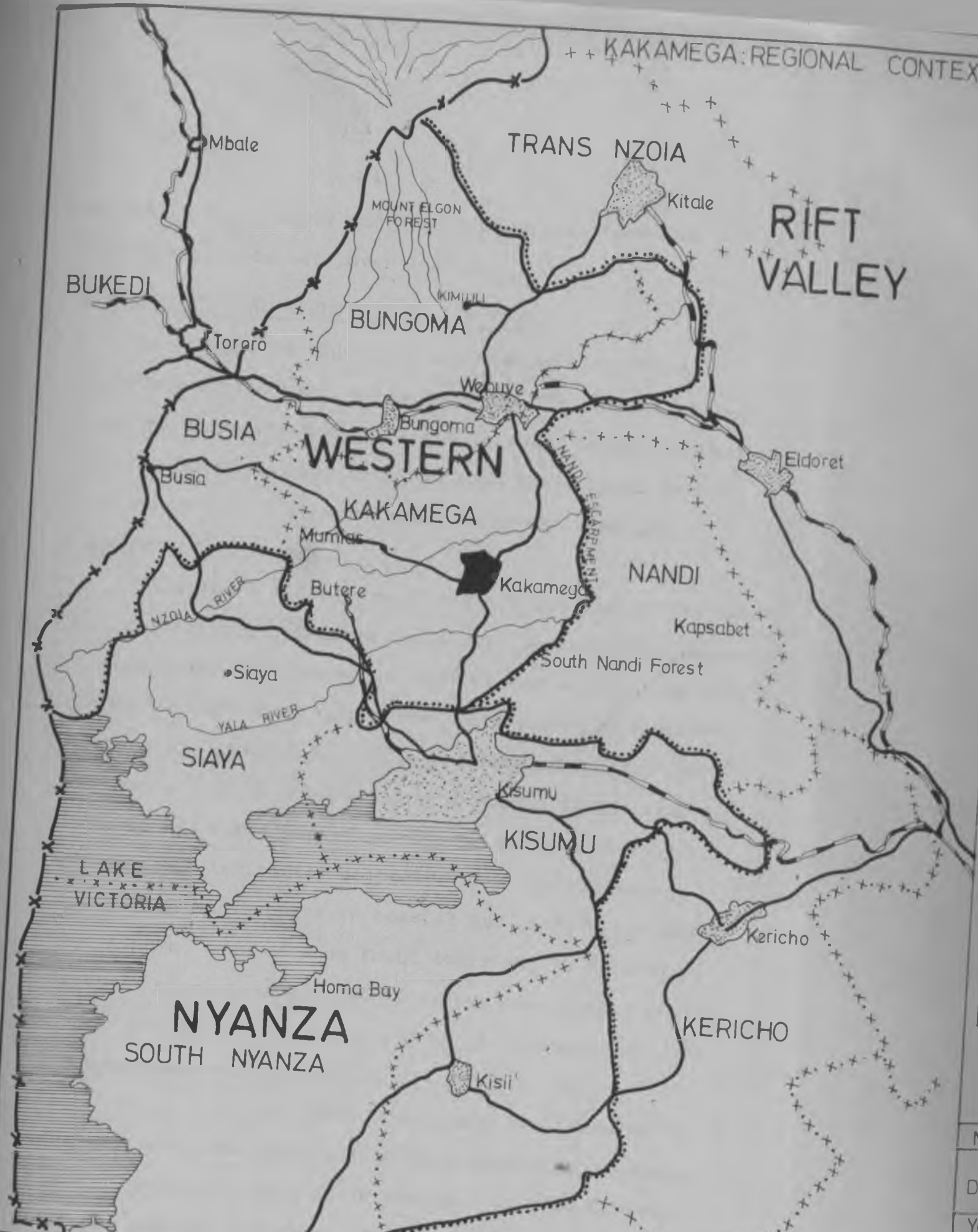
Kakamega's surrounding areas are characterised by fertile agricultural land that is at the same time very densely populated, with average population in some of

the locations given as 800<sup>1</sup> per sq. ha. Although the town serves a potentially productive hinterland, it at the same time plays a vital role in collecting and marketing produce within the district and outside the district too.

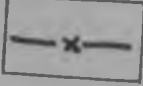





For a long time the hinterland of Kakamega has been associated with mere subsistence economy, but the trend has changed very much in the recent past. Most small scale farmers have been very actively involved in tea growing, sugar can and coffee for cash purposes. Due to the rapidly changing agricultural activities in the surrounding areas, there appears to be an industrial potential to be tapped in Kakamega. It is worth to note that population pressure is a critical factor in both regional and district plans of Kakamega. The standard of infrastructural development in Kakamega is so low that it is a hindrance to the attraction of industries in the town,

Kakamega's new function as administrative capital to the whole of Western Province has resulted in a fundamental increase in its area of influence, that covers the whole of Bungoma, Busia and Kakamega district, though the town is not centrally located. We have noted above that Kakamega's hinterland is densely populated, this has led to low rural development and hence a hindrance to the faster development of the town as an administration and service centre.

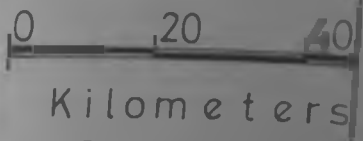
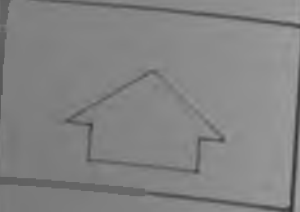
Kakamega's influence is not only confined to western province. The influence extends to some parts of the



**LEGEND**

-  International Boundary
-  Provincial Boundary
-  District Boundary
-  Roads
-  Railway
-  Study Area

|       |   |
|-------|---|
| Name  | A N. Shibiru                                    |
| Dept. | Urban & Regional Planning University of Nairobi |
| Year  | 1977/78   |



MAP No. 3

URBAN LAND USE PLANNING POLICIES FOR THE PHYSICAL DEVELOPMENT OF PERI-URBAN AREAS - CASE STUDY OF SHIRERE KAKAMEGA

Source: Survey of Kenya

adjoining Rift Valley and Nyanza provinces (see map for regional context over leaf ).

## 1.2. HISTORICAL EVOLUTION OF THE TOWN

An attempt is made here to trace the historical evolution of the town, so as to place the current peri-urban problems under examination in their proper context. The current peri-urban problems have their roots deeply entrenched in the steady growth which the town has experienced so far.

Kakamega's establishment has its origins in the late 19th century the time when the first British administration in Nyanza was established in 1894 at Mumias. It was also during the time when Nyanza was administered as Eastern Province of Uganda. In 1903 a visiting administrative post was set up as a subsidiary to Mumias at the time Kakamega was named Fort Maxted. The early history of Kakamega was indirectly connected with the railways. The railway had brought in coastal and Indian traders into Kisumu, some of whom found their way to Kakamega. Kakamega started as an administrative cum trading centre, a function which it still plays to the present day. In 1910 Kakamega was classified as a trading centre.

The period from 1920-1930 marked the transfer of the administrative headquarters from Mumias to Kakamega due to the health hazards in Mumias. In 1920 Kakamega assumed all the functions of Mumias, the town boundaries were demarcated about one mile radius from the adminis-

strative buildings. At the same time the town was gazetted as a township.<sup>3</sup> It was evident at the time that there was no formal planning, but a segregation of uses was very evident both according to use and racial basis. Shops clustered around the road junction to Mumias, the administration buildings were situated near the hill top. Residential quarters were grouped in various locations with the Asian traders living in the commercial areas, the Arabs and Swahili residents from the Coast concentrated on the western side of the town. At the time there was evidence of lack of adequate housing that led most employers to live outside the township, this tendency has continued to the present day.

In 1930 the town boundaries were fixed, this was also at the time when settling in the town was restricted. In the 1930's gold was discovered at Kakamega. This led to a corresponding rapid infrastructural development. At this time the population of the town rose from 589 to 4,292.

1948 to 1962 was a marked period of stagnation following the closure of the goldmines in Kakamega. This stagnation is best noticed when one looks at the population fluctuations at the town censal periods of 1948 and 1962. In 1948 the inhabitants in the town were 4,292, whereas in 1962 the population was recorded at 3,939 a negative percentage growth of 0.5

It was in 1948 when the town was surveyed and



HISTORICAL EVOLUTION OF KAKAMEGA



Based on National Archives of Kakamega

LAND USE PLANNING POLICIES FOR  
URBAN AREAS - CASE STUDY OF SHIR

subsequent development plans have been prepared since then in 1950, 1959, 1961, 1963, 1965, 1970 and the revised short term plan of 1972.

In 1963 when Kenya attained independence a new province was created, thus western province with Kakamega as its headquarters. Between the period 1962-67 there was a rapid growth in population from 3,939 to 5,803 an annual growth rate of over 8%. With the elevation of Kakamega to provincial headquarters meant increased functions and a wider area of influence than before.

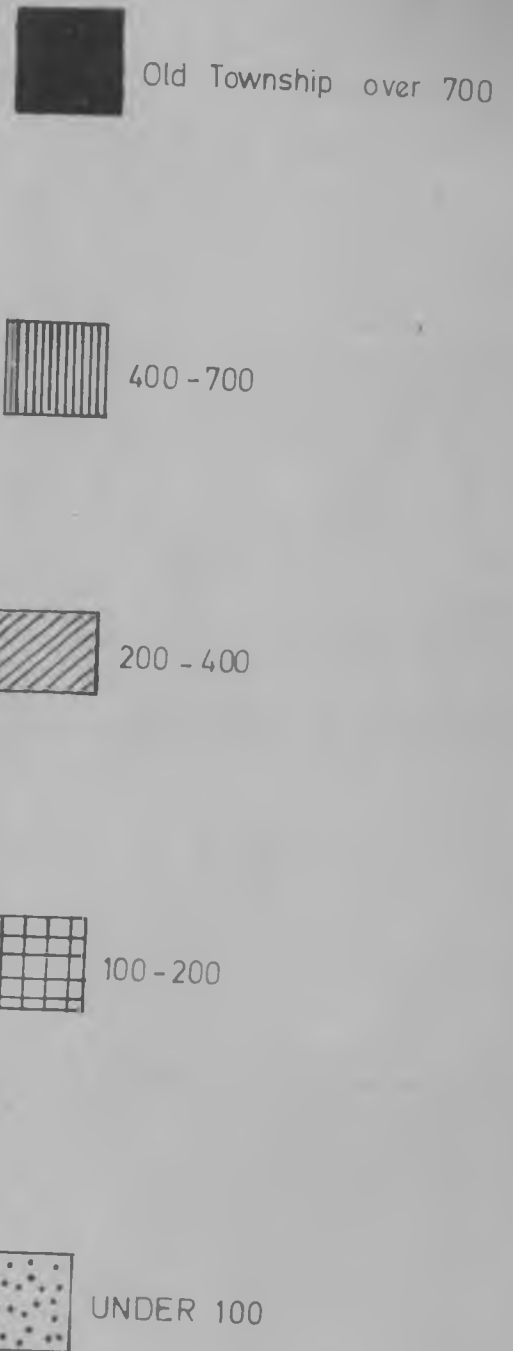
In 1971 alongside with Embu, Meru, and Nyeri, Kakamega was elevated to Municipal status. This led to boundary extension that created a firm foundation of the current peri-urban problems that continue to diversify every day.

### 1.3 POPULATION:

The last National Population Census taken in 1969 showed that Kakamega town had a population of 6,244, with a population density of 767 per sq.km. The urban population is distributed within an area of 8 sq. km. In 1971 when the then township was upgraded from a township authority to Municipal status and its area was extended to 49 sq.km. to include an estimated peri-urban population of about 30,000<sup>4</sup>. The total municipal population is currently estimated at 40,000. See map of the distribution of population density of the municipality (NO.5 ).

POPULATION DENSITIES WITHIN KAKAMEGA MUNICIPALITY PER SQ. KM

LEGEND



|                   |   |           |
|-------------------|---|-----------|
| Name              | AN Shibra                                       |           |
| Dept              | Urban & Regional Planning University of Nairobi |           |
| Year              | 1977/78   |           |
| <p>Kilometers</p> |   | MAP No. 5 |

Source: Based on Authors Computations

URBAN LAND USE PLANNING POLICIES FOR THE PHYSICAL DEVELOPMENT OF PERI URBAN AREAS CASE STUDY OF SHIRERE KAKAMEGA

## POPULATION BY TRIBE OR NATIONALITY AND BIRTH PLACE

## KAKAMEGA

Table 1.1

| Tribe or Nationality | BIRTH PLACE |               |                           |               |               | Not stated |
|----------------------|-------------|---------------|---------------------------|---------------|---------------|------------|
|                      | Total       | Same District | Elsewhere in the District | Outside Kenya | Outside Kenya |            |
| Total                | 6244        | 3631          | 413                       | 1889          | 299           | 12         |
| Total Kenyan African | 5423        | 3332          | 411                       | 1648          | 22            | 10         |
| Central Bantu        | 583         | 90            | 2                         | 490           | 1             | -          |
| Western Bantu        | 3635        | 3030          | 352                       | 233           | 13            | 7          |
| Coastal Bantu        | 69          | 31            | 1                         | 36            | 1             | 1          |
| Nilotic              | 867         | 142           | 16                        | 704           | 3             | 2          |
| Nilo Hamitic         | 166         | 23            | 11                        | 132           | -             | -          |
| Other Nilo Hamitic   | 71          | 9             | 28                        | 31            | 3             | -          |
| Western Hamitic      | 9           | 11            | -                         | 7             | 1             | -          |
| Eastern Hamitic      | 23          | 6             | 1                         | 15            | -             | 1          |
| Non Kenyan African   | 198         | 98            | -                         | 47            | 52            | 1          |
| European             | 50          | 2             | -                         | 9             | 38            | 1          |
| Asian                | 519         | 159           | 1                         | 179           | 180           | -          |
| Arab                 | 54          | 40            | 1                         | 6             | 7             | -          |

Source: Ministry of Finance and Planning Kenya Pop.Census

Volume 2 PP 27, 1969

### 1.3.1. COMPOSITION AND STRUCTURE:

The table below shows the composition of the population of Kakamega town as per 1969 population census.

The table reveals quite a high proportion of the African population in the town compared to the other races. This pattern of dominance by the Africans is expected to grow even faster than the past especially so because of the adopted growth centre strategy in Kenya. According to this strategy Kakamega has been designated a principal town, that is bound to attract a number of investments and hence more people. The proportion of the non-African population may have decreased due to Government policies such as Kenyanization of trade, commerce and other sectors of the economy. As can be seen in subsequent sections the African population has remained predominant, this trend is expected to continue in the future.

The age/sex composition of the population of Kakamega township is given below and is also based on the 1969 population census. For a better visual impression a population pyramid has been given overleaf.

Table 1.2

KAKAMEGA TOWN: - AGE-SEX COMPOSITION 1969

| AGE    | MALE | %     | FEMALE | %     | TOTAL | %      |
|--------|------|-------|--------|-------|-------|--------|
| 0-9    | 926  | 51.02 | 889    | 48.98 | 1815  | 29.07  |
| 10-19  | 747  | 51.38 | 707    | 48.63 | 1454  | 23.29  |
| 20-39  | 1329 | 59.52 | 904    | 40.48 | 2233  | 35.76  |
| 40-49  | 313  | 72.24 | 103    | 24.76 | 416   | 6.66   |
| 50+ .. | 2.3  | 65.34 | 113    | 34.66 | 326   | 5.22   |
| TOTAL  | 3528 | 56.50 | 2716   | 43.50 | 6244  | 100.00 |

Source: Kenya Population Census 1969; Ministry of Finance and Economic Planning and Development.

The table reveals that more than half the population is aged less than 20 years. Even more significant is the proportion of children between 0-9 at the time; this group constitutes about 30% of the total population.

There are implications which emerge from the above population structure. First, the population is not stable in the sense that it is dominated by males

KAKAMEGA TOWN: POPULATION PYRAMID AS PER 1969 CENSUS

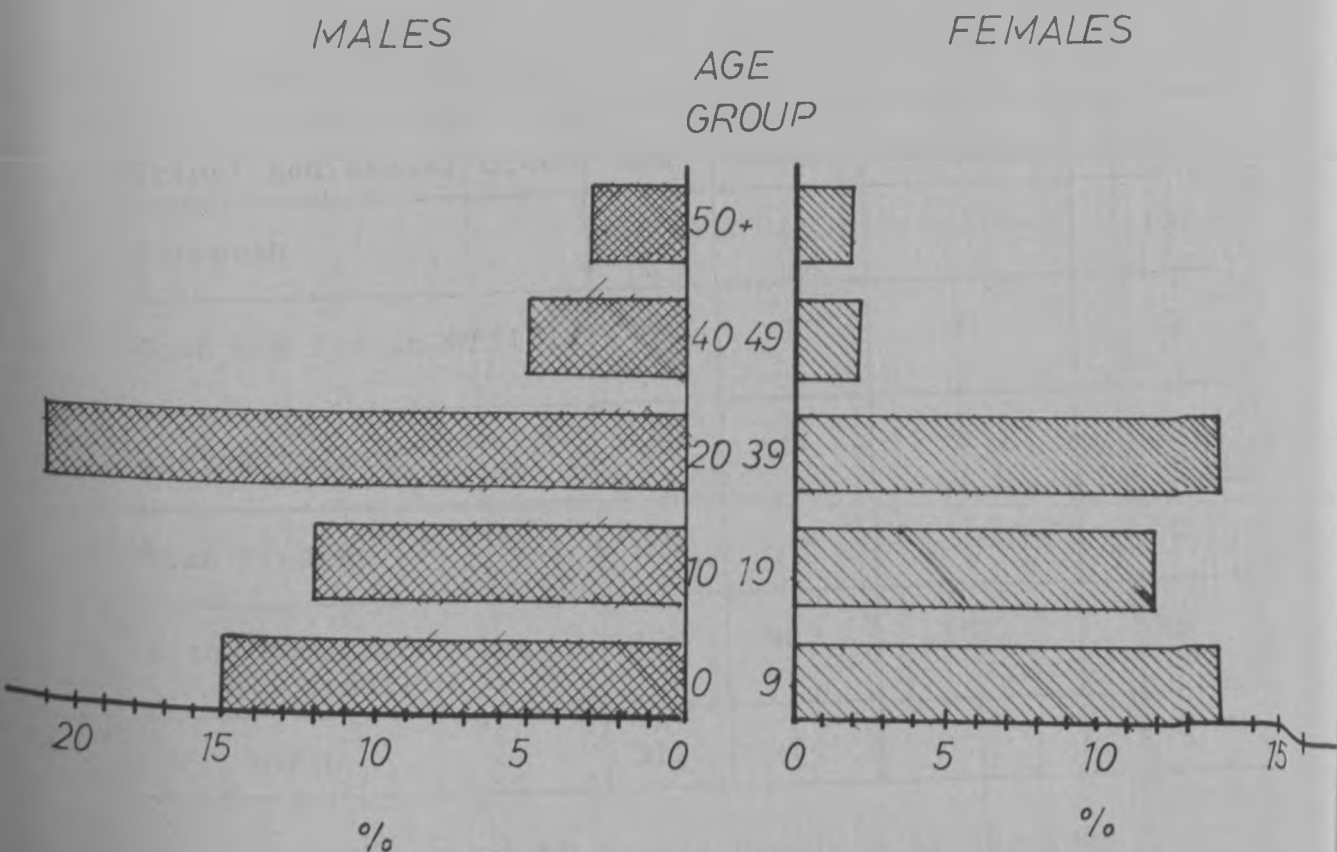


FIG 3

among the active labour force where 38% is composed of males compared to 28% females. As the figures reflect the structure of the urban population it is expected that the imbalance will be overcome by the inclusion of the peri-urban population which is basically rural in character.

### 1.3.2 PAST POPULATION GROWTH TREND:

The earliest records of Kakamega's urban population may be traced to the year 1928 which can be found in the District Commissioner's annual returns. There were 598 people in the town. In 1948 Kakamega's population rose to 4978<sup>5</sup> people. Below is the population structure of population in 1928.

Table 1.3

| Tribal and Racial Group              | Men        | Women      | Children   | Total      |
|--------------------------------------|------------|------------|------------|------------|
| European                             | 9          | 4          | -          | 13         |
| Goan and Indian Officials            | 6          | 2          | 7          | 15         |
| Indian Traders                       | 20         | 5          | 8          | 33         |
| Goan Traders                         | 2          | -          | -          | 2          |
| Arabs, Somalis, Nubians and Swahilis | 175        | 203        | 157        | 535        |
| <b>TOTAL</b>                         | <b>212</b> | <b>214</b> | <b>172</b> | <b>598</b> |

Source: PC Nyanza Province AR KNA 1928



The table shows that in 1928 the numbers of Africans in the town was insignificant. In 1962 just at the time when Independence was in the process of being achieved, many africans were drifting to towns and such was the case in Kakamega, where there was a sharp rise in the African population by 80% of the total population, see table below.

Table 1.3.1

| RACE     | 1962 NUMBER | % TOTAL |
|----------|-------------|---------|
| African  | 3,163       | 80%     |
| Asian    | 601         | 15%     |
| Arab     | 91          | 2%      |
| European | 84          | 2%      |
| TOTALS   | 3939        | 100%    |

Source: Ministry of Economic Planning and Development.

It should be borne in mind that the enumeration was based on Male Hut Tax and 'Kipande' (Identity Card) which means that the actual population was not enumerated, the enumeration only took care of the adults and ignored the youth.

Kakamega's population growth has shown a direct correlation with functions and activities that the town

discharges since its origin.

In 1948 the very first "de factor" population census was taken in Kenya covering all the races. The enumerated population for Kakamega was put at 4,978. When the next census was taken after 14 years, the population of Kakamega had dropped to 3,939 revealing a negative growth of -1.7%. This has been attributed to the economic inactivity of the town following the closure of the Goldmines in Kakamega. The period between 1962-1969 witnessed a steady rise in population, following the newly acquired status of a provincial headquarters by Kakamega. The population rose from 3,939 in 1962 to 6,244 in 1969, showing an intercensal growth rate of 6.8%. Currently the population of Kakamega appears to be growing steadily, it is now estimated at 9,500, showing that since 1962, the population has trippled. See table below for Kakamega's population growth since 1948.

Table 1.3.2

| Year          | 1948  | %   | 1962  | %   | 1969  |
|---------------|-------|-----|-------|-----|-------|
| Population    | 4,978 |     | 3,939 |     | 6,244 |
| Annual Growth |       | 1.7 |       | 6.8 |       |

### 1.3.3. FUTURE POPULATION GROWTH TRENDS:

The task of making population forecasts is fraught with various difficulties due to insufficient knowledge regarding

demographic dynamics which influence the pattern of growth of the population as a whole. This problem is even more critical in Kenya where there has been only three population censuses in the past 70 years of the country's history. Even with data from those censuses, the use of inter-censal data for population projections is very limited because the effects of migration on population growth are difficult to determine, changes of boundaries between one census and the next renders inter-censal data of very little use indeed.

Urban population projections must contain the element of immigration, but the migration tendencies of any settlement are difficult to predict with any certainty. Migration to/from and between areas /and is largely a human behaviour response to changing conditions in peoples physical and emotional surroundings and it is indeed difficult to predict human behaviour, however through observation of past population growth trends, it is possible to make some forecasts which can be used for planning purposes.

It has been mentioned before that Kakamega township showed a negative growth rate of -1.7% per annum during the 1948 -62 inter-censal period, but showed an even higher rate of growth in the period between 1962 and 1969 of 6.8%. With such population fluctuations, uncertainties arise as to which growth rate should be adopted in projecting the population.

# Population Projections

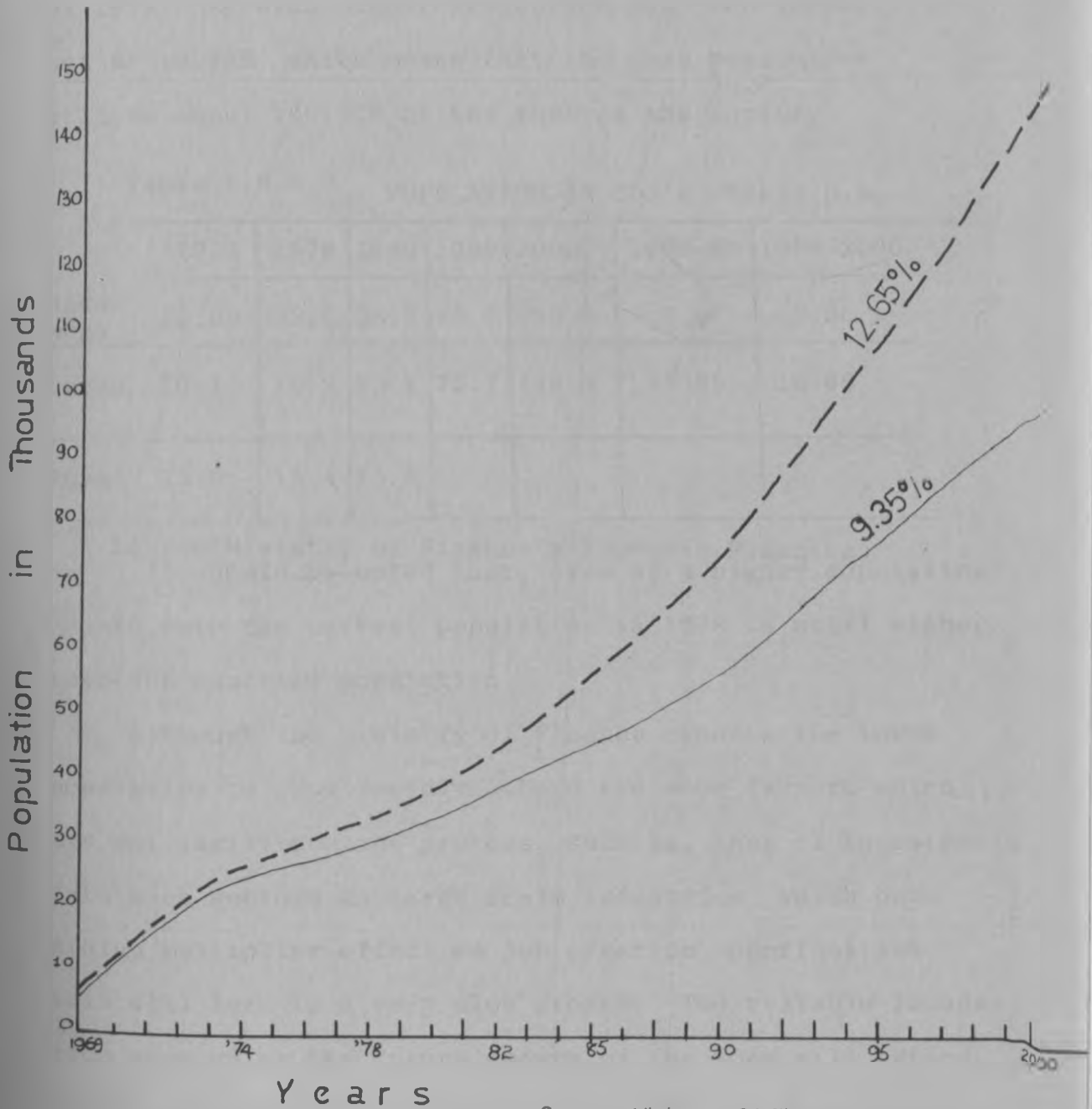


Fig 4

Source: Ministry Of Finance and Economic Planning, urban population projections 1969.

growth rate of 9.35% than the rates of the preceding years. There are no reasons given that help to explain this dramatic rise in population, although this may be partly so due to the latest municipal boundary extension of 1972. An even higher projection has been worked out at 12.65%, which means that the town population will be about 150,000 by the turn of the century.

Table 1.3.3.2 POPULATION IN 000's %Rate p.a.

|           | 1973  | 1978 | 1980 | 1990 | 2000  | 1969-80 | 1980-2000 |
|-----------|-------|------|------|------|-------|---------|-----------|
| Kaka-mega | 24.00 | 33.6 | 38.5 | 75.7 | 149.0 | 7.0     | 7.0       |
| Urban     | 10.1  | 18.2 | 23.1 | 75.7 | 149.0 | 12.65   | 12.65     |
| Rural     | 13.9  | 15.4 | 15.4 |      |       |         |           |

Source: Ministry of Finance & Economic Planning.

It should be noted that, even at a higher population growth rate the current population in 1978 is still higher than the expected population.

Although the Ministry of Finance expects the towns population to grow rapidly, there are some factors which may not facilitate the process, such as, lack of investments into such sectors as large scale industries, which have a high multiplier effect on job creation opportunities, this will lead to a very slow growth. The reliable foundation upon which the future growth of the town will depend is the provision of services to its rich and densely

populated hinterland of the district, With the development of service industries, small scale and other service oriented industries, people may be attracted to the town to take advantage of existing economic benefits. We therefore consider growth rates of 9.35% and 12.65% very unrealistic.

The national growth rate (Natural Increase) of 3.5%, shall be applicable in the rural areas that were included into the municipality area in 1972. The period between 1962-69 showed an annual growth rate of 6.8%, Since 1969 till the present day, with an estimated population of 9,500, the annual growth rate works out to 4.8%. There is no justification for adapting high population projection of 12.5% and 9.35% per annum.

The above analysis calls for projections based on the expected trends of the growth of the town, the assumption is that between 1969-1990 the population will grow at the rate of 5% and then after 1990 the population having acquired urban characteristics will grow at a uniform rate of 7% which approximates the annual growth rate of 6.8% between 1962-69. Whichever projection rate is applied, the population of Kakamega will be more than four times what it is now.

Overleaf is the population projections of Kakamega based on 5% from 1969-1990 period and then 7% for the period between 1990-2000.

#### 1.4.1 RESIDENTIAL

According to the plan the amount of land area of 647.0 Ha., the amount of land set aside for residential use was 308 Ha. or 47.6 per cent. Although 47.6% of the land was reserved for residential use, 43% of the land has been developed, which indicates that the rate of developing residential land has been rather fast and explains in part why residential development is taking on rather fast in the adjoining peri-urban areas. As the towns population increases, so is the housing demands of the people. Most of the housing is provided by the public sector. Out of a total 800 ha. of land in the Municipality only 153 remains undeveloped. Since the majority of the people are engaged in public sector, it would appear that most of them would be housed by public institutions, but this is not the case: See the existing housing stock of Kakamega in table 1.4.1.

TABLE 1.4.1

| Housing Administered by | Site & Service Scheme | Tenant Purchase | Rental Houses | Total No. of Houses | No. of Rooms |
|-------------------------|-----------------------|-----------------|---------------|---------------------|--------------|
| Municipal Council       |                       |                 |               |                     |              |
| 1. H.F.C.K.             | -                     | -               | -             | -                   | -            |
| 2. Others               | -                     | 120             | 127           | 247                 | 651          |
| County Council          |                       |                 | 93            | 93                  | 217          |
| M.O.W.                  |                       |                 |               |                     |              |
| 1. Pool                 |                       |                 | 254           | 254                 |              |
| 2. Institutional        |                       |                 | 161           | 161                 |              |
| Kenya Posts & Teleco.   |                       |                 | 3             | 3                   |              |
| TOTAL                   |                       | 120             | 638           | 758                 |              |

Source: Ministry of Housing and Social Services, The Housing Stock in the Major towns of Kenya.

It shows that most people have no alternative but to rent private housing either in town or just outside the town where the rental units are available and where the rents are reasonably lower. Average rents in Kakamega range from Kshs.15 - Shs.700. Average incomes are less than K.shs.1,000<sup>7</sup> which means that most people can only afford lower rents and hence the drift into the urban fringe areas of Shirere.





Plate 1

Sub-standard housing in the urban fringe. Note the use of low quality materials and the concentration of the units on the plot.



Plate 2

Incomplete substandard housing that is partly occupied, which reflects the high demand for housing in Kakamega.

#### 1.4.2 INDUSTRIAL:

Kakamega is an administrative cum commercial principal town, which undoubtedly implies that, industrial development is still very low. The role of industry in the promotion of rural economic development and the creation of employment opportunities are indeed the backbone of population growth in an area and the magnet of in migration.

The Government has embarked on a programme of rural industrial estates centres of which Kakamega is one of the centres, this aims at promoting local participation in industry and creating more job opportunities. The development of industry has been rather slow in Kakamega. In 1972 at the time when the short term development plan 1972 to 1977 was prepared it showed an improvement of 6.8 Ha. under use, a mere 1.05% of the entire urban land. Of late some carpentry, block making and brick making have been witnessed in some parts of Shirere, particularly so along the Kisumu-Kakamega road and the Kakamega-Mumias road. There is still about 30.2 Ha. planned for various industrial uses that have not come off the ground.

The local authority is faced with the task of providing the necessary incentives that can attract industries to the town, by providing suitable land, and indeed there are large trunks of rural land that were included in the municipal area in 1972, the only obstacle being that the land is still held in private hands. The provision of adequate infrastructure is also important as an important requirement for the location of Industries.

### 1.4.3 EDUCATION:

The spatial distribution of educational facilities in Kakamega is depicted on map . Educational facilities have been placed under; Primary schools, Secondary schools and technical institutions.

There are a total of 6 primary schools in Kakamega town, with a total enrolment of 2961. The total teaching staff is 88 which gives a teacher pupil ratio of 1:34. Of the total school going age children 31% are in primary schools. The total land covered by primary schools is 10 ha.

It can thus be seen that the number of primary schools is inadequate in the town and hence the influx of school going age children in the peri-urban areas, like Shirere.

The primary schools are not administered by the Municipal Council as is the case in Nairobi and Mombasa, partly due to lack of finances.

There are three secondary schools with a total enrolment of 1470 pupils, this represents 15% of the total school going age children. This gives a teacher student ratio of 1:28, lower than that of the primary schools. The total area covered by the secondary schools is 40.6 ha. out of a total 92.6 ha. under educational use, this is 44% of the total educational land.

Technical institutions are slowly taking off the ground. The Western College of Applied Arts and Sciences

is now in operation. It occupies 40 ha. of land. This is consistent with the short term plan of Kakamega which in part states that a major function of Kakamega Municipality will be the provision of higher education.

#### 1.4.4. RECREATION:

Though an important aspect of urban life, recreation tends to receive minimum attention from public authorities, either because it is a liability to the authorities or simply its benefits cannot be realized immediately.

The development of recreational facilities in Kakamega is still very low, the only recreational areas being Muliro Gardens, Golf Course (open space) and Gadhii Hall for indoor functions. It is worth to note that out of 58.7ha. of land under recreation, about 76% is occupied by the golf course. On-the-spot investigation has shown that the golf course is not very much used and perhaps the land could be allocated to other immediate users and shift the golf course somewhere else.

It has been along practice of most planners to zone areas recreational when no other user can be given the land. This is very evident in Kakamega, where very steep land or left-overs in acute angles have merely been designated recreational. An additional 30.6 ha. were required for recreational use during the planning period between 1972-1977. Most of this has not been properly developed into residential areas; and there is no evidence of proper

management and administration of the recreational areas.

#### 1.4.5 PUBLIC PURPOSES:

Kakamega is essentially an administrative centre, a function which it has played ever since the colonial administrative post was shifted from Mumias to Kakamega. As a provincial headquarters, the administrative function has remained one of the most important public purpose functions. This can be seen from the amount of land currently under use vis-a-vis other urban uses. Land for public purposes is 64 ha. whereas that of residential is 83.4 ha., all other users occupy land below 60 ha.

#### 1.4.6 COMMERCIAL FUNCTION:

This is one of the most important functions of an urban area. The level of commercial activities is indeed an indication of the development of the area and that of the surrounding area.

We do not intend to analyse the internal structure, but rather to examine the current activities in relation to the entire town. The commercial centre has been planned to expand westwards, mainly to the south of the road to Mumias, in order to remain as central as possible to the town which is expanding westwards. It appears as if the town centre is far removed from the majority of the people in Shirere and Lurambi areas, this explains the emergence of several shopping centres on the periphery of the town. It must be noted that these mushrooming

shopping centres have not been planned for.

One of the problems that will be encountered in the town's westwards expansion is the demolition of the present squatter settlement of "Kambi Somali". This is bound to invoke political sentiments, which means that an alternative should be given to the current occupants.

To date land under commercial use is a mere 11.8 ha out of the total land of 800 ha in the municipality. With the current encouragement of cash crops in the District such as tea, sugar cane, coffee, kakamega's commercial activities are likely to step up than is currently the situation. Since Kakamega will be looked upon as "a regional town", the economic prosperity in Busia district and Bungoma district will enhance the commercial sector in Kakamega considerably.

#### 1.4.7 UTILITIES:

The provision of utilities in Kakamega is still low, other than electricity and telephone services which seem to be adequately provided for the current needs of the town.

Improvements are currently taking place with regard to water, the storage capacity is now being improved on. It is the same storage capacity that has been relied upon since the origin of Kakamega town. The current storage capacity is 275,000 gallons of water. There are plans underway to increase the capacity by

.30,000 gallons. Water is taken to the consumers by means of gravity.

The new sewage works serve only that part of the old township, and is located in the southern part of the town where it is expected that the town will experience a dense population concentration.

With the boundary extension and hence larger area, the local authority is confronted with even a bigger area to serve than before. Given that the former area of only 8 sq.km. was not adequately served, it is apparent that the current level of utilities are likely to deteriorate due to the pressure exerted upon them by the peri-urban areas.

#### 1.4.8 TRANSPORTATION:

It is beyond the scope of this study to analyse the quality of the roads and any other transport facilities. We intend to examine transportation in terms of easy accessibility from one part of the town to the other. Other than a few roads, most of the roads are predominantly murram roads. No public transport exists within the town other than public transport to and from the adjoining provinces. The main mode of travel in Kakamega is on foot to and from place of work. Rapid development in any town depends on the level of infrastructure and hence the crucial factor of accessibility. This may in part explain the low level

of industrial and commercial enterprises that exist in Kakamega.

The role of agricultural experimental farm within the/<sup>old</sup> township areas and that of undeveloped committed or uncommitted land does not concern us here because it has no direct implications to the urban fringe areas, which is the focus of this study.

#### 1.5 ECONOMIC BASE OF OLD TOWNSHIP AREA:

We shall briefly examine the economic base of Kakamega town with a view to understanding those factors that might serve as incentives for in migration.

Kakamega has high trading potentialities due to the potentially high purchasing power of the surrounding districts. Unfortunately Kakamega has remained dormant for a very long time due to inadequate exploitation of the agricultural potentialities. Farming is carried on purely on subsistence level apart from some small scale sugar, tea and coffee farming which is done in some parts of the district. These activities are not sufficient to generate <sup>strong</sup> economic base for urban growth.

In 1969 16% of the entire Municipal population were in paid employment, 70% of the employment was in service activities mainly Government employment which shows that this is a service town.

Economic problems of Kakamega may further arise from



Table 1.5 Employment in Various Sectors of the Town

| Year | TOTAL | P R I M A R Y    |        | SUB<br>TOTAL | %    | NON PRIMARY              |                  |                             |          |                |          | Sub<br>Total | %      |
|------|-------|------------------|--------|--------------|------|--------------------------|------------------|-----------------------------|----------|----------------|----------|--------------|--------|
|      |       | Agric-<br>ulture | Mining |              |      | -Manufa-<br>ctur-<br>ing | Constr-<br>ction | Electri-<br>city and<br>Gas | Commerce | Trans-<br>port | Services |              |        |
| 1969 | 882   | -                | -      | 0            | 0    | 18                       | 16               | 89                          | 173      | -              | 506      | 882          | 100.00 |
| 1968 | 954   | -                | -      | 0            | 0    | 19                       | 17               | 96                          | 188      | -              | 634      | 954          | 100.00 |
| 1969 | 1003  | -                | -      | 0            | 0    | 51                       | 13               | 83                          | 144      | 11             | 701      | 1003         | 100.00 |
| 1970 | 965   | 3                | -      | 3            | 0.31 | 55                       | 15               | 34                          | 167      | 18             | 673      | 962          | 99.69  |
| 1971 | 1142  | 4                | -      | 4            | 0.35 | 67                       | 87               | 38                          | 255      | 13             | 678      | 1138         | 99.65  |

% of Population employed 1969 - 16% .

Source: Statistical Abstracts 1968-1972

Ministry of Finance and Economic Planning.

competition between Kakamega on one side and Kisumu, WEbuye and Mumias on the other.

There are no immediate plans that exist to generate industrial growth which shows that there is a likely decline in population in future.

#### 1.6 PLANNING PROBLEMS OF KAKAMEGA:

Kakamega's problem can be said to vary from those connected with population growth to topographical features which affect the town's growth. The population of Kakamega has fluctuated considerably since 1962, which implies that if one takes into account these fluctuations, he can very easily end up planning for more people or less than the case may be.

The town is dissected in its midst by a ridge that traverses in the centre of the town in a north east to south west direction, which makes it difficult for the centralization of such services as sewage disposal. Topographical characteristics of the town also contribute to likely heavy expenditures in terms of infrastructure.

Huge junks of peri-urban areas about five times the size of the former township have now been included in Kakamega Municipality. The land is still held in private hands, and with no development plan for the purposes of official guidance one envisages a chaotic situation for the town in the near future. Land within the old township area is now almost used up and the

next alternative is to turn to the peri-urban areas. Kakamega is in danger of experiencing the problem of uncontrolled settlements which is so prevalent in Nairobi, Mombasa and Kisumu. Lastly note should be taken of the fact that Kakamega town has not developed sufficiently to absorb the current population in various types of employment.

1.7 S U M M A R Y:

The chapter has attempted first to examine the environs of Kakamega, then its evolution to the present day. In so doing we have attempted to highlight the current peri-urban areas in relation to the town. It has been seen that the population growth rate of Kakamega has not been steady at all, it has fluctuated from - 1.7% between 1948 and 1962, 6.8% between 1962/69 and now the population of Kakamega is growing at a rate of 4.8%.

An attempt has been made to examine the various land uses within the old township area. Out of a total of 800 ha, of land, planned and developed land is about 647 ha. This shows that more land will be required in the near future, the needed land is still under private ownership.

The economic base of the town has been examined with a view to predict future migration trends. The assumption here has been that a thriving economic base attracts more

people into the town. In some cases an economic base may be weak and still attract more people because both commercial and industrial potentials of the town may still remain unexploited and there may be a chance of utilizing the resources in the near future. In such a case people will come to the town in anticipation of great economic benefits. A conclusion has been made that the economic base of Kakamega is weak due to low industrial potentials.

The chapter has highlighted the peri-urban problem of the town, and noted that the uncontrolled developments in these areas will interfere with orderly economic and physical development of the town.

#### FOOTNOTES:

1. Kenya Population Census 1969.
2. Information on historical development of Kakamega has been obtained from County Council minutes, National Archives and from the local elders. Most of the material has been extensively documented by Z. Maleche in his unpublished B.A. dissertation; A Geographical Interpretation of the present Day structure of Kakamega Town 1969 University College Nairobi.
3. P.C. Nyanza AR Nairobi KNA 1910.
4. The Town Clerk's estimates 1977.
5. Long term development plan Kakamega 1970.

6. Ministry of Finance and Planning, Urban  
Population Projections in Kenya 1969 - 2,000.
7. Author's survey.

CHAPTER TWO - PHYSICAL ASPECTS

SHIRERE THE STUDY CASE:

2.0 In this chapter we shall focus our attention on Shirere sub-location, which has been chosen for detailed investigation on grounds that it is representative of the other fringe areas.

2.1. GENERAL BACKGROUND:

It was not until 1971 when the Municipal boundaries of newly created municipalities such as Embu, Nyeri, etc had their boundaries extended and hence the inclusion of large agricultural lands. This then was the time that Shirere in Kakamega fell under the Municipal jurisdiction. The total land included in Kakamega municipality was 41 sq.km., with Shirere occupying about 19 sq km which is about 43.3% of total extended land. The land is endowed with rich agricultural soils that support a total population of about 12,000 people which amounts to about 30% of the total municipal population now estimated at 40,000 people. The majority of the people depend on subsistence agriculture for their livelihood.

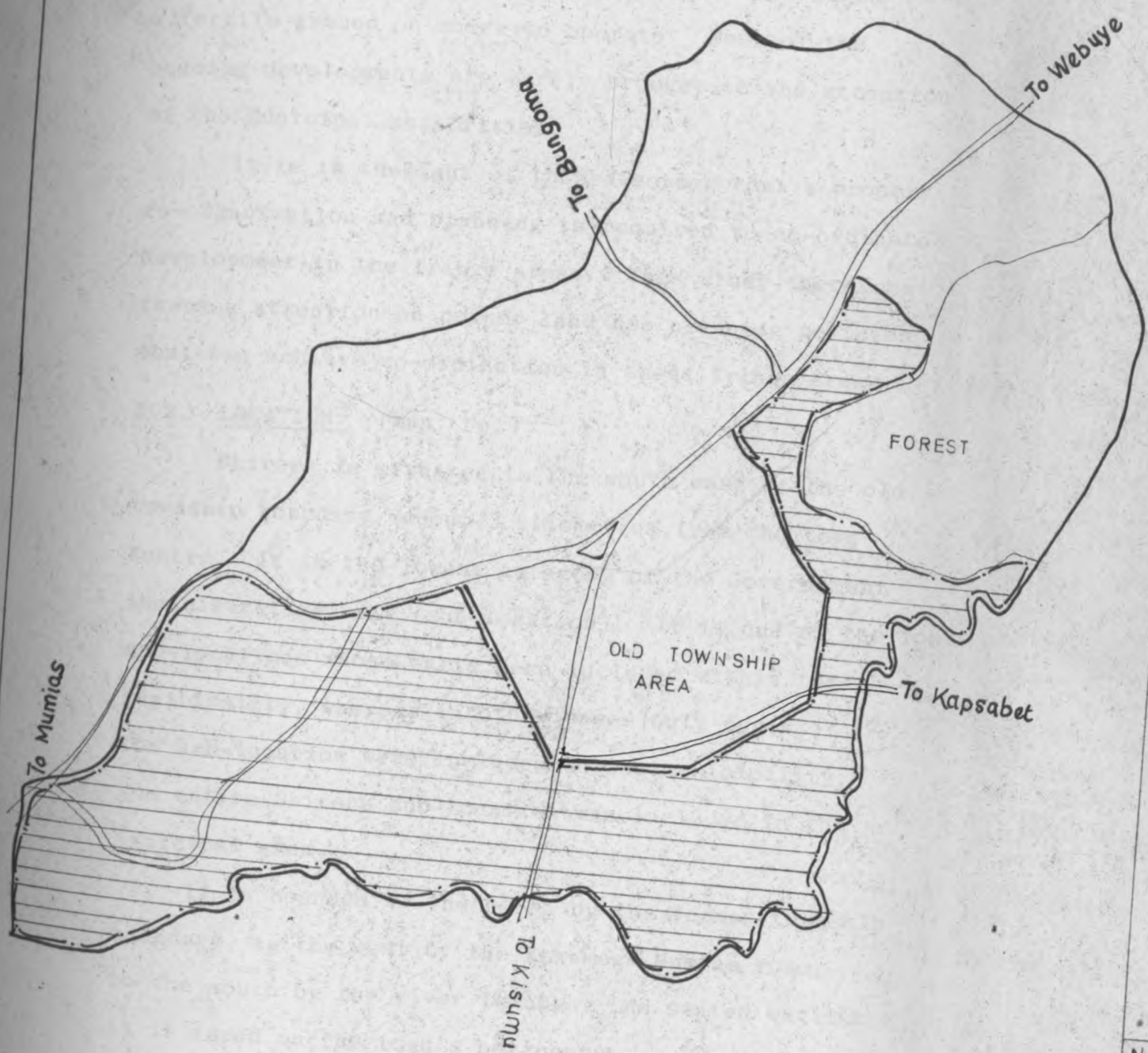
Before 1971 Shirere sub-location fell under the jurisdiction of Lurambi Division. The character of Shirere was distinctively rural in nature, there were hardly any type of developments that are so prevalent today.

Land in Shirere sub-location is privately owned except for the land under schools and other public utilities in the area such as the oxidation ponds for sewage disposal. Land is also privately owned in the other extended areas of Indangalasia, Lubao, Shikoti sub-locations. With the increasing rate of urbanization in Kakamega, Shirere has become a residential area for both high income, medium and even low income earners working in the town, this is partly so due to lack of sufficient housing in the old township area. Many people have tended to concentrate in Shirere due to various reasons, firstly there is cheap accommodation available, especially to the low income earners. Secondly water is readily available as opposed to other fringe areas of the municipality, thirdly it is easy for people to walk to town from Shirere, transportation means are readily available which makes the area accessible to all other parts of the town.

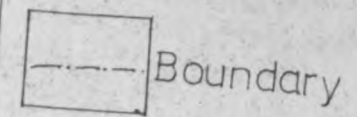
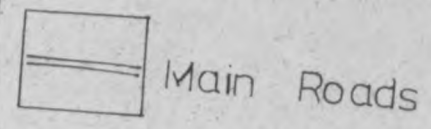
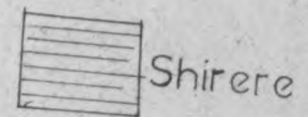
Most of the developments in Shirere are residential, most of them are built contrary to the Building Code regulations 1968 which are applicable in the area by virtue of its inclusion in the municipality. It is this extensive residential developments that bring into light deficiencies in basic services such as water supply, sewage disposal, accessibility etc.

It has been stated elsewhere that an official plan exists for guidance of development in the former

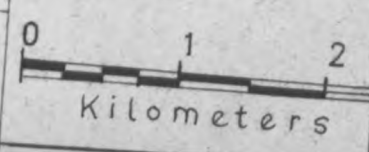
# LOCATION OF SHIRERE



## LEGEND



|       |  |
|-------|--|
| Name  | A.N. Shibirā                                     |
| Dept. | Urban & Regional Planning University of Nairobi. |
| Year  | 1977/78  |



MAP No 7



old township, no such a plan exists for the guidance of the extended areas, and hence developers have found a fertile ground on which to operate. Most of the ongoing developments are rarely brought to the attention of the municipal authorities.

It is in the light of this disorder that a proper re-organization and planning is required to co-ordinate development in the fringe areas. This study therefore focuses attention on proper land use planning policies that can achieve co-ordination in these fringe areas.

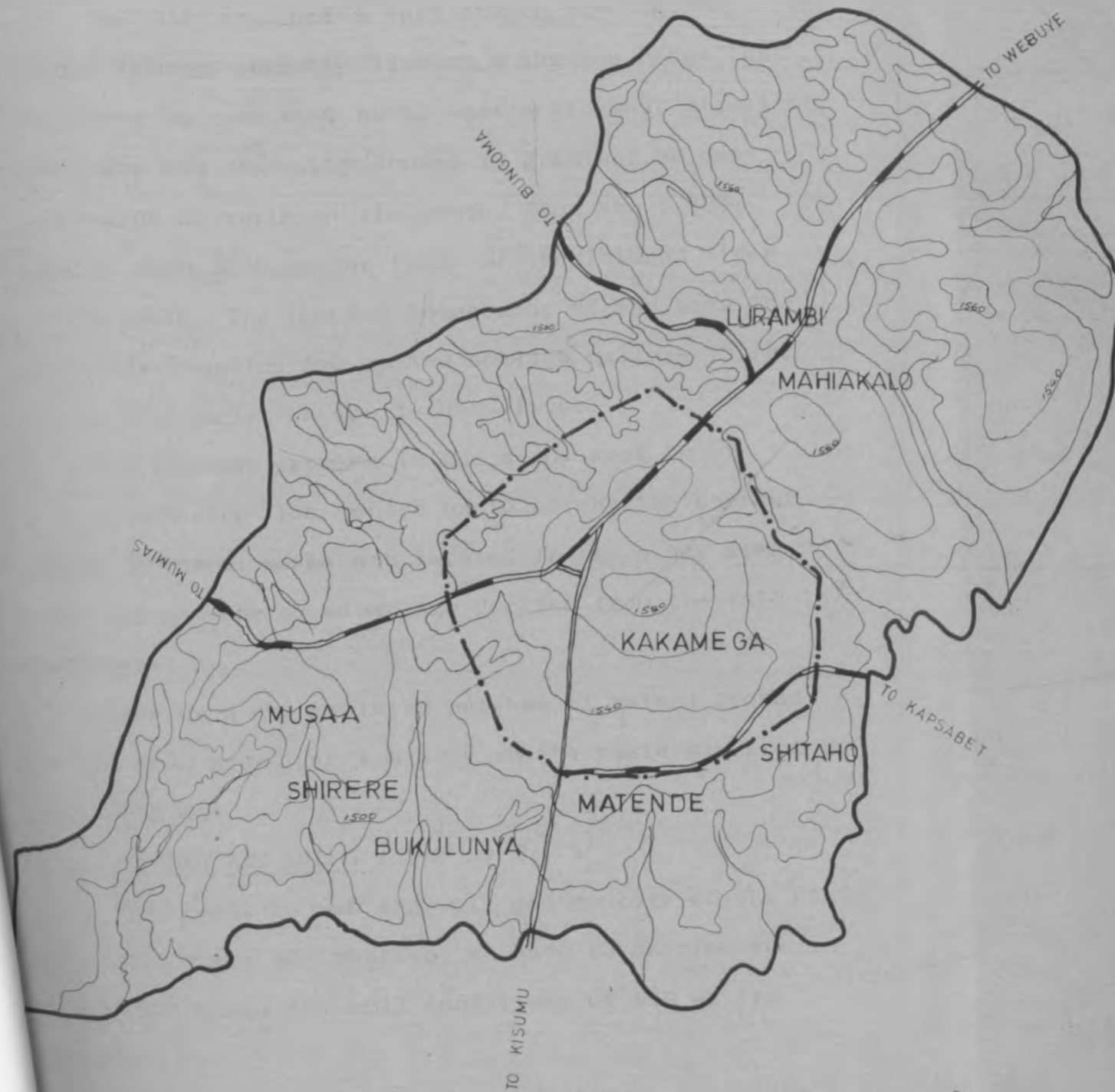
## 2.2. LOCATION: (Map. No. 7 )

Shirere is situated to the south east of the old township boundary, about 3 kilometres from the town centre. It is the lowest category of the Government administrative unit (sub-location). It is one of the four sub-locations whose parts were included within the Municipality, whereas in other cases only parts of the sub-location were included in the municipality, the entire Shirere sub-location was included in the municipal area.

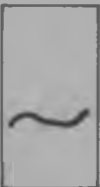



It is bounded to the north by the former township boundary, to the west by the Kakamega Mumias road, to the south by the river Isiukhu. As stated earlier it is found on the town's periphery.

Shirere occupies a total area of 19sq. km. about 20% of the entire municipal area.

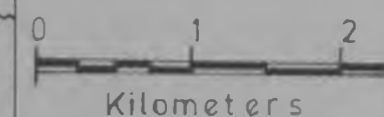
PHYSICAL



LEGEND

-  New Boundary
-  Rivers
-  Old Boundary
-  Contours

|       |   |
|-------|---|
| Name  | AN Shibiru                                      |
| Dept. | Urban & Regional Planning University of Nairobi |
| Year  | 1977/78   |



MAP No. 8

Survey of Kenya

URBAN LAND USE PLANNING POLICIES FOR THE PHYSICAL DEVELOPMENT OF  
RURAL-URBAN AREAS CASE STUDY OF SHIRERE KAKAMEGA

### 2.3 PHYSOIGRAPHY (MAP NO. 8 ).

The study area has a very simple physiography. The former Kakamega township lies on a shallow ridge that traverses the town in a north east/south west direction. The study area gradually loses in gradient as one moves from the north to the south, from about 500m down to about 300m on the banks of the Isiukhu river to the south. The general topography of the area is generally dissected due to the shallow valleys formed by the tributaries of the Isiukhu river.

The drainage pattern in the study area is of north-south direction, which explains why the current sewage treatment works are located in the study area, this has been due to advantage derived from the fall in gradient.

There are a few isolated patches of raised ground in the study area, particularly in the rosterman area to the south west.

### 2.4: GEOLOGY AND SOILS ( MAP NO. 9 )<sup>1</sup>

To be able to put the soil and geology of the study area into proper perspective, we have to examine the entire geological and soil conditions of the entire municipality.

Underlying rocks in Kakamega fall into two major categories, thus the post-Kavirondian granites, and secondly the precambrian volcanics and sedimentary rocks. In the kavirondian granites are contained gold bearing quartr veins, that were extensively exploited

GEOLOGY



Source:

URBAN

PERI-

in the early 1930's.

The soil conditions vary in accordance with the parent rock, to the east we have deep well drained and fertile red-brown loam that overlays the volcanic basalts these soils are fertile and provide better growing land, only a small part falls within the study area.

To the north of Kakamega where the underlying rock is granite, soils are pallid to pale coarse and sandy loam. These soils are characteristically unfertile again only a small part is to be found in Shirere.

To the south and south west predominantly Shirere sub-location, the dominant soil is an average to red-brown loam that overlays the parent sedimentary rocks. The area also features numerous stone outcrops. The soil is quite fertile, which explains why we have a higher population density in Shirere vis-a-vis the other adjoining sub-locations. The soil can also support the growth of several crops either for subsistence or for cash purposes.

## 2.5 LAND USE PATTERN (See map No. 10 )

The study area is basically rural in character, a character that is rapidly undergoing changes as a result of the urban influences exerted to the rural lands.

Although the land use is predominantly agricultural, other uses can also be seen in the form of housing (sub-urban) developments, public purpose uses, small



Plate 3

Modern rental housing with servants quarters provided. Note the high quality materials used.



Plate 4

Owner occupied stone building with an elaborate garden for subsistence agriculture.

scale workshops. The predominant land use on the immediate periphery of the town is residential, it has been pointed out earlier <sup>due</sup> to the short supply of houses in the town and the exorbitant rents charged. Housing developments for rental purposes can be found concentrated along the main Kisumu-Kakamega road in the study area. It is worth of note that these housing developments are carried out according <sup>to</sup> each developers wishes, there is no official guidance whatsoever in the form of a plan. Of the 200 households interviewed the study revealed that development was carried out in response to the demand for housing. 40 households indicated that consent had not been sought from the municipal authorities. 50% of the residential developments are one dwelling unit (one bed room) with an average household size of 4.5 people. The National Occupancy Rate is given at 2.5 persons per room, which means that acute overcrowding exists <sup>in some cases</sup> and causes even serious consequences without basic services like water supply, sewage disposal, surface drainage and refuse collection.

The roads in this area are mere footpaths that lead people into their respective homes, during dry weather the paths are motorable but during rainy season the paths are rendered impassable.

In the past housing developments have been associated with a lot of deficiencies but the study has shown that, 20% of the houses (of the 200 interviewed) fall above

the basic standards expected, some are let whereas others are owner occupied, it is Government's policy to pay higher allowance to owner occupiers vis-a vis those who rent. In essence this policy helps in promoting peri-urban developemnts, not necessarily substandard in nature. Although the developments may conform to the building by-laws, they are still illegal developments due to lack of approval by the municipal authorities.

It has been said that subsistence agriculture is the predominant land use, crops grown are beans, maize, bananas. There are a few cases where some farmers are engaged in cash crop economy such as coffee. Of the households interviewed, only 5 were actively involved in coffee farming.

The other major land uses in the study area are educational and public purpose. The primary schools in the study area are not run by the municipal council as required by the Local Government regulations 1963 due to inadequate finances. There are 5 primary schools in the area with about 300 pupils, this gives about 1,500 school going children in the area. The predominant public purpose user in the area are the churches which in most cases are found next to the primary schools in the area.

A serious conflict arises in the study area due to the location of the sewage works in the midst of dwelling





Plate 5

Semi permanent rental units, with inadequate water supply and communal toilet facilities.



Plate 6

Rental housing units, almost completed. There is no indication of an access road.

range from K.shs.15 to Shs.1,200 within the study area. It must be noted that all the housing developments are on private land. These developments occur in a completely unplanned and uncontrolled manner. In this unplanned areas of Shirere, services that are basic to human existence are non-existent and because of the haphazard arrangement of buildings, it would appear very costly to provide them.

It is Shirere that tends to shoulder the extra urban population that finds no alternative accommodation in town, indeed the trends for the growth of the town favour, the south, south west areas of Kakamega, due to varied factors such as ease of accessibility, ease in both water and sewer connections, cheap rents etc. The housing developments are bound to continue, which might throw the area into complete chaos in the near future. The rapidity of the developments indicates that the Building Code by-laws are not enforced.

It is not possible at the moment to give any particular reason that has led to failure in enforcing the Building Code by Laws.



**Plate 7**

Initially owner-occupied house but currently let due to shortage of houses in the township area.



**Plate 8**

Rental housing with timber walls. Note the block making in the background.

## HOUSE TYPES IN THE STUDY AREA

Table 2.6 SAMPLE SIZE 200:

| TYPE   | NO.OF HOUSES | % of Sample |
|--|--------------|-------------|
| Temporary, Mud, grass<br>Thatched huts   | 20           | 10%         |
| Semi Permanent<br>Mud walls, Iron<br>Sheet roofing                               | 140          | 70%         |
| Permanent; brick or<br>stone walls with<br>either iron sheets<br>or tile roofing | 40           | 20%         |
| TOTAL  | 200          | 100         |

There are no cases where housing developments have been undertaken by squatters, as is evident in Nairobi and Mombasa. It is the land owners in Shirere that help in promoting the problem. Either they sell the land to would be developers or they carry on the developments themselves. We have already noted that carrying out such developments especially those of permanent nature is not important per se but rather the developments are mushrooming without official guidance.

In most cases the houses in the study area are served with pit latrines except in cases of permanent

houses which are connected to the sewage treatment works located in the study area.

Below is a table showing the composition of people in every household of the 200 interviewed.

Table 2.6.1

| Number of Persons | Number of Households | Total Persons |
|-------------------|----------------------|---------------|
| 1                 | 0                    | 0             |
| 2                 | 3                    | 6             |
| 3                 | 11                   | 33            |
| 4                 | 19                   | 76            |
| 5                 | 41                   | 205           |
| 6                 | 64                   | 384           |
| 7                 | 39                   | 273           |
| 8+                | 23                   | 184           |
|                   | 200                  | 1161          |

Author's field survey 1978 Jan.

Average household size in this case is

5.805 which is approximated in this study at 6.

If Government policy of 2½ persons per room can be adhered to then no overcrowding in the study area presents only serious problems for immediate attention. However, in cases where the occupants happen to be town workers who rent dwelling units in the area, overcrowding

results because there are as many as five people occupying one dwelling room. There were 15 such cases out of the total sample of 200 households which represents 7.5 of the total.

It can thus be said that, there is need for urgent steps to be taken to effectively solve the problems posed due to lack of housing for the towns population.

## 2.7 COMMUNITY FACILITIES:

### 2.7.1. EDUCATION

At the time of our survey there were five primary schools in the study area; two secondary schools on Harambee basis and no nursery schools. The number of primary schools that exist in the town is 4, and as earlier stated the schools are not sufficient for the school going children, which means that those that cannot be accommodated find chances in the schools in the study area.

If we use the estimates worked out by the Ministry of Lands and Settlement for the population that is to be served by one primary school the area is supposed to have 4.8 primary schools. It would then appear that the schools are sufficient, but given that the schools also serve the town area and the other adjoining sub-locations, it is apparent that there is congestion of pupils in the already existing schools. Land in Shirere is in private ownership which is a bottleneck

for the further expansion of the existing schools. Further, with the Government policy of free primary education up to class five, five primary schools in an area that is currently densely populated is inadequate. In 1969 the schools outside the municipal boundary accommodated about 487 pupils from within the town an estimated 18% of the townships attendance. The situation now is that the number of children from the town to the Shirere area is even more.

The current primary school accommodation is given as follows;

Table: 2.7.1.

| SCHOOL     | NUMBER    |
|------------|-----------|
| Bukhulunya | about 400 |
| Ematende   | " 380     |
| Ikonyero   | " 350     |
| Mahiakalo  | " 350     |
| Hamusa     | " 150     |

The figures represent 13.5% of the entire Shirere population of about 12,000 people.

There are two secondary schools in the study area, one is situated at the former Rosterman residence for the miners staff. The school is run on harambee basis and is a mixed school for both girls and boys. The attendance fluctuates every year due to exorbitant school fees. Another secondary school on harambee basis is at Ematende, and shares the same compound with



Plate 9

A harambee Secondary School on the immediate periphery of the town.

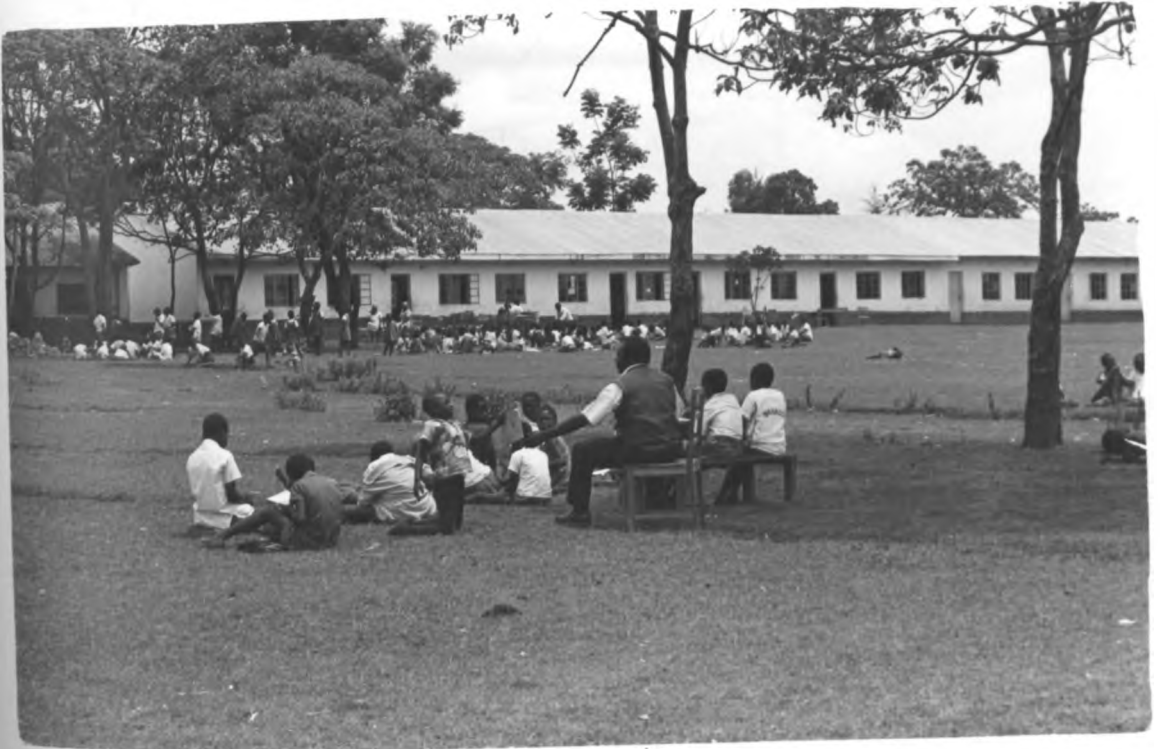


Plate 10

Ematende Secondary cumu primary school. Classroom deficiencies have resulted into classes being held under a tree.



the primary school. The implications are that, there is hardly any room for expansion in view of the fact that the land in the area is freehold.

As the population in Shirere continues to increase the future demand for educational facilities will increase, which calls for establishment of new facilities.

At the time of the survey some parents said that one reason why they were frequently selling their land was for the purpose of raising school fees. With the government commitment of free primary education, one envisages a situation of low illiteracy rate in the area.

Table 2.7.2.

LITERACY IN THE STUDY AREA

Derived from a sample of 200 households with a total of 1161 people.

| Educational Status       | Number | %    |
|--------------------------|--------|------|
| No education             | 580    | 50%  |
| Primary Education        | 465    | 40%  |
| Secondary Education      | 93     | 8%   |
| Post Secondary Education | 23     | 2%   |
| Total                    | 1161   | 100% |

Out of 1161 people in the sample taken 50% are



Plate 11

Means of water supply to some of the residents of Shirere is from such springs.



Plate 12

The oxidation pond under use with a school in the background an illustration of mixed land uses.

are important in providing a healthy environment, and are usually rendered by municipal authorities. There are services which may be provided but which have no direct bearing on the health of the people.

Low density population can do without some services and be able to provide a healthy environment. A population like that of Shirere that is urbanised to some extent and overcrowding occurs in some areas requires some basic services for maintaining a good environmental quality.

#### 2.7.3.1. SEWAGE AND DRAINAGE:

A sewage treatment works that was designed to serve the old township area is sited in the study area near Bulhulunya school. This sewage works also cater for a few houses in the study area, the houses connected to the sewage works are all permanent. Out of the 40 permanent houses, 15 are connected to the sewage works, contrary to the prior plan of serving the town area first. The other houses in the study area are served with pit latrines, which are undesirable for the maintenance of good health; especially the high density areas in Shirere that adjoins the Kisumu-Kakamega road and those found immediately on the periphery of the old township area.

There is no surface drainage in Shirere, except the provision for surface drainage along the Kisumu



Plate 13

Rental housing located next to the sewage works,  
One of the houses connected to the sewage works  
contrary to the initial plan.



Plate 14

One of the oxidation ponds not under use. Residential  
dwellings can be seen in the background.

Kakamega highway. Surface drainage in Shirere is now easily done due to the natural sloping of the land, but as new buildings continue to come off the ground, there will be need for clear provision of surface drainage. Access in some parts of the area is hindered due to stagnant water which also is a health hazard because it provide an ideal situation for mosquito breeding.

2.7.3.2. REFUSE:

Refuse collection is essential in proper maintainance of health. If not properly treated refuse can serve as a good medium for the transfer of disease.

Refuse collection and litter clean up is non existent in the study area, and even in the old township are refuse collection is not regular.

Absence of this service in the study area, and with the on going housing developments Shirere presents serious consequences which merit immediate attention.

It has been pointed out that, the financial requirements for instituting this service is a limiting factor. This service could have been given easily from the rates paid to the municipality but currently no rates are payable from the study area.

Refuse is disposed off in any manner the house owners think fit, frequently the litter is burnt but most of the refuse is left lying around the compounds, a practice that is detrimental to health.



Plate 15

Access to the houses is mostly by footpaths. Note the elaborate fencing. The house is well serviced with water and electricity.



Plate 16

House meant for rental purposes and not yet occupied. Note that there is no vehicular access to the house.

### 2.7.3.3. ROADS:

Roads serve as an important linkage of one place to another and also help in making other services possible such as collection of refuse, access for to houses to facilitate ambulance services etc. The study area is predominantly inaccessible to vehicular movement, most of what exists are mere paths leading to individual households. During the dry weather the roads are motorable, but during the rainy season the paths are impassable.

The only significant road that traverses the study area is the Kisumu-Kakamega highway, this road serves only those who live near it.

The on going unplanned developments in the area will make it more difficult for access roads to be re-aligned in future, this may lead to demolition of buildings that will result into excessive compensation costs.

### 2.7.3.4 FIRE AND PUBLIC SECURITY:

The fire brigade that serves both Nyanza province and western province is located in Kisumu, there is currently no indication of having this service in Kakamega, perhaps the probability of a fire outbreak in Kakamega is minimal, which also applies to the study area.

The police service is situated in the town a few kilometres from the study area. The civilian

administrators at the time of the survey recorded their satisfaction with this service. It was also indicated that the crime rate in the study area is rather low, unlike that in the fringe areas of our major urban centres such as Nairobi, Kisumu and Mombasa. A possible explanation for this is the fact that in-migration into Shirere is extremely low, as will be seen later under the Social Base.

#### 2.7.3.5 WATER SUPPLY:

Water in Shirere is obtained from various sources, there are some households who get their water from the central supply in town. It should be noted that the administration of water supply in Kakamega falls under the office of the District Commissioner although the technical aspects to the supply are undertaken by the Ministry of Water Development.

Despite the fact that the storage capacity was meant for the old township area, some houses in Shirere have been connected to the main supply. Individuals are required to buy their own piping then seek the expertise of the Ministry of Water.

There are three storage tanks at Mlimani in the old township area of different capacities thus, 1125 cubic metre, 67.5 cubic metres and 45 cubic metres.

Out of our sample of 200 households, there was piped water in 62 homes, either on communal or individual basis. 91 households said that they





Plate 17

Some of the rental units constructed with poor materials are on the brink of collapse. Note the communal water tap next to the door. Water is supplied to such substandard housing and yet in some cases of standard housing it is not supplied.

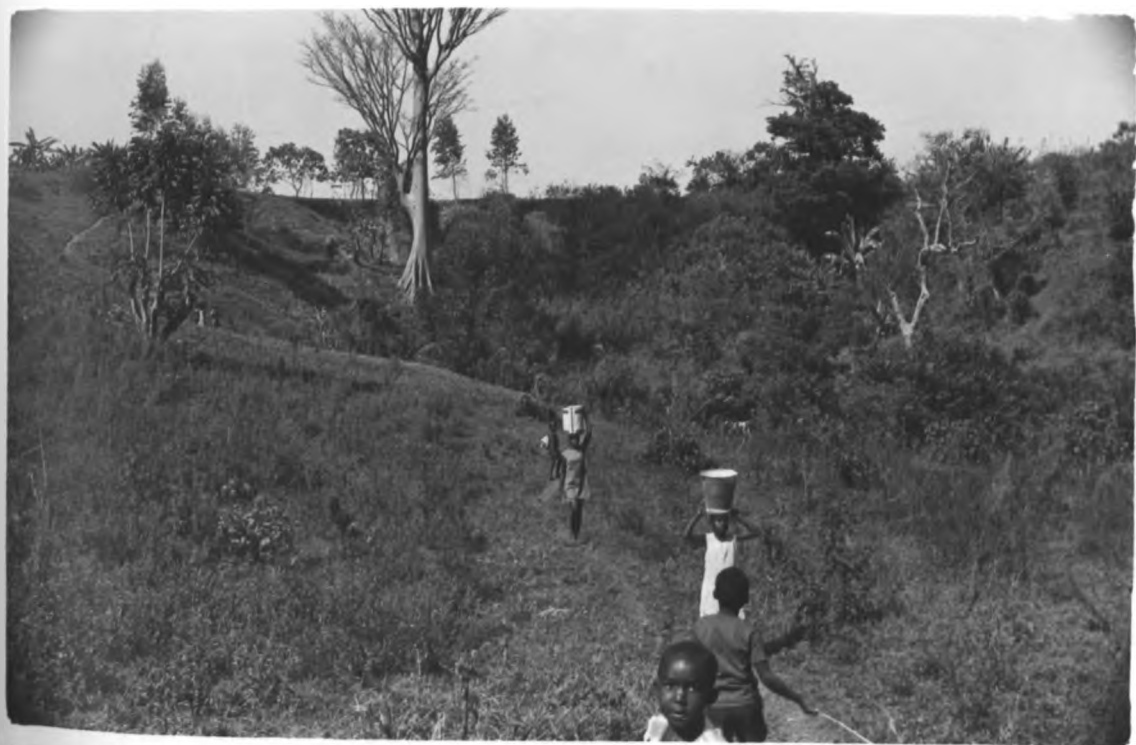


Plate 18

Young girls return home after fetching water from the river. A substantial number of people depend on rivers, streams and springs for their water supply.

purchase their water from those who live next to them and have piped water and the rest 47 households fetch their water from the streams near their houses; the furthest home from the nearest stream was about 1km away.

Table 2.7.3.5

WATER AVAILABILITY

Sample size 200

|  | Number | %     |
|--|--------|-------|
| Piped Water                              | 62     | 31%   |
| Purchase from those who have piped water | 91     | 45.5% |
| From stream or spring                    | 47     | 23.5% |
| TOTAL                                    | 200    | 100   |

Supply of water to homes in the peri-urban area without following any plan is bound to create problems, because plans may not in future conform to the already laid pipes which may result in a duplication of pipes.

Due to pressure exerted on the little supply there is, those interviewed said that, the water is not always available whenever it is required, The water shortage is due to low storage capacity.



**Plate 19**

Communal Pipe Water. Water expenses are met by the owners of the residential units.



**Plate 20**

The people on this plot have to draw their water for use from the neighbours or the stream nearby.

The problem that arises from water supply is lack of co-ordination between the municipal authorities, the office of the District Commissioner and the Ministry of Water Development. In the other Municipal authorities the provision of water supply is undertaken by them which makes it easier for the planning of the service. Lack of co-ordination between the aforementioned will result into serious consequences in the near future of an even greater magnitude than is the case now.

#### 2.7.3.6 RECREATION:

As is the case in most urban fringe areas, the recreational facilities are completely lacking in Shirere. In a few cases members of the public use some school fields for their own recreational purposes. Recreational facilities can best be situated on public land, which is lacking in the study area. Availability of land for this purpose will require compulsory acquisition. The topography of Shirere which loses its gradient very sharply from the north is another bottleneck for the development of recreational facilities.

The provision of recreational facilities can only be provided in accordance with a physical development plan, which is currently non-existent.

#### 2.8 DEVELOPMENT BOTTLENECKS IN SHIRERE:

The Developmental problems that stem from the physical character and pattern of the current land



Plate 21

Some of the residential units, with poor maintenance.



Plate 22

Modern rental housing, with all the basic facilities. Note the concentration of the houses. Almost all the plot size is covered.

use in the area are:

The Isiukhu river that flanks the southern and western part of the study area will not allow for any further developments because costly bridges may have to be instituted.

The land tenure system in the area is freehold. It was stated in one of our assumptions that the extension of the municipal boundary, has not been followed with effective land use control of the activities being undertaken in Shirere. There are no local zoning by-laws that could be enforced to institute the required control.

The existing and on-going housing developments which are unplanned make it difficult for essential services to be provided, the problem is even made worse by the overcrowding of buildings along the Kisumu-Kakamega road/which make it even more difficult for the installation of basic services.

The study area is predominantly served with pit latrines, services like water and electricity exist at a very low level.

## 2.9 S U M M A R Y

There exists no serious physical barriers to urban development in Shirere, the geology of the area shows that the rocks are capable of supporting building structures. As demonstrated in the economic base of Kakamega, the soils are fertile and support a

variety of crops.

Subsistence agriculture is the mainstay of the people. In some cases, fresh fruits and vegetables are grown in Shirere and marketed in the town area.

Land uses in the area are unco-ordinated due to lack of a land use plan.

The chapter has shown that there are serious deficiencies in infrastructure and other necessary community facilities.

It has been demonstrated that the shortage of land for urban development is due to the freehold ownership of land in the area.

It has been noted that the pressure exerted on housing in Shirere is a by-product of the housing shortage in the old township area.

#### F O O T N O T E S:

1. See Development plan Kakamega September 1970 for Geological information.

3.0

CHAPTER THREEThe Social Characteristics of Shirere:3.1. MIGRATION: POPULATION MOVEMENT AND ITS IMPLICATIONS:

There is a direct relationship between the rate of in-migration in the urban areas and the peri-urban problems of the various urban areas in Kenya. This is the reason why an appreciation of the rate of population growth can best be understood with a clear understanding of the in-migration of population into Kakamega. The rate of in-migration will also help us to appreciate the level of peri-urban developments that are currently going on.

A number of reasons can be given for peoples desire to migrate, but the most acceptable reason is that people move into the town to greater economic, social and physical benefits that are non existent in the rural areas. Some people move into town because they depend on it for employment, some are said to simply give preferance for an urban way of life.

There appears to be a correlation between education and migration in that the educated look to the town as the only true places for reaping their economic/social benefits. Some landless people look to the town as their saviour out of their economic and social predicament.

The moving of the people into towns faster than the



town can absorb them carries with it serious consequences. The urban areas are not able to provide the needed housing, which then leads to overcrowding and uncontrolled settlements and an escalation of the peri-urban problems. Substandard houses are built just next to the town, with an occupancy ratio that exceeds 5 people for every two rooms.

The expanding population in the peri-urban area leads to crowded housing units, with lack of basic infrastructure and hence renders the residents vulnerable to health hazards, there is no safety at all, such developments lead to a very low standard of environment that is undesirable in an urban area.

Lack of basic infrastructure such as roads, water sewage treatment and refuse collection all contribute to an unhealthy environment - a possible social explosion.

The additional population exerts pressure on a few services such as water and sewage works that might have been meant for a smaller population. This disrupts the smooth supply of certain services.

In-migration creates a shortage of houses, and hence contributes to the high rents that are so characteristic in Kenyan urban areas. The rents demanded by the landlords are out of reach by the low income earners, hence the perpetuation of illegal housing developments on the peripheries of the towns.

### 3.2 IN MIGRATION IN SHIRERE;

Shirere is fertile and hence good for crop production. It is also located within easy reach to the town. The area enjoys some form of infrastructure that is lacking in other peri-urban areas of Kakamega. Accessibility to the town is easy though the foot paths are not motorable during wet season. There are plenty of rental units for house hunters. It is these factors that would tend to attract the in migrants coupled with the fact that the town is growing towards the Shirere direction, a few speculators also find it proper to concentrate their land purchases in Shirere for higher returns at a later date.

A total of 1161 inhabitants was recorded in the 200 households interviewed. Since we are trying to measure the weight exerted on the peri-urban areas as a result of the boundary extension of 1971, we have concentrated on the in migration since 1970 only. Of the 1161 people recorded in our sample, only 25% moved into Shirere after 1970, which gives a total number of 312 in migrants. Some have bought land in the area and are settled with their families, while others are town workers who rent housing units in the area at cheap rents. Most of the in migrants came to Shirere as the only good alternative compared to their home areas. 60% of the in migrants came from within Kakamega.

District the remainder come from as far afield as central province in Kenya and in a few cases as far as Uganda.

### 3.3 POPULATION OF SHIRERE (PAST TRENDS)

We have already shown in chapter one that the population of Kakamega in 1969 was 6,244, which does not include the peri-urban areas. This population increase showed a rate of 6.8% increase per annum between 1962-1969, compared to that of 1948-62 which was negative (-1.7%). Currently the population of Kakamega is given at 9,500 which shows a growth rate of 4.8% per annum between 1970 and 1977.

Shirere had a population of 7,746 in 1969, the 1962 census figures are unavailable.

Table 3.3.

| Shirere |      | 1969 Census           |                |        |                         |                  |
|---------|------|-----------------------|----------------|--------|-------------------------|------------------|
| Total   | Male | Male<br>Child-<br>ren | Male<br>Adults | Female | Female<br>Child-<br>ren | Female<br>Adults |
| 7,746   | 3761 | 2082                  | 1679           | 3985   | 2147                    | 1838             |

Of the total population at the time, 51.4% were female.

Out of the sample taken 603 were female, 52% of the total 1161 population. Females still are more in number than the males.

### 3.4 POPULATION DISTRIBUTION:

The density in the study area as of 1969, was 400 per

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sq.km. (2 per ha.) this can be compared to the density in the town during the same period of 767 per sq km (7.805 per ha).

Population densities are highest near the main road from Kisumu to Kakamega and on the immediate periphery of the town, where densities are given at an average of 30 households per ha. with an average household size of 6, it can thus be said that densities in some parts stretch to 180 per ha. There is no proper layout of the crowded rental units.

The other area with a high density is the Mahiakalo area just opposite Lurambi administrative centre, where densities average 50 persons per ha. The former residence of the white miners at Rosterman also constitutes another area of high density in the study area.

Most of the occupants of these high density areas are the low income earners, who commute in Shirere after work.

### 3.5 POPULATION STRUCTURE AND COMPOSITION:

The composition of the population in the study area varies quite considerably in relation to the type of house and the socio-economic background of the occupants. The average household size in the study area is 6 persons, household refers to a complete family with head occupying a self contained unit, be it a single dwelling room or a four roomed house.

The study shows that the females dominate the sex structure 52% of the sample were female whereas 48% were males. This displays one basic rural characteristic where females are the majority in most cases, this also indicates that most men have moved to other larger urban areas to derive economic benefits that were not forthcoming in Kakamega. Of those interviewed it was found that 62% were in the economically active group. We have attempted to show the age composition of the population in the table below.

Table 3.5

AGE COMPOSITION : SHIRERE 1978

Based on sample size of 200 households

| AGE     | NUMBER | PERCENTAGE |
|---------|--------|------------|
| 0 - 10  | 151    | 13         |
| 11 - 20 | 209    | 18         |
| 21 - 30 | 418    | 36         |
| 31 - 40 | 186    | 16         |
| 41 - 50 | 116    | 10         |
| 51+     | 81     | 7          |
| TOTAL   | 1161   | 100        |

Source: Author's survey.

Age Sex Pyramid  
Shirere 1977

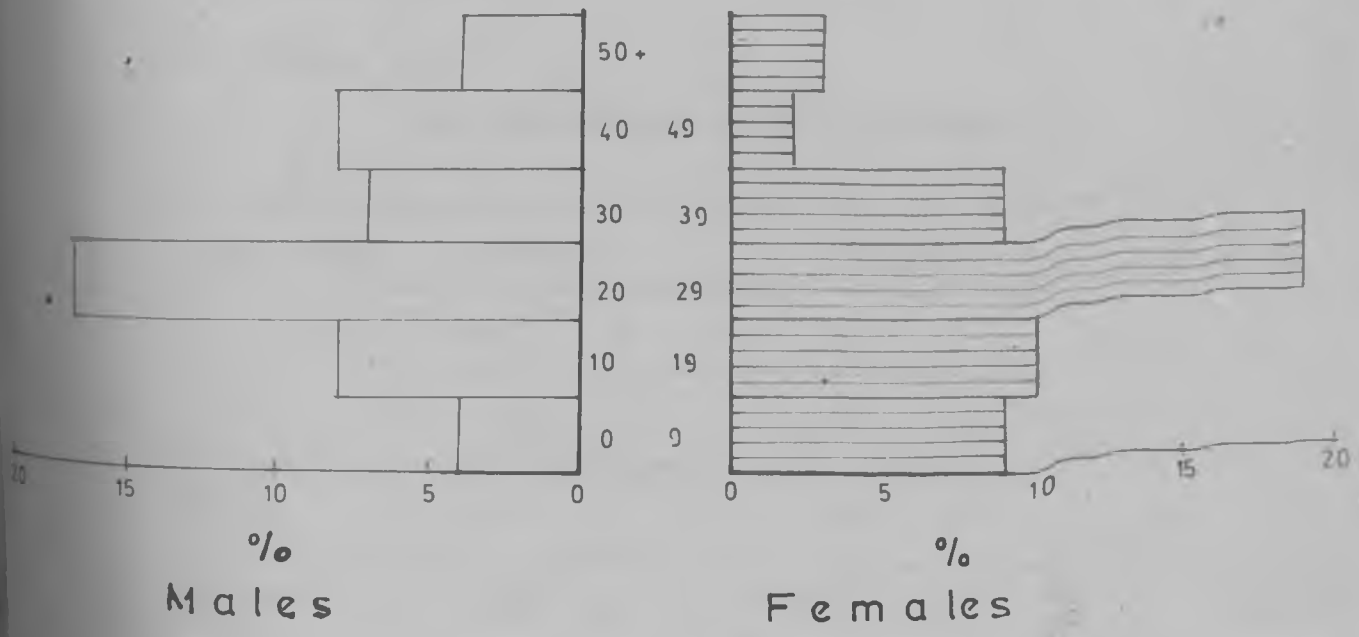


FIGURE 6

The sample shows that the age group between 21-30 years is the largest, confirming the contention that it is the young who tend to migrate into the urban areas more than the elderly. It could also mean that since Shirere is still predominantly rural in character, the young still have<sup>t</sup>o find a better alternative before they can emigrate for better economic benefits.

The survey was conducted during the August school vacation when some children pay visits to their relatives, hence the analysis of the age group 11 -20 should be cautiously applied.

Table 3.5.1.

## AGE SEX COMPOSITION IN SHIRERE

| AGE GROUP | FEMALES |    | MALES |    |
|-----------|---------|----|-------|----|
|           | NO.     | %  | NO.   | %  |
| 0 - 9     | 104     | 9  | 47    | 4  |
| 10- 19    | 116     | 10 | 93    | 8  |
| 20- 29    | 221     | 19 | 197   | 17 |
| 30-39     | 104     | 9  | 81    | 7  |
| 40-49     | 23      | 2  | 93    | 8  |
| 50+       | 35      | 3  | 47    | 4  |
| TOTAL     | 603     | 52 | 558   | 48 |

Author's survey.



The age sex structure shows that those below the age of 20 are 31% of the size of the sample taken. Another interesting feature is that the percentage total of females <sup>above</sup> 40 years declines considerably compared to that of males, the females account for only 5% of the total sample size, while the male percentage above 40 years is 12%. Like most of the areas in Kenya the age group between (20-29) <sup>is the largest land and</sup> accounts for 36% of the total population interviewed.

The various household sizes have already been referred to under physical pattern on housing. The average household size is 6 persons per dwelling unit, in some cases there is overcrowding whereas in others the space available is adequate for the occupants.

### 3.6 ETHNIC COMPOSITION IN THE STUDY AREA:

From our survey we found that there are two distinct tribes in the study area, the Luhya (the indigeneous people) and the Luos from Nyanza province most of who settled in the area in the late 1930's and early 1940's. It was found that most of those Luos in the study area were workers in Kakamega in the then Public Works Department. There has been quite substantial integration evidenced by the adoption of the Luhya Language by those who have settled in the year. When asked why they preferred land in Shirere to any part 100% said the land in Shirere was quite fertile for crop production and nearer their places of work

It was further stated that the land prices were cheaper in Shirere in comparison to their home areas.

There are no distinct clusters for the Luhya and the Luos.

One would have expected to find the area predominantly occupied by the Isukha people, but this is not so, in fact the Luhya's found in the area are mostly from nearby divisions of Vihiga, Ikolomani, Mumias etc. The Luhya population is about 84% of the sample size, of this the Maragolis form about 27% with the Isukha and the Idakho accounting for 40%, Luhyas from the other parts of the district account for about 17% of those interviewed. The Luos account for about 11% of the sample. Other tribes such as Kikuyu, those from Uganda account for about 5% of the size of the sample.

Table 3.6

ETHNIC COMPOSITION (STUDY AREA)

| TRIBE  | PERCENTAGE | NUMBER |
|--------|------------|--------|
| Luhya  | 84         | 975    |
| Luo    | 11         | 128    |
| Others | 5          | 58     |
| TOTALS | 100        | 1161   |

Source: Author's survey.

A further breakdown of the Luhya inhabitants to show

those who have moved into Shirere is given below. The Isukhas are the indigeneous people in the area, all others migrated into the area at some time in the past 25 years.

Table 3.6.1.

|                   |     |     |
|-------------------|-----|-----|
| Isukha and Idakho | 40% | 464 |
| Maragolis         | 27% | 313 |
| Other Luhyas      | 17% | 197 |
| Total             | 84% | 974 |

It is therefore evident that in migration into Shirere has been going on for many years in the past. The immediate problem that one falls into is to determine the precise rate of in migration for lack of sufficient and reliable data.

### 3.7 FUTURE POPULATION GROWTH TRENDS AND ITS IMPLICATIONS TO THE DEVELOPMENT OF SHIRERE

We have examined elsewhere population trends both past, present and future for the entire municipal area. We now examine future population growth trends and their implication to development in Shirere. It is not an easy task to predict population growth with any amount of certainty, but based on past trends and the present, some assumptions can be adopted that can help in future population projections for planning purposes.

A basic assumption that we shall adapt in this study

is that Shirere's population will continue to rise in the foreseeable future. Secondly since Shirere is not entirely urban nor rural, the population increase should accommodate an element of in migration.

The Ministry of Finance and Economic Planning has made certain population projections for Kakamega two rates of 9.35 and 12.65 have been adopted, both which put the population of Kakamega at approximately 100,000 people by the year 2,000 which is 10 times the current population. We have tried to argue elsewhere that Kakamega is basically an administrative cum commercial town, and with a weak industrial base. There is therefore no attraction that will promote in-migration into Kakamega, hence there appears to be no justification for the massive projections (see chapter 1). Contained in the same document is the argument that the rural population (including the study area) will be urbanized by the year 1990 and hence the same growth rate as that of the already urbanised area. This assumption has also been adopted in our projections of the study area.

The population of Shirere was 7,746 in 1969. Now the population according to estimates by the local administrators is 12,000 people, which shows an annual growth rate of 5.6 more than that of the old township area which reveals a growth rate of 4.8 per annum.

# Population Projections

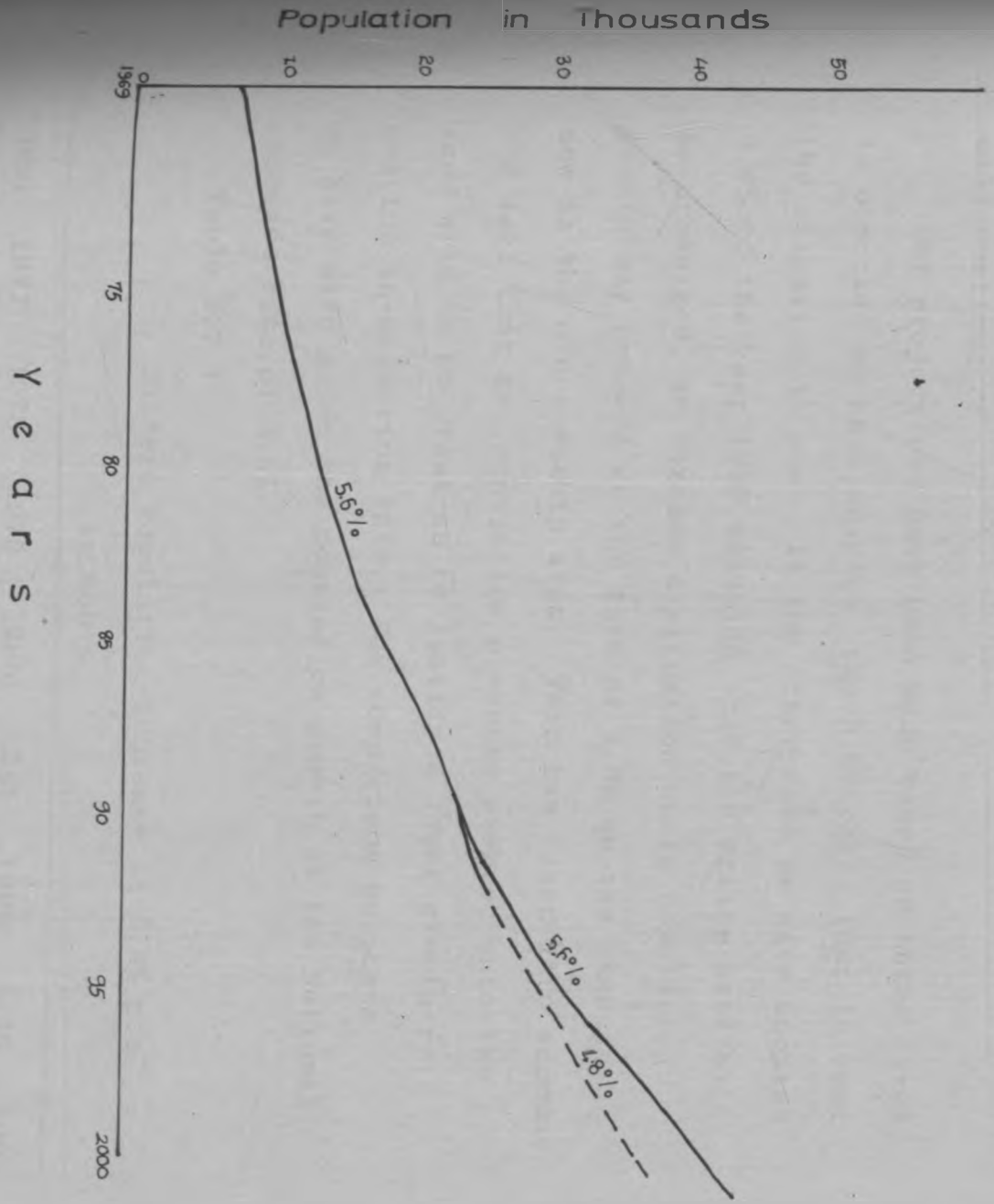


FIGURE 7

If the natural growth rate is 3.5 then the extra 2.1% can be attributed partly to in-migration from outside the municipality and partly due to in-migration from within the municipal area, particularly due to the shortage of housing in the old township area. It is expected that the current growth rate of 5.6% per annum will continue.

Our projections have been made based on three rates, in one case we have adapted the 5.6% rate, that is what the situation is now. In the other case we have adopted 5.6% to the year 1990, assuming that the entire area will be urbanized, we foresee a situation where population growth may proceed at the rate of 4.8% as the case is now in the old township area. This has taken into account the fact that the population pressure exerted onto the land will be so great as to justify a lower growth rate and low in-migration rate. For comparison purposes we have also given the population growth at the National increase rate of 3.5%.

Table 3.7.1

Shirere Population Increase at 5.6% p.a.

in 000's

| Year | 1977 | 1978  | 1979  | 1980  | 1985  | 1990 | 1995 | 2000 |
|------|------|-------|-------|-------|-------|------|------|------|
| No.  | 12   | 12.67 | 13.38 | 14.13 | 18.55 | 24.3 | 32   | 42   |

Table 3.7.2

Shirere Population at 5.6 to 1990 thereafter  
at 4.8% to the year 2,000

| Year | 1977 | 1978  | 1979  | 1980  | 1985  | 1990 | 1995 | 2000  |
|------|------|-------|-------|-------|-------|------|------|-------|
| No.  | 12   | 12.67 | 13.38 | 14.13 | 18.55 | 24.3 |      |       |
|      |      |       |       |       |       |      | 30.8 | 37.15 |

Table 3.7.3.

Population growth at the natural increase  
of 3.5%

| Year | 1977  | 1978  | 1979  | 1980  | 1985  | 1990  | 1995  | 2000  |
|------|-------|-------|-------|-------|-------|-------|-------|-------|
| No.  | 12000 | 12420 | 12855 | 13305 | 16355 | 19424 | 23070 | 26473 |

All the rates show that the population will be more than two times what it is now. These population increases will inevitably result into intensified peri-urban developments, the current deficiencies in infrastructure will also become worse with the population increase. Unless urgent measures are taken to step up certain services such as water in the old township area, serious deficiencies than is the case now will result.

With population increases the number of people per ha. will be more than can be supported by subsistence agriculture as is the case now. This will mean that alternative employment has to be found to provide means of support to the majority of the people.

Population projections at the natural increase rate

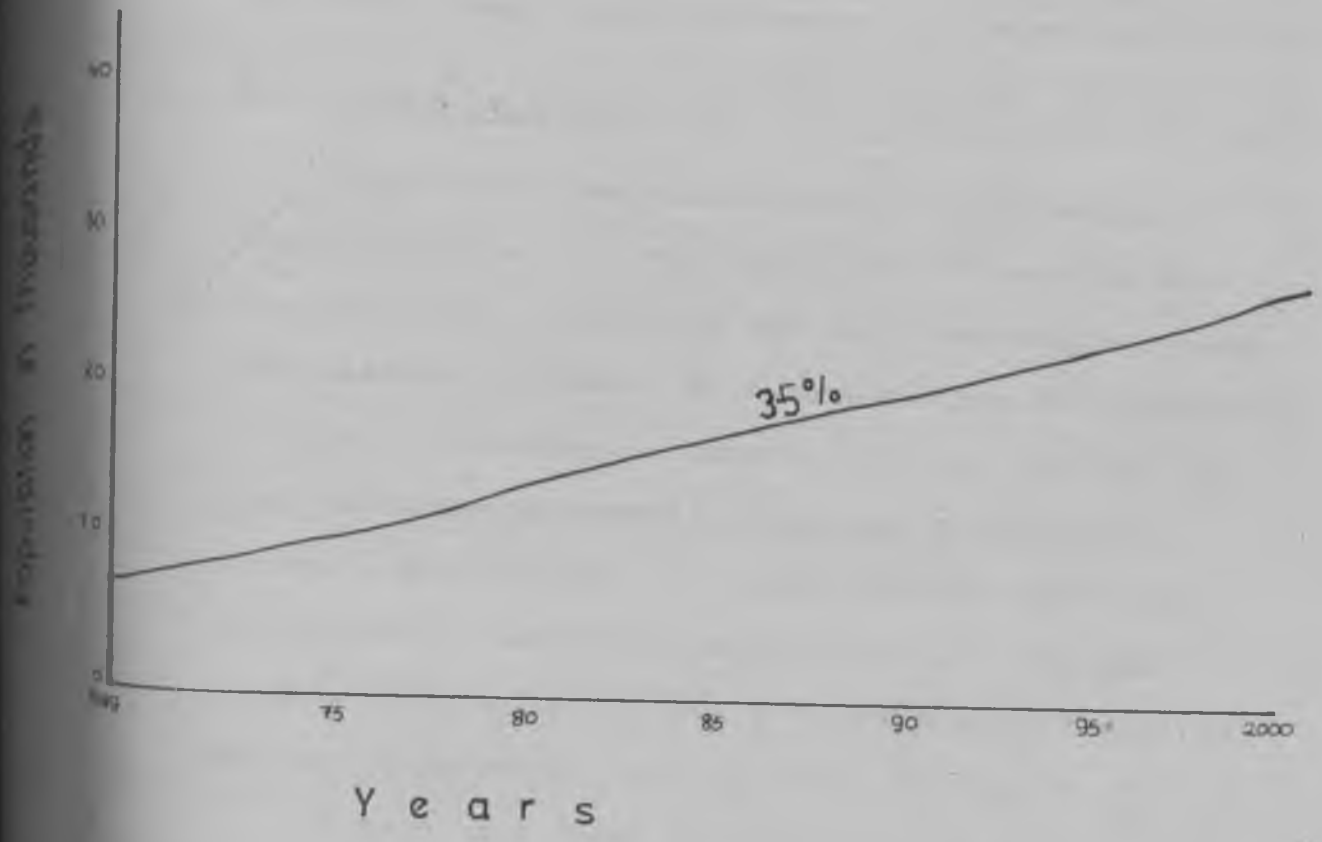


FIG. 8



An increase in population will require a proportionate increase in the provision of community facilities such as health, educational, recreational etc. than is the case now.

The amount of control in Shirere is minimal, and with a larger population the municipal authorities may not exercise the required control given that control with the current small population is almost non-existent.

### 3.8 S U M M A R Y:

This Chapter has concentrated on population growth trends with a view that planners need to know the structure, composition and magnitude of any system they want to plan for. We have seen that the population of Shirere has shown an upward rise over the past and that the trend is likely to continue in the near future. What has not been given with any certainty is the rate at which the population will continue to grow this is due to lack of sufficient and available data on demographic characteristics of Shirere.

We have also found out that Shirere will continue to shoulder most of the population that is likely to migrate into the town. This is due to the advantages enjoyed by Shirere in comparison to the other municipal areas, such as availability of water, cheaper housing, the fertility of the land and the ease of access to the town as the main work place.

A conclusion has been made that the sharp increase in population expected, must receive immediate planning attention for a proper co-ordinated physical development. It has also been noted that the current infrastructural deficiencies in Shirere will be worsened with the expected population increase.

Although it is envisaged that the population of Shirere will increase over the years till the year 2000 this will depend on better economic benefits that people will derive from the town, otherwise without any economic or social incentives, we foresee a situation where the population may continue to grow merely at the natural increase rate, with better health facilities the natural increase still warrants immediate planning attention.

F O O T N O T E S:

1. Urban Population Projection, Ministry of Finance and Economic Planning 1969.

## 4.0

CHAPTER FOURECONOMIC CHARACTERISTICS4.1. INCOMES AND EMPLOYMENT;

There are neither large industrial enterprises in Kakamega nor large commercial concerns that employ many people. We have already examined Kakamega as a commercial cum administrative town. The two functions have not in the past generated sufficient employment for the town dwellers. It has also been noted that Kakamega has a very low industrial potential that has not been fully exploited. Even if the industrial potential that there is, is exploited, it would still depend on whether the type of industries are labour intensive or capital intensive before one can predict with any certainty the amount of employment that can be offered.

Shirere still displays considerable rural influences. We therefore find two groups in the area. On one hand we have the subsistence indigeneous dwellers, on the other hand we have those employed in the civil service that reside in the study area.

When asked whether employed, most indigeneous people considered employment as that offered by the Government in the town. They did not consider tilling their own land as an employment, even a few that own furniture workshops or block making shops still considered this as no employment at all. An employed person is not necessarily a wage earner, and

Hence this response. The various employment categories are shown in the table below show the various categories of people and their working places. In this categorization we concentrate on those who were interviewed and were aged between (18-55) years. According to our age sex composition (see chapter 3) this effective work force constituted about 64% of the sample taken thus (743 people).

Table 4.1 Showing Type of Work (MAIN)

| Type of Employment  | Number | Percentage % |
|---------------------|--------|--------------|
| Subsistence Farming | 416    | 56.0         |
| Government service  | 126    | 17.0         |
| Commerce & Trade    | 10     | 1.3          |
| Transportation      | 15     | 2.0          |
| Self employment     | 82     | 11.0         |
| Other               | 94     | 12.7         |
| Total               | 743    | 100.00       |

Source: Field Survey by author.

It can be seen that the main occupation is subsistence farming in which 56% of the people are involved.

As has been witnessed in most of other surveys conducted either at the urban level or regional level, the question of income is never willingly answered unless the interviewer makes an effort to apply leading questions, this is so because most people are so sensitive to taxes that whenever they are asked about income they have the habit of distorting facts. With all these difficulties we have tried to examine the income structure in our study case. For the purposes of simplicity we have divided our income groups into four categories only.

Table 4.1.2

Shows Income Structure in Shirere;

| Income in<br>K.Shs. | Number | Percentage |
|---------------------|--------|------------|
| 0-500               | 1033   | 89         |
| 501 -1000           | 81     | 7          |
| 1001-1500           | 35     | 3          |
| Above 1500          | 12     | 1          |
| TOTAL               | 1161   | 100        |

More than three quarters of the population in Shirere earn less than K.shs.500 per month. It should be noted that in this group we have included about 36% of the population aged between 0 and 20. Most of the



Plate 23

The local drinking 'busaa' club. The centre of attraction of some members of the community. Next to the club are some residential rental units. Note the proximity of the developments to the road.



Plate 24

Shirere Market with shops that are poorly stocked which suggests that most people depend on the commercial centre in town for their daily requirements.

people in the category of (1001-1500) are Civil Servants that have rented some of the good houses in the area, and a majority of them are in-migrants that have settled in Shirere, and currently live in owner occupied houses that help them to realize huge owner occupied house allowances.

Unless there are further industrial expansions, plus a better developed commercial base, then we foresee a situation where subsistence economy will still dominate in Shirere.

#### 4.2 COMMERCE AND TRADE:

Only one shopping centre of any significance exists in the study area; this is the Shirere Market to the south of the town, situated on the eastern side of the Kisumu - Kakamega road that traverses the study area. We counted about 7 shops, there is also one bar and a local 'busa' club (the traditional drink). The shops are poorly stocked, all are operated on retail basis. Poor stocking may be partly explained by the fact that the area is so close to the town thereby making it easy for the people to purchase their goods in town.

No market exists in the area, an unplanned open air market exists in the old township area just near the study area. Most of the goods are petty, such as maize, vegetables etc.



Plate 25

Furniture workshop on the immediate periphery of the town.



Plate 26

An unplanned garage cum timber workshop along the Kisumu-Kakamega road.



Other than the few shops in Shirere market, there can also be found unplanned shops scattered all over the study area, a development which the headquarters D.O.II discourages.

We have already considered the fact that the road condition in Shirere is poor, the population has also been given at 12,000. Seven shops and a few scattered ones in a haphazard manner are inadequate for the needs of the people.

Two workshops exist in the area for the purposes of furniture production, one block making workshop is also located in the study area, on the same compound of residence by the owner.

It is therefore clear that the commercial activities of Shirere are poorly developed and require immediate attention.

#### 4.3 INDUSTRIAL ACTIVITIES:

We have already noted the low development of industrial activities in Kakamega, and so is Shirere. The only notable industrial concern in the area is the motor garage that is currently under construction (see plate). This however is an individual effort on private land, and unplanned. It is situated to the west of the Kakamega-Kisumu road that traverses Shirere.

#### 4.4. TRANSPORTATION:

There are three major roads that pass through the study area. To the east we have the Kapsabet road



Plate 27

The main Kisumu-Kakamega road that traverses through the study area. The road is all weather surface.



Plate 28

Murram road to Kapsabet. The road forms a boundary between Shirere and teh old township area, to the immediate left is Shirere.

(murram) to the west there is the Mumias road that marks the boundary between the study area and the Shikoti sub-location. The Kisumu-Kakamega road dissects the study area in the centre. Of the three roads, it is the Kisumu-Kakamega road that shoulders most of the traffic, either to Kakamega, or through traffic to Webuye and Kitale. The development of the sugar industry in Mumias is expected to increase the volume of traffic between Kakamega and Mumias.

The other roads in the study area are mere footpaths that provide accessibility to the various homes in the area.

Most people in the study area travel on foot, which implies that their transportation costs are minimal.

The table below will help to illustrate the predominant travel modes in the study area.

Table 4.4. Mode of Travel:

| Mode             | Number | Percentage |
|------------------|--------|------------|
| Private Car      | 5      | .4         |
| Public Transport | 38     | 3.3        |
| Motor Cycle      | 3      | .3         |
| Bicycle          | 58     | 5.0        |
| Travel on foot   | 1057   | 91.0       |
| TOTAL            | 1161   | 100.0      |

Source: Field Survey

Although we have noted that there are major roads connecting the study area to other places like Kisumu .

public transport in the study area accounts for only 3.3% (38) of the total sample size. The number of private cars in the study area is minimal. Most people travel on foot (91% of the sample size). What this analysis seems to show is that, development of road network in the area has not reached a critical stage that requires immediate attention, nevertheless a better planned area requires proper roads for efficient movement of goods, services and people.

It cannot be stated with any certainty when bus services will be provided by the Municipal authorities but it is envisaged that people in Shirere will continue to rely on pedestrian mode of travel and public transport for some time to come and will need better access roads into their homes.

#### 4.5 LAND: AN ECONOMIC COMMODITY:

Land among the Africans was communally owned. Thus a chief could own land in trust for the clan. This fact has been recognized by Lord Lugard in his book <sup>That</sup> the "Dual Mandate", no one had the right to own, sell, lease or carry out any transactions in land without the approval of the clan.<sup>1</sup> It was this argument of communal ownership that made it possible for the Colonial Government to acquire large chunks of land without payment of any compensation.

Nyerere<sup>2</sup> in his works has argued that, land is God's

gift to mankind and that we only hold the land in trust for the dead, the living and those to be born and that land is not an economic commodity to be negotiated.

As a measure to promote productivity and faster agricultural development coupled with conferring security of tenure to individuals, land has been registered and title deeds given. This has enabled many people to pledge their title deeds as security for attainment of credit. Conferment of title also makes it possible for one to alienate his own land on the basis of willing seller-willing buyer.

In Shirere individual titles have been given to people. With the boundary extension for the municipality that ensued in 1971 many would-be developers have 'invaded' Shirere and land sales are frequent in the area. We have also noted the unemployment rate in the area, some people said that they could only afford high secondary school fees by selling parts of their land.

Some stated that due to unemployment they had to sell part of their land for some form of support. Out of the 200 households we found that 94 households had sold parts of their land to some other people for various reasons. See table

Table 4.5

## Why did you sell part of your land?

| Reason                     | Number | %   |
|----------------------------|--------|-----|
| Due to lack of School fees | 57     | 61  |
| Due to unemployment        | 32     | 34  |
| Other                      | 5      | 5   |
| Total                      | 94     | 100 |

Source: Field Survey

Most of the parts bought have not been developed, they have been fenced and left to lie idle, a possible inference is that the land is being held for speculation purposes.

There is also an average of 50<sup>3</sup> sub-divisions in Shirere every month, which indicates possible danger in the sense that without a development plan, the purchasers may carry out developments which may be inconsistent with a plan to be released at a later date.

The amount of sub-division in Shirere also proves Shirere's popularity vis-avis the other municipal areas due to advantages such as water and nearness to town. As a possible direction of town growth, speculators have found a fertile ground on which to invest.

Sub-division permission is given by the Municipal authorities, who charge a fee in accordance with the use for which the land is required. See table:

|                                |     |       |             |
|--------------------------------|-----|-------|-------------|
| Agricultural land sub-division |     | 20/-  | per 0.4 ha. |
| Residential                    | " " | 275/- | " "         |
| Commercial                     | " " | 550/- | " "         |
| Industrial                     | " " | 825/- | " "         |

Together with the fee, one has to pay an area rate of 10/-. This in effect is a source of revenue for a young municipality that badly needs finances. It is a dilemma for the municipality whether to continue sanctioning sub-divisions that will later prove a bottleneck to urban development in future, or to ban land sub-division and therefore forego the revenues received. We shall examine this problem in the next chapter on legislation.

Land sales are also taking place in other areas around the town but not at the same rate as the central part of Shirere. The after effects of the frequent land sales will also be examined in a later chapter.

#### 4.6 THE PATTERN OF LAND VALUES:

In the last section we have noted that, land is regarded and indeed has been frequently used as a commercial commodity both for economic and social benefits. We now intend to examine the pattern of land values of Shirere. The importance of land values in this study is based on the assumption that, land values indicate the expense that will be incurred in case of acquisition, and

to a larger extent, land value study is a good measure of the current development rate, a rise or a fall in land values helps understand the economic dynamics of an area. Land values also play a vital role in segregating land uses.

Land values can also serve as an indicator of the trend in urban change in an area as it correlates with changes in land use indicating both changes in demand in the various use categories and various sectors of the urban area in question. Land values also reflect changes in form of improvements in infrastructure and facilities in various parts of the area.

A detailed discussion of land values as is derived from locational theory is beyond the scope of our study, first we must understand that land derives its importance from its two basic qualities.

- (a) As a locational matrix within which residential commercial, industrial and other activities are located.
- (b) As a scarce commodity for the use of which there are many competitors.

Land values are indeed determined by the demand for land uses, differences in land values of an area arise due to differential locational advantages and the desirability of the various parcels of land in the area.

Land values are influenced by a wider range



of factors such as general economic situations and the population. It can be seen that urban growth does alter the structure and pattern of land uses, the urban land market brings forth necessary adjustments in land values through price mechanism. We can also explain the outward expansion of a town in terms of differential levels of land values.

As demand for space within an urban area increases resulting in a rise in land values within the existing boundaries of the built up area outward expansion ensues into the less expensive land in the peripheral areas and eventually land values in these areas begin to rise due to the increase in demand, it is in this light that we must view the pattern of land values in Shirere. At the same time it must be appreciated that planning does not affect the total demand for land use in an urban area, the overall effect of planning in fact is to shift and redistribute land values.

Within the old township area, land has been assessed for rates on the basis of unimproved site value at 4% of the total value. A valuation roll is prepared once in every five years as per the law, but this has not been done in Kakamega for about six years now. The peri-urban areas including Shirere have not been assessed for rates. An area rate has been instituted in the peri-urban areas but the municipal treasurer has reported poor response, the area rate is payable in most cases

when sub-division is approved.

In trying to examine land values, in Shirere, we have perused the District land register, and held discussions with area elders. We must note that value depends on the use to which one wants to put the land to and since land uses in Shirere are juxtaposed we cannot derive a definite pattern of land values. We shall only make generalized statements in accordance with observed patterns in the field.

We have examined land sales in three categories, those that flank the old township, land sales in the interior and land sales close to the Kisumu-Kakamega road. We have found that land values in Shirere are influenced by the fertility of the soil, its location, the demand for the land and to a larger extent the knowledge the seller has of the market.

We observed 30 land sales, 10 in each of the three categories below.

I Table 4.6.1

10 Cases of Land Values on the Immediate periphery of the town.

|    | Acreege | Use          | Value in <sup>000's</sup> |
|----|---------|--------------|---------------------------|
| 1  | .8      | Residential  | 8                         |
| 2  | .6      | Residential  | 6.6                       |
| 3  | .9      | Residential  | 8.3                       |
| 4  | 1.1     | Agricultural | 6.6                       |
| 5  | 1.08    | Agricultural | 7.4                       |
| 6  | 1.6     | Residential  | 12.5                      |
| 7  | .4      | Commercial   | 16                        |
| 8  | .55     | Commercial   | 20                        |
| 9  | 1.3     | Commercial   | 36                        |
| 10 | .44     | Commercial   | 18.5                      |

Table 4.6.2

10 Cases of Land Values close to Kisumu  
Kakamega Road

|    | Acreege | Use          | Value in <sup>000's</sup><br>K.shs |
|----|---------|--------------|------------------------------------|
| 1  | 0.5     | Commercial   | 22                                 |
| 2  | .4      | Commercial   | 11                                 |
| 3  | .8      | Residential  | 10                                 |
| 4  | .2      | Residential  | 3.5                                |
| 5  | 1.0     | Agricultural | 9                                  |
| 6  | 1.2     | Agricultural | 13                                 |
| 7  | 2.0     | Agricultural | 20                                 |
| 8  | 1.5     | Agricultural | 14                                 |
| 9  | .8      | Residential  | 11.5                               |
| 10 | .2      | Residential  | 4                                  |

Three land use categories can be distinguished thus, Residential, Commercial and agricultural.

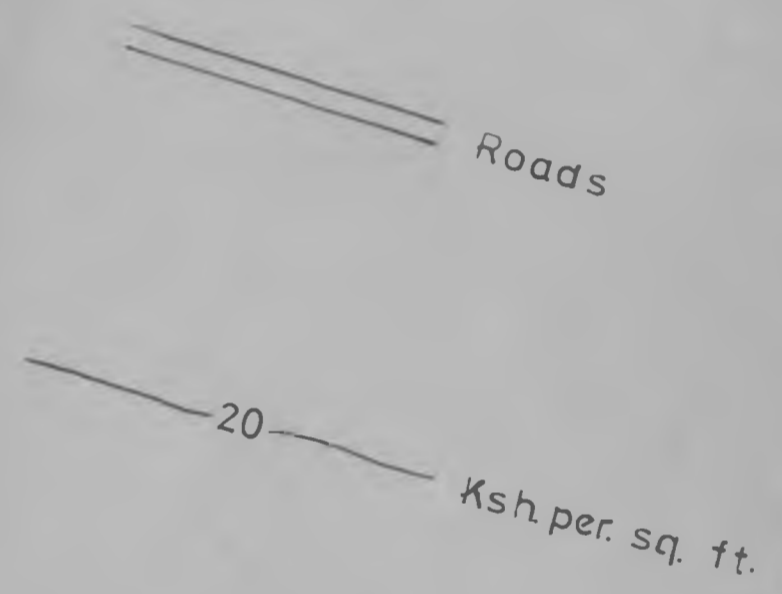
Table 4.6.3; 10 cases of land values in the interior of Shirere

|     | Acreage | Use          | Values in K.sh 000's |
|-----|---------|--------------|----------------------|
| 1.  | 1.3     | Agricultural | 15                   |
| 2.  | 1.1     | Agricultural | 12                   |
| 3.  | 1.0     | Agricultural | 10.5                 |
| 4.  | 2.3     | Agricultural | 18                   |
| 5.  | 0.9     | Agricultural | 9                    |
| 6.  | 2.4     | Agricultural | 21                   |
| 7.  | .3      | Residential  | 3.5                  |
| 8.  | .5      | Residential  | 7                    |
| 9.  | 1.0     | Residential  | 10                   |
| 10. | .75     | Residential  | 6.5                  |

The rising land values in Shirere are due to the urban growth rate of Kakamega town and hence the consequent rise in demand for land for various uses.

Urgent planning is required to stabilize land values to a certain extent, although land values are determined on the urban land market. The current rise of land values will result in excessive compensation costs at the time of land acquisition for urban development.

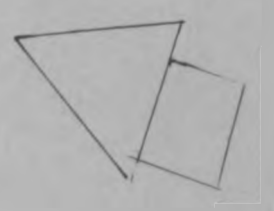
EXISTING LAND VALUES  
IN THE OLD TOWNSHIP AREA

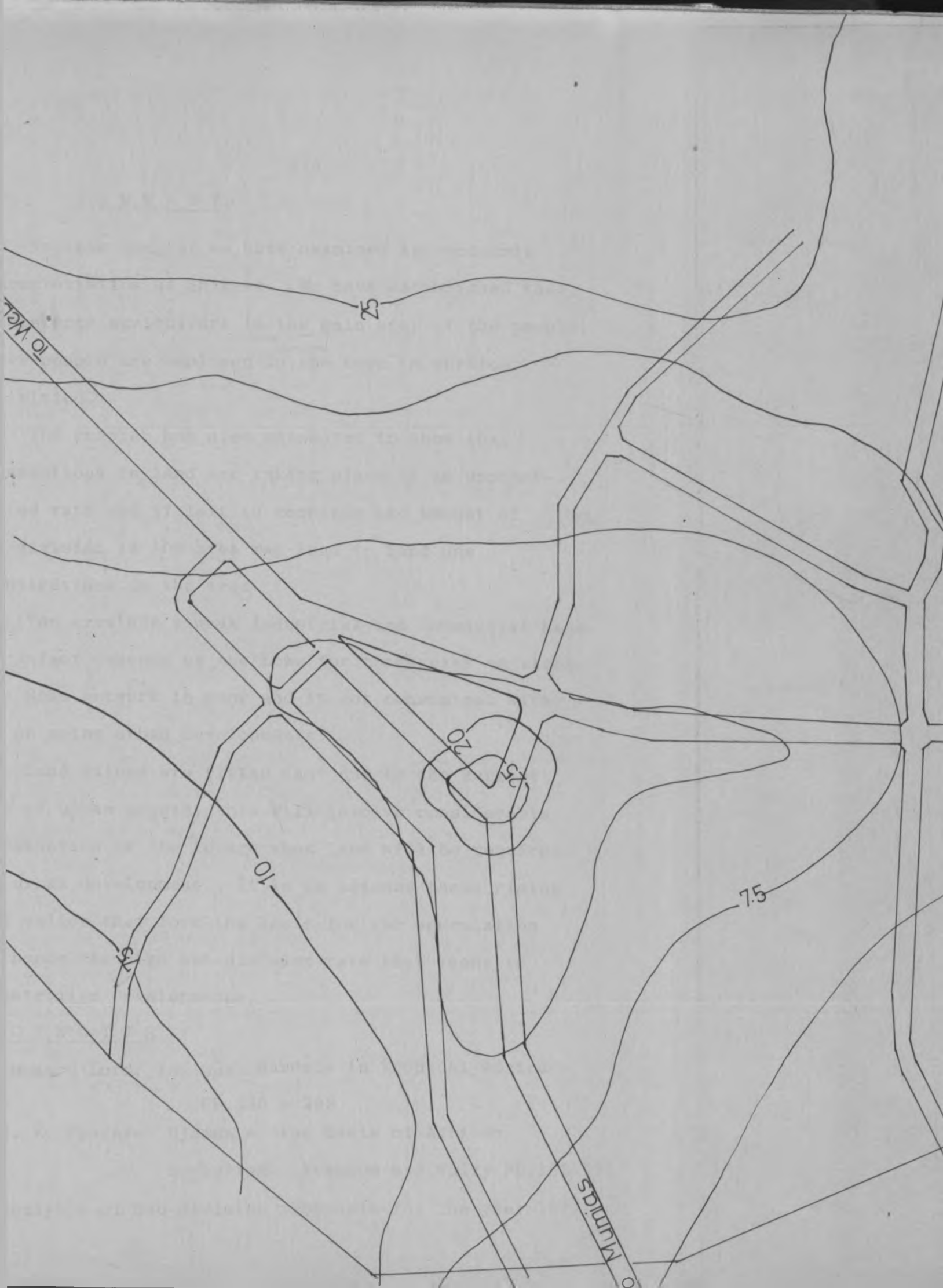


AN SHIBIRA  
DEP URBAN AND REGIONAL PLNG  
YEAR 1978

FIGURE : 9

SOURCE:  
VALUATION ROLL  
1971





EXISTING LAND VALUES  
IN THE OLD TOWNSHIP AREA



==== Roads

— 20 — Ksh. per sq

AN SHIBIRA  
DEPT. OF URBAN AND REGIONAL PLNG  
YEAR 1978

FIGURE 9







4.7 S U M M A R Y:

In this chapter we have examined the economic characteristics of Shirere. We have established that, subsistence agriculture is the main stay of the people. A few people are employed in the town in service activities.

The chapter has also attempted to show that transactions in land are taking place at an unprecedented rate and if left to continue the amount of sub-division in the area may lead to land use complications in the area.

The area has a weak industrial and commercial base and infact depends on the town for commercial services.

Road network is poor and is not consistent with the on going urban developments.

Land values are rising fast due to the current rate of urban growth, this will involve considerable compansation in the future when land will be required for urban development. It is in essence these rising land values that form the basis for the speculation and hence the high sub-division rate that leads to uncontrolled developments.

F O O T N O T E S:

1. Lugard Lord: The Dual Mandate in Tropical Africa  
PP.280 - 292
2. J. K. Nyerere: Ujamaa - the Basis of African  
Socialism. Freedom and Unity PP.162-171
3. Analysis of Sub-division proposals for the year 1977.

## 5.0

CHAPTER FIVE:LAND USE CONTROL:

It is beyond the scope of this thesis to examine the entire legislation that governs planning in the various municipalities in Kenya. Since we have examined the physical, social and the economic characteristics of Shirere, it would be appropriate to consider what weaknesses that have arisen which have led to the uncontrolled developments in Shirere. Legislation that deals with land use control does exist and yet unwarranted developments are going on. We would like to examine why this is the case. We therefore examined the development control legislation and its enforcement specifically in Shirere.

5.1 LAND TENURE SYSTEM:

Land in Kakamega municipality falls into three broad categories (i) Government land (owned by the Municipal council and the newly extended portion of the forest) (ii) Land held in trust by the local authority and (iii) land that is currently owned individually.

Our concern in this study is with the fringe areas i.e. areas that were included within the municipality in 1971. We have already shown elsewhere that 41 sq. km of rural land were included in the municipality in 1971, which is about 86%

of the total land. Our study area represents 19 sq. km, of the total municipal land which works out to 40%,

In Shirere, other than the oxidation ponds that are situated on land which was acquired and is only 3,2 ha., the rest of the land 1897.8 ha is privately owned.

Before private ownership ensued in Shirere, it should be noted that, it was trust land, which was (in theory) administered by the county council of Kakamega as recently as 1970.

Since the attainment of Independence in 1963 the Kenya Government has been committed to the establishment of a strong agricultural base in the country on which our economy is very much dependent. It was recognized that to be able to do that, security of land tenure was an important prerequisite, since then individual land ownership has been granted in various parts of the country. It is not necessary in a study of this nature to document all the procedure followed in registering land, we need only say that, the county council in which the land is situated (trust land) applies to the Government for adjudication to take place. All existing rights in land are then adjudicated upon, with the aid of village elders, in accordance with the provisions of the land Adjudication Act<sup>1</sup>. After the execution of this Act, the register is then laid for scrutiny by the members affected. With the completion of ascertaining ones rights in land, individual titles are then conferred and the provisions of registered

land Act applies <sup>2</sup> to the land. This in effect means that one has absolute ownership of his land and can dispose of it freely as he so wishes.

Since this private land falls within the municipal jurisdiction, should we assume that ownership is absolute and therefore the owner can do whatever he wishes with the land or is ownership only limited to excluding others from making use of it? Our earlier analysis of Shirere has shown that, current urban developments are taking place because the land owners feel that they own the land and can dispose of it in any manner they consider fit. We have also seen that the rapid change from agricultural use to urban use, is in anticipation of urban growth and largely due to the land tenure system that exists. This type of land tenure system in Shirere presents a problem to orderly urban development and is further aggravated by the fact that there is no physical land use plan to guide development. It can be concluded that private ownership of land of over 85% in the municipal area poses a threat to development of the Kakamega town as a whole.

## 5.2 DEVELOPMENT CONTROL LEGISLATION:

This section will concentrate on existing planning legislation and its applicability to Kakamega. We would like to examine the enforcement of the law in our study case, does it merely exist on paper? If so why? Who is responsible for its execution? And where has it succeeded

or failed? These and many other questions are what we shall attempt to answer in this section.

Planning restricts the owner or occupier of land from using the land in any manner he may want, in effect planning is directly derived from the law of Nuisance whose principal idea is that "use yours so as not to injure others". We require a plan because development must be co-ordinated, and this can only be effected by appropriate legislation. Although land use control is exercised in accordance with a plan or scheme, this does not mean that since no plan exists in Shirere, then there is no control, there exists legislation and the presence of unplanned developments is an indicator that the legislation available is not rigidly enforced. We now turn to statutes concerned with urban land development, control, management and its administration.

#### 5.2.1 THE TOWN PLANNING ORDINANCE 1931

This Act contains provisions for use, control and development of government land. In this ordinance there are only two sections that are relevant to our current study, thus sections 23 and 24. Section 23 deals with the preparation of development plans on government land outside municipalities and townships. The section in part states "such government land would not be made available for alienation for building purposes, sold or leased for more than six months until

the Commissioner of Lands has approved a plan on which such alienation is based." It is under the provisions of this Act that development plans are prepared by the Department of Physical Planning for Government land outside municipalities and townships.

Section 24 of the Act confers powers to the Commissioner of Lands to control sub-division of land in municipalities and townships. The Act states in short "no land within any municipality or township shall be divided into lots except in accordance with the provisions of a town planning scheme approved under this ordinance". If no approved plan exists, then the Act requires that the sub-division should be in accordance with another plan approved by the Commissioner, this section is particularly important because it covers all land within a municipality regardless of the land tenure system. In Kakamega the provisions of this section would be effected to control land use in Shirere, despite the fact that the land is in private ownership.

#### 5.2.2. LAND PLANNING ACT 1968

The provisions of this Act deal mainly with preparation of development plans, appointment of planning authorities and the control of development. According to this Act, the local authority can assume control over areas for which development plans have been prepared and gazetted by the Minister. A preparatory

authority prepares the plans, in practice this is the Physical Planning Department of the Ministry of Lands and Settlement.

The provisions of this Act also empowers the planning authority where one is established to require an application for planning permission to include a proportion of the land up to 20% for public purposes, but such powers have not been transferred to the local authorities, they are still vested in the central authority of which the Commissioner of Lands is the Chairman.<sup>3</sup>

In theory the Central Authority should exercise control over all areas in the country, but control is limited to:

- (i) areas within three miles of the boundaries of municipalities and former townships.
- (ii) land within 400 ft. of the centre line of the trunk roads except within municipalities and township boundaries
- (iii) all land in Kilifi and Kwale District excluding their municipalities.

It should be noted that till now no urban plans have been approved under this Act, the procedure under section 24 of the town planning ordinance has proved more effective. Land Planning Act has only been used with development proposals falling outside urban centres.

Shirere fell under category one prior to its inclusion into the municipality, but all the same the <sup>developments</sup>

as at that time indicated that the provisions of this Act were not being strictly followed.

### 5.2.3. LOCAL AUTHORITY POWERS OF CONTROL:

The provisions of town planning ordinance and land planning Act 1968 have examined land use control in broad national outlook. We now turn our attention to the Local Authority level, which touches directly on the study area.

We pointed out that the land planning act 1968 makes a provision for local authorities to become planning authorities, but so far this has not been effected, largely due to lack of finances, skills and the central Government's desire to centralize the planning process.

Local authorities also have powers for the control of land use in their areas of jurisdiction, these powers are derived from the Local Government Regulations 1963. Local authorities are empowered to make by-laws within their areas of jurisdiction, which will be as binding as law provided the laid down procedure is followed and the by-laws are not inconsistent with any written law. The by-laws could be made to affect any activity in the area, be it in planning or any other matters as empowered by Reg.201. The most important regulation that has direct application to land use



control is regulation 166 that states

"Every municipal Council, County Council may ,  
subject to any other written law relating thereto,  
prohibit and control the development and use of  
land buildings in the interest of proper and  
orderly development of its area"

This is the cornerstone of official land use control by  
municipalities, and even includes private land.

This provision has not been strictly followed in the case  
of Shirere because the authorities have said that they have  
no basis on which to stop certain developments due to  
the lack of a development plan.

Although there is no law that makes it obligatory  
for consultations between the Commissioner of Lands,  
the Local Authorities and the Physical Planning Department,  
it is important that efficient land use control requires  
frequent consultations, which is seriously lacking in  
Shirere, sub-divisions are approved by the Municipal  
Authorities with the Physical Planning Department hardly  
ever being brought into the picture.

87% of the land in Shirere is under private hands.  
Coupled with lack of competent manpower, and the lack  
of a physical plan, development control measures are  
non-existent in Shirere. Although appropriate  
measures are laid on paper.



Plate 29

Subdivision of about .5 ha used for both residential and subsistence agriculture by owner. Note the elaborate fencing.



Plate 30

Subdivision utilized for the purpose of growing perishable goods such as vegetables situated next to the above.

5.2.4; APPLICATION OF LAND CONTROL ACT 1967  
TO THE STUDY AREA

Although the provisions of the Land Control Act 1967 do not apply to Shirere, it is important to discuss control measures of Shirere with reference to the Act, because before 1971, the Act did apply to the area and it was after the boundary extension in 1971 that the area was degazetted and the Act ceased to apply. It was argued that by virtue of the boundary extension, the area now fell under the municipality and this Act does not apply to municipal areas.

We shall be examining this Act with a view to establishing whether the lack of its application has contributed to the current ineffective control of development or not.

We have seen that freehold land can be alienated as freely as the owner so wishes, but it was recognized that if land alienation can be left solely to the discretion of the owners certain problems are bound to arise which may cause socio-economic hardships to some members, and hence the enactment of the Land Control Act 1967 Cap.302.

The Act sets out to safeguard the following:

- (i) Agricultural land from falling into wrong hands
- (ii) Accumulation of vast land by individuals (although Kenya's land policy sets no land ceiling).



Plate 31

Some of the rental housing in a dilapidated state. A good illustration of intensive plot developments.



Plate 32

Some of the oldest people in the Municipality who may have social handshins in the event of a possible acquisition. What is their conceent of urban life?

anytime provided they are adequately compensated.

Whether people agree or disagree, when the Minister for Lands and Settlement is satisfied that the land is needed for a public purpose as per section 6 of the Land Acquisition Act chapter 295, acquisition will have to commence. In this case it is the local authority of Kakamega which will apply to the Minister to acquire the land on their behalf.

Section 75 of the Kenya Constitution safeguards individual property and specifies conditions to be followed if individual property is to be acquired.

Although the law is supreme and once executed in accordance with the laid down provisions there is nothing that individuals can do, it has been revealed through our survey that acquisition is unpopular in Shirere and should be handled carefully considering the socio-economic hardships that may result and the consequent political implications.

We shall use a table to summarise the legislation discussed and the various problems encountered in its execution.

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We shall use a table to summarise the legislation discussed and the various problems encountered in its execution.

Table 5.2.5

| ACTION                 | OBJECTIVE   | LEGISLATION APPLIED   | PROBLEMS OF EXECUTION  |
|------------------------|---|---|--|
| 1. Compulsory Purchase | 1. To cater for public purposes                       | 1. (i) Constitution of Kenya Sect.75<br>(ii) Land Acquisition Act Cap.295 | 1. Public participation is minimal                             |
|                        | 2. Creating and maintaining a land bank               | 2. Local Government regulations No.144                                    | 2. Assessment, compensation payments take considerable         |
| 2. Land Assembly       | (i) to collect land for public or private development | (i) Local Government Regulation No.144                                    | (i) Difficulty in the surrender of plots.                      |
|                        | (ii) Repooling or consolidation                       | (ii) Land Planning Act of 1968  | (ii) Complication in determining terms of re-allocation        |
| 3. Land Banking        | (i) create land resources                             | (i) Local Government Regulations No.144                                   | (i) Availability of finance, deciding on exact amount required |

Table 5.2.5

| ACTION              | OBJECTIVE  | LEGISLATION APPLIED  | PROBLEMS OF EXECUTION   |
|---------------------|--|--|---|
| 3. Land Banking     | (ii) Control land prices<br><br>(iii) Control supply of land | (ii) Land Acquisition Act<br>Cap. 295  | (ii) Management problems<br>i.e keeping off squatters.  |
| 4. Zoning           | (i) Regulate land use<br><br>2. Control growth               | (i) Land Planning Act<br>1968<br><br>(ii) Local Government<br>Regulations No.166<br>1963 | (i) Estimating future land<br>requirements<br><br>(ii) problems of enforcement<br><br>(iii) problem of accommodating<br>change. |
| 5. Density Zoning   | 1. to prevent<br>overcrowding                                | 1. Land Planning Act 1968<br><br>2. Model building bylaws<br>3. Local Govt.Regulation    | It is always a problem to<br>to police the land.  |
| 6. Building Control | (i) Ensure safety<br><br>(ii) Reduce fire hazard             | Local Government adoptive<br>Building by-laws 1968<br>Grade 1 & 11                       | (i) Establishing standards<br>for all buildings.<br><br>(ii) Problems of enforcement  |



### 5.3 SUMMARY:

It is evident that the new regulation governing the use of land within Kakamega municipality are contrary to the previous traditional concept and practices of land use by the people.

More than 86% of the land in Shirere is under private ownership, which gives the people the illusion that ownership is absolute and not exclusive as the case is supposed to be. There appears to be a correlation between the current land sales in the area, the high rate of subdivision and the land tenure system in Shirere.

Although land control legislation exists, in the form of local authority, (Local Government Regulations,) Town Planning Act 1931, Land Planning Act 1968, there is overwhelming evidence that there is no execution of the appropriate provisions to ensure co-ordinated development.

The responsibility of control rests with the office of the Commissioner of Lands, the Director of Physical Planning and the Local Authority concerned. The Commissioner of Lands is based in Nairobi and so is the Director of Physical Planning, they have no way of policing the area in question, which means that the local authority concerned, is supposed to shoulder the responsibility by use of by-laws, this is largely missing in Shirere. Reasons normally cited for ineffective control of the fringe areas are lack of manpower and resources.

In concluding this section we must reiterate that lack of a land use plan has led to a relaxation of control measures in the area.

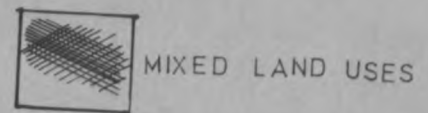
FOOTNOTES:

1. Land Adjudication Act Chapter 284.
2. Registered Land Act Chapter 300
3. Central Authority:  
established under Land Planning Act 1968'  
- The authority requires an application for  
planning permission. The Commissioner of Lands  
is the Chairman with the Director of Physical  
Planning as a member, who attends in advisory  
capacity, other members include Ministers of  
Lands, Agriculture, Works, Water and Local  
Government.

# AREAS OF SERIOUS DEVELOPMENT PROBLEMS



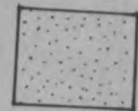
## LEGEND



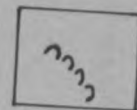
MIXED LAND USES



LAND AND BUILDING SPECULATION



FREEHOLD LAND

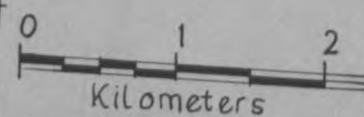


STEEP SLOPES

Source: Field Survey

URBAN LAND USE PLANNING POLICIES FOR THE PHYSICAL DEVELOPMENT OF  
PERI URBAN AREAS — CASE STUDY OF SHIRERE — KAKAMEGA

|      |  |
|------|--|
| Name | A.N. Shibiru                                     |
| Dept | Urban & Regional Planning, University of Nairobi |
| Year | 1977/78  |



MAP No12

enforced to curb unauthorised developments. This magnitude of the development continues to rise every year, which implies that, future planning of Shirere will encounter serious problems and will adversely affect the economic and physical development of the area as well.

### 6.3 FREEHOLD TITLES TO LAND:

Shirere is predominantly freehold land, whereas land ownership has only exclusive rights, most of Shirere people have construed land ownership as absolute, in the sense that it can be sold, leased or be used as a basis of any negotiation. Unlike other urban fringe areas of Nairobi where the problem of uncontrolled developments is engineered and handled by squatters, in Shirere the landowners themselves have considerably given hand to the type of developments currently going on. Freehold title was initially meant to give security of tenure to the land owners, but in an urban area like Kakamega freehold titles are a constraint to the availability of land for urban development when more land is required. We shall later look at the problem of land acquisition as a sound basis of urban land use policy for the development of fringe areas.

In some cases it has been shown that registration of land owners has resulted in some people being rendered landless and hence an imminent danger to the municipality ; the landless may cause an increase in crime and other

development, as the case may soon be in Kakamega. The old township area is almost used up and land will be required for urban uses which will mean acquisition. Both the government and the local authorities have limited <sup>resources</sup> for developmental projects and higher compensation costs are bound to drain on the already limited resources. Speculation both in land and building must be curbed with appropriate measures to keep compensation costs within reasonable limits.

#### 6.6 MIXED LAND USES:

In the early analysis sections, it has been noted that various land uses are juxtaposed without proper planning. Various kinds of developments are taking place in Shirere, thus residential, commercial, industrial etc. The essence of planning is to try and segregate or put in close proximity land uses that are complementary. This has not been the case in Shirere, in some cases we have seen a garage constructed without plan, workshops have been mixed with residential use, and even the sewage works for the town have been planted in the midst of a residential neighbourhood just next to a school. This has tended to create an unpleasant atmosphere to the residents in the area due to the foul smell from the oxidation ponds.

Heavy capital investments have been made in some of these developments, future corrections will no doubt prove costly, remedial measures are therefore urgently called for.

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**Plate 35**

The fenced land next to the Kakamega-Kapsabet road. Land lies undeveloped, a practice common in the area and attributed to speculation.



**Plate 36**

Fenced maize garden of about .2 ha , a recently bought subdivision.



### 6.7 LACK OF CO-ORDINATION IN PROVIDING CERTAIN SERVICES:

It has been earlier shown that, water supply which was meant for the old township area has been provided to the fringe areas without proper consultations between the municipal council and the Ministry of Water Development. Administration and management of water is not undertaken by the municipal council as is the case in the larger municipalities of Nairobi, Mombasa and Thika.

This supply of water to more people than was intended, often results in water shortages in Kakamega. Various households when interviewed said that water supply is so irregular that one can never have a ready supply throughout the day. It has been stated by the officials at the District Water Office that, the problem is not that of lack of water but rather due to small storage capacity, which does not keep pace with the ever increasing population. It is emphasised here that proper plans are essential for proper supply lines, other than taking water to unplanned houses, which may at a later date prove inconsistent with the physical plans.

### 6.8 ACUTE DEFICIENCIES IN SERVICES AND FACILITIES:

One of the major characteristics of an urban fringe area is the acute deficiencies for the provision of services and community facilities.

In Shirere, the roads are not motorable, water

has been served only to a few people, no proper sewage facilities, pit latrines are commonly used but with the dense population in some sections this becomes a health hazard to the people.

There are inadequate educational facilities as shown in one of the plates, some classes are conducted under a tree. There is not even a single health facility in the study area. The residents rely on the Kakamega General Hospital which serves the province and the district as well. In a few cases those who can afford to pay go to Mukumu Mission Hospital about 6 km. away. The situation of educational facilities is made worse by the influx of the pupils from the town area who depend on Shirere due to the shortage of schools in the town area.

There are no recreational facilities in the area, the same applies to the low level commercial services that makes it necessary for the people to depend on the well established commercial services of the town.

#### 6.9 HOUSING:

The most outstanding problem in Kakamega is the shortage of housing. This has greatly influenced the unplanned residential developments in Shirere. The land owners in Shirere have taken advantage of the housing shortage to construct houses for rental purposes for the



Plate 37

To the western side of Shirere, the area is sparsely populated as can be seen from the scattered mud and wattle huts in the background.



Plate 38

Some of the houses depend on rain water for their supply. Note the storage tank on the house.

town workers. Most of the houses are sub-standard, and do not comply to either grade 1 or 11 building bylaws.

Although there are some houses which are constructed to the required standard, and in some cases even above the standard, the important point is that these houses are uncontrolled developments, because they are being carried out without the guidance of any land use plan. It is these expensive houses that will also involve considerable compensation costs when the land will be required for urban development, since the developments are taking place on freehold land.

#### 6.10 CONFLICT BETWEEN AGRICULTURAL USE AND URBAN USE

The study has noted that, most of the inhabitants are involved in subsistence agriculture, and since the area was included in the municipal area, urban land uses have gradually encroached on this land. This brings into light a conflict of uses, thus agricultural and urban, the important question is which one should give way to the other? If the subsistence agriculture yields to the urban use pressure, what level of social and economic hardships will the people be faced with? Since this land is in freehold hands and in the event of more urban land requirements it is compulsorily acquired, will this cause hardships to the people? These and many other questions have surfaced as real



Plate 39

Land lies idle in some parts as concentration of buildings goes on in some parts of Shirere.



Plate 40

Row housing in the interior of Shirere situated on a maize shamba.

challenges to the advocates of land acquisition without offering an alternative to the people.

6.11 LACK OF EFFICIENT ADMINISTRATIVE MACHINERY:

The study has established that due to lack of financial resources, and qualified manpower the municipal council of Kakamega is not able to police the fringe areas to discourage misuse, abuse and mismanagement of land.

It is this failure that has led to a chain of the uncontrolled and unplanned developments in Shirere. The legal instruments available for the control of fringe areas have not been applied to this area, due to the inadequacy of qualified manpower and finances.

## 7. CHAPTER SEVEN: RECOMMENDATIONS AND CONCLUSIONS

### 7.1 RECOMMENDATIONS:

We set out with four objectives to this study in the introductory chapter. As we proceed to make recommendations on the policy issues for the development of Shirere, it is appropriate to re-examine our objectives, it is not necessary to restate the objectives per se, but rather to briefly outline what has been done and the basis on which we shall make our policy recommendations.

In our lengthy discussion, eleven problems, some interrelated have surfaced in Shirere, these problems require urgent policy actions for proper guidance of Shirere's development, It has been found out that the municipal boundary extension of 1971, has significantly influenced a number of problems in Shirere. A case has also been made that the freehold tenure system in Shirere poses a serious bottleneck to proper economic and physical development of the area under study.

Our policy recommendations will aim at creating an environment that will be conducive to better living of both the local people <sup>and</sup> the in-migrants in future. Policies suggested will also aim at establishment of a better working machinery between the Local Authority and the Community of Shirere. A framework within which policies for the development of Shirere will be suggested will be as follows:-

In dealing with Shirere we shall be looking for policies that seek to gather, and take custody of land for the purposes of public benefit. Control policies that regulate the manner in which development should be carried out are of prime consideration, especially so in an urban fringe area like Shirere. An attempt will also be made to suggest policies that are aimed at fostering and actually promoting urban development, it is in this respect that the role of physical planning is highlighted. Policies which deal with the development of an urban fringe area if the problem of land distribution is not clearly resolved. Although it will be beyond the scope of this work to discuss issues of equity in distribution of sites in Shirere, nevertheless we shall attempt to suggest proper procedure to be followed in allocation of land in Shirere.

It has been the running theme in this work that urbanization is taking place at a faster rate in Kenya, and that control of urban land resources has become extremely critical, it has been demonstrated that urban land is a resource that is so scarce which needs careful and wise allocation if the environment of our urban dwellers is to be improved, it is on this basis that we now proceed to make our recommendations of suitable developmental policies for Shirere. It is important to note some of the policy approaches advocated may have national implications, at the same time we note that a policy approach



that may solve the peri-urban problem in one place may prove the opposite in another place.

(i) Overcoming Physical Constraints:

The Physical Constraints to urban development in Shirere, may be regarded as a challenge to proper planning than a real bottleneck in the actual development of the area; complete overcoming of this challenge requires mobilization of the appropriate technology with the resources available. Kakamega like most municipalities in Kenya is plagued by inadequate manpower and the much needed resources for development. This will remain a long term problem in Kakamega, the immediate and proper solution would appear to be utilization of suitable land until such a time that land with difficult terrain will be handled. In Shirere, the steep valleys along the Isiukhu river, and other minor streams should be left out and preserved as recreational places for the inhabitants. This we suggest in view of the fact that there are no recreational places in Shirere for the residents, although the various school groups in the area could be utilized. Recreational development is a responsibility that rests solely under the Municipal Council of Kakamega, however, these developments have no guarantee of success unless the Council has the necessary resources for the suggested developments and subsequent management.

If we adapt our definition of the fringe

as that area that surrounds a town boundary and in which the population has either to a lesser or greater extent been affected by urban forces, then we see in Shirere a conflict of land uses. We have the urban use on the one hand and the subsistence agriculture on the other hand. It has been demonstrated in chapter five that in the event of urban use encroachment on this rural land, those who depend on it for subsistence are likely to experience social and economic hardships, when urban pressure penetrates onto the agricultural land. It must have been anticipated in the early 1970's that Kakamega Municipality would need more land and hence the boundary extension of 1971. Planning has in the past emphasized on the built up urban areas. We are faced with a dilemma of ensuring that these agricultural areas do not at some future date frustrate orderly urban development in Kakamega or vice versa.

(ii) Establishment of Agri-Residential Suburb

In our analysis of Shirere it has been found that residential development and agricultural (subsistence) development are the predominant land users, this means that it would be improper to impose other land uses in the area, efforts should be made to strengthen and emphasise on proper land use between residential and agriculture. The area could be provided with urban facilities, and with proper access to the town area, the plot sizes should remain or be made large enough to allow agricultural activities, as we have already shown the majority of the

residents are indigeneous people who depend on their land for subsistence, such a move would be quite appropriate. Although the said plots should be large enough, subdivision can be allowed into smaller plots as the urban encroaches onto this area. We therefore suggest a self-sufficient agri-residential suburban community in which the involvement of the people through municipal guidance is of paramount importance, such a development can only be possible if proper community facilities are provided.

(iii) Preparation of a Comprehensive Land Use Plan;

Illegal developments in Shirere have been attributed to the fact that, there exists no land use plan to guide development. The long term strategy (see over leaf) was prepared in 1970, no evaluation has been carried out so far, and it is infact not an official document and therefore not binding as law. The only land use plan for Kakamega, currently in operation is the short term plan of 1972 that covers the old township area. The local authority has nothing to guide it in accepting or rejecting any development proposals. The current practice in <sup>Kenya</sup> is that the physical planning Department prepares the development plan for the local authority which after approval by the Commissioner of Lands is binding to all the developers, such a plan is long overdue for Kakamega, this is even justified by the problem currently posed by the peri-urban settlements

EXISTING LONG TERM DEVELOPMENT STRATEGY



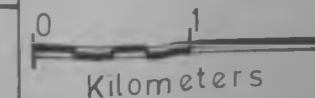
LEGEND

-  Farmland
-  Forest
-  Existing Town Development
-  International Trunk Road
-  Primary Distributor
-  Secondary Distributor

Name AN Shibera

Dept. of Urban and Regional Planning  
University of Nairobi

Year 1977/78



MAP No.13

Source: Kakamega Development Plan 1970

like Shirere; even with stringent by-laws the local authority would still need a plan for guidance. A land use plan will eliminate the danger of mixed land uses, such as we have witnessed with the location of treatment sewage works that are planted in the midst of dwelling houses and just next to a school. In one instance we have seen a garage being put up next to residential places, workshops have been erected in residential areas, the whole land use situation is chaotic and calls for an immediate, Comprehensive Physical Development Plan to arrest the situation and foster a co-ordinated development that will create a healthy and pleasant environment for its residents.

(iv) Land Acquisition:

Land ownership in Shirere is predominantly freehold, we have seen that this type of land ownership leads to problems of control by the Municipal authorities. Even though the authorities have the power of the by-laws to administer the land, the amount of control is minimal due to inefficiency in law enforcement. Most of the people interviewed did not see why their land and any other developments on it should be controlled, this leaves a very big question unanswered, thus "is the interest in freehold land exclusive or absolute?" It has been argued by several scholars that, effective development programmes in such an area can only be

effected if the land is compulsorily acquired.<sup>1</sup> It may appear simple just to suggest acquisition, there is indeed appropriate legislation<sup>2</sup> that can be executed, but most scholars have not attempted to consider the implications of land acquisition. Acquisition has always been one important urban policy tool with which to make land available for public requirements. No doubt land in Shirere must be acquired to give way to proper management and administration so as to ensure orderly urban development. Our question is "is acquisition the answer?".

It appears appropriate to advocate acquisition in Shirere at present due to rising land values and the on going urban developments that will result in inflated compensation costs. Land within the old township is almost used up and a case for more urban land development has been made. The town is currently growing south and southwestwards, which calls for immediate attention into the Shirere area and hence the urgent need for acquisition of land. This acquisition should only be undertaken when the land is really required, otherwise acquiring land and not putting it to immediate use is indeed a fertile ground for squatter and uncontrolled settlements. Experience has shown that squatters 'invade' public lands faster than private lands, if this happens, acquisition will have helped to create more problems than it is the case now. It is with this

in mind that we call upon the municipal council to exercise due care in applying to the Commissioner of Lands for acquisition of the land. On the other hand, during our surveys, almost all those interviewed were unwilling for their lands to be acquired, they preferred rehabilitation and upgrading their areas to match expected urban standards, some even suggested that an alternative area be given other than the moneys worth, a better illustration is that of the nine families displaced at the time when the sewage works were built, they were given money to find alternative settlements, but they still live next to the oxidation ponds, and are the very people complaining about the mosquito hazards from these ponds. In acquiring this land, public opinion must be carefully considered and accommodated, otherwise acquisition may yield even more serious problems that may have been contemplated before.

Having noted that the freehold tenure system impedes orderly development, and having recognized that this has resulted into lack of effective control of land use by the municipal authorities it is suggested that the municipal authorities should deploy the required manpower to institute the needed control, we are aware of scarce resources, but that should not be given as an excuse as the situation deteriorates.

(v) A case for Stringent Legal Measures:

Although written law and building control legislation does stipulate the requirements for urban land development, enforcement of this law is very weak indeed in Kakamega and other local authorities, this calls for a re-examination of the role of the local authorities by the National Government in matters of land management, additional resources be voted to the local authorities to enable them to institute proper management techniques.

The peri-urban problem is not a unique problem of Kakamega, but is prevalent in most of the Kenyan towns and requires solutions from the National level, that is why we suggest that to implement an effective urban land development policy for these peri-urban areas, the central government should exercise both legal and administrative powers to acquire the land in private hands, and must plan it and in those cases where the land is in private hands, it must be strictly regulated, an effective urban land policy evolves around the problem of acquisition of these freehold lands.

(vi) Land Bank Establishment;

Acquisition will necessitate the setting up of a land bank, this land can then be released at a later date when the land is required for public benefit, but advocating a land bank in Kakamega would bring forth some other unforeseen problems, such as difficulty in



predicting exactly how much land would be required and at what time. The serious consequences that result from such an action is the flooding of the market with cheap plots that remain vacant for a very long time, this clearly shows that land banks are not the ultimate solution to the problem. Management of these land reserves calls for additional resources, if the Kakamega municipal council can find additional resources, it would be better to try land banking first on experimental basis and then it could be adopted at a later date if it succeeds.

(vii) Need for Proper Sub-division Procedure:

In chapter Six we noted that, there is lack of proper sub-division regulations, which has led to so many sub-divisions and the consequent land and building speculation. Sub-division 'per se' is not necessarily a bad thing but, when sub-division is undertaken without planning guidance and without any standardization then it is definite that at a later date this will affect the orderly development of Shirere. As I write the Town Clerk has now issued a circular that, sub-division of land in Shirere will no longer be sanctioned<sup>3</sup> by the Municipal Authorities on grounds that it has assumed greater intensity and poses a threat to future expansion and development of the municipality. In some cases sub-divisions have never been developed for a very long time, an act that can be attributed to speculation.

(viii) Re-Application of the Land Control Act 1967;

Since land is sold on the basis of a willing buyer, it was in the past easy in Shirere to control such transactions in land, because the land control Act of 1967 was in operation, but immediately the boundary of Kakamega was extended in 1971, the area was degazetted, because the act does not apply to urban areas. The provisions of this act provide for a land control board which should be approached in the event of any dealings in land, it is the absence of application of this Act that prompted an increase in land sales. It is recommended that the Shirere area be re-gazetted under the provisions of the Land Control Act. The Land Control Board of the area would help to relieve the municipal authorities the pressure of policing the area. In future care should be taken before an area is degazetted just because a boundary of an urban area has been extended, it has quite adverse implications on land use in the area as has been examined in Shirere. It is suggested that the land control Act be ammended accordingly to help curb this problem in the peri-urban areas of our towns.

(ix) Curbing Speculation in Land:

Building and land speculation are problems which are of national nature and require definite and stringent policies if they are to be curbed. A case has been made

that speculation is so rife in Shirere and that this will prove too costly at the time the land will be needed for urban development. It is hoped that policies issued at the National level will filter down to help proper utilization of land in the peri-urban areas of our towns in Kenya. An urban land taxation system be instituted on capital gains for property, this will encourage optimum development and restrain speculation. Such a move was instituted in 1975 during the budget speech<sup>4</sup>. Property dealers raised alarm that such measures would kill the property market in Kenya which was just struggling to survive; but the Minister for Finance and Economic Planning has argued that this is one of the sure ways of distributing income in the Nation. If high taxes are levied on parcels of land that are prone to speculation, the owners may very easily give them for development. The Capital Gains tax has in effect led to a rise in land values. In Shirere only an area rate is executed, a meagre payment indeed, and reports from the Treasurers Department indicate that the response is very poor. The unimproved site value rating which is in operation in the old township area should be instituted in Shirere as a tax to curb speculation in land and building and at the same time to encourage development of the vacant plots. Lastly, it must be noted that the intensive urban activities that amount to speculation in Shirere are as a result of anticipated acquisition, noting that the growth of the

of the town tends south and south-west. The measures suggested above therefore require immediate attention and once more we reiterate that a healthy urban land development policy pivots on the acquisition of land.

(x) Community Participation:

Support from the community leaders in Shirere must be sought otherwise the Municipal Council will not have the required powers of policing and coercion. Nairobi and Mombasa have a meagre force of Municipal inspectors that help in policing their areas of jurisdiction. There is therefore a need for new legislation that will give greater powers of control, regulation and enforcement to local authorities, there is need for a planning inspectorate and if enough resources are available, there is need for planning extension services to the local authorities as is the case with agricultural extension services. This will help young municipalities like Kakamega to handle the planning problems within their areas completely.

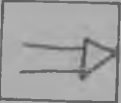



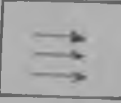
(xi) Land Zoning Acts:

Land use zones could considerably help the planning problems that exists in Kakamega. It was stated earlier that there is no zoning in Kakamega so far. Zoning has always served as a tool for controlling the pattern of urban land use 'density and height of buildings,

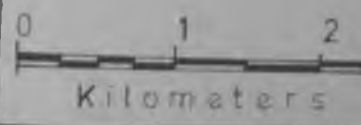
# CONTROL ZONES



## LEGEND

-  Direction of Town Growth
-  Zone of Strongest Legal Control
-  Medium Control
-  Minimal Control
-  Area Recommended for Immediate Comprehensive Planning.

|       |   |
|-------|---|
| Ncme  | A.N. Shibira                                      |
| Dept. | Urban & Regional Planning, University of Nairobi. |
| Year  | 1977/78   |



MAP No.14

traffic circulation, provision of public utilities etc, In Kakamega a form of zoning which we have just mentioned describes the pattern of land use on a map. There are no written zoning Acts. Zoning Acts serve a useful purpose in land use planning. It is therefore recommended that zoning be instituted in Kakamega to guide the development of the town's peri-urban areas. Before the zoning of Shirere proceeds, due care must be exercised to accommodate the interests and social aspirations of the people. We have shown that the means of enforcing planning and building regulations is weak, it should be reinforced and definite problem zones should be subject to rigorous control. Not all the areas of Shirere are plagued by problems, zones which require greater control have been demonstrated on the map No.12 The map shows the areas which require greatest control to areas that only need minimal control in terms of preservation of health and safety.

(xii) Solving the Housing Problems:

Unplanned residential developments have been noted as the predominant problem in Shirere. In one case we have the indigenous mud and wattle huts, which belong to those who happened to fall within the Municipal boundaries at the time of municipal boundary extension, and these form the majority in the area, on the other hand we have permanent and semi-permanent houses, some as per the stipulated standards and some of them below the standard. It was

earlier shown in chapter one that there is a shortage of housing in the town area, and that most of the people who can find no houses in the town or who are unable to pay the market rents, find their way into Shirere. The residents of Shirere have therefore put up residential units with cheaper materials contrary to the building by-laws which they rent at nominal rents to satisfy the demand.

It has been expressed in some quarters<sup>5</sup> that the design standards currently in use are colonial and that should be done away with. It has been also argued that the design standards impede a faster supply for the urban residents, hence the rapid construction of sub-standard housing in the peri-urban areas to satisfy the demand which cannot be satisfied in the town area. A lowering of the standard will create<sup>an</sup> environment that is hazardous to health and low quality materials may result in higher maintenance cost than would have otherwise been the case. If the earlier stated long term strategy can be effected it means that Shirere will be a low income residential area, since it is located near the sewage works, and with the expected high densities in the area it will be very easy indeed to provide sewage connections. Since the residents of the area already own the sites, it would sound appropriate

for the Municipal Council to provide the required services, and then issue materials loans for the residents to construct standard houses, a provision should be made for the residents to repay their loans by subletting parts of their premises to the needy urban workers. This arrangement will help those who are not regular income earners to repay the loans. If our earlier recommendation of an agri-residential suburb can be accepted, this will mean that the residents of Shirere will still subsist on their small shambas plus additional incomes from the rented premises. Eventually when the majority of the people are able to make a living from urban based activities, the agricultural parcels could be acquired and then leased to those that might have owned them before. This means that the Council will institute effective control measures for the leasehold interest. It is easier to control a lease than freehold land. Then later when the leased lands are required for urban development the leasehold agreement can be terminated. An improvement of the housing situation in Shirere can therefore be financed by the municipal council in collaboration with the National Housing Co-operation. The Council must provide the technical know-how and the supervision if the envisaged housing developments are to succeed and conform to the expected standards.



On the other hand the municipal authorities could undertake the task of encouraging co-operative housing schemes, this will considerably help to augment public efforts.

(xiii) Additional Community Facilities:

We observed that there are inadequacies in Shirere, which makes it dependent on the town for those limited supplies and this often leads to shortages because a larger population is being served than was anticipated before. A good example here is with the water supply. The municipal authorities should take over the administration of water supply, the current administration of water is inefficient there is the Ministry of Water on the one hand and the office of the District Commissioner on the other. Water has been served in areas that were not initially anticipated. The Council should draw experience from the larger municipalities to set up a water department for better administration. It is expected that revenue derived from water will meet the expenses expected and where need arises the central government could be approached for a subsidy, this could be during the initial stages.

The population concentration and distribution in Shirere calls for more community facilities such as schools, health centres etc. The primary schools in Shirere serve an additional population from the

town where the schools are in adequate.

There is not even a single health facility in Shirere which means that the people here depend on the Provincial General Hospital, the establishment of at least a health centre is long overdue in the area.

For a co-ordinated development of kakamega, comprehensive planning should be undertaken to cover the entire area, with the wishes of the agencies interested in the area and the community at large accommodated.

(xiv) Long Term Planning for the Immediate Peri-Urban Areas

Planning authorities should be empowered to carry out comprehensive long term planning for their immediate peri-urban areas, this would in effect provide general guidelines for development. This is important because even before these areas are included within the various municipal authorities they depend on the various towns for certain services, this has been true of Shirere. The current practice in which the developments of the areas within three miles of a municipality or a town authority should be approved by the central authority as earlier shown in chapter five are ineffective for lack of a monitoring system.

It is hoped that the above policies will help promote a co-ordinated physical development of Kakamega Municipality as a whole and thereby creating an environment that people are happy to work and live in.

## 7.2 CONCLUSIONS:

Planning will only be effective if the right conditions exist, and no amount of documentation or consultation can yield planned development unless the correct social and political climate exists. This work set out with the hypothesis that there is lack of co-ordinated development in Kakamega town due to the developments in the peri-urban areas.

Solutions have been sought that aim at improving the situation in Shirere and other peri-urban areas of Kakamega. In chapter one an attempt was made to review some of the western based concepts on city growth, all of which we found did not apply to Kakamega's situation. The developments in Kakamega are linear in character, concentrating along the main roads and streets. There is certainly no practicability of the concentric, sector and multiple nuclei/<sup>concepts</sup> that explain the growth of cities in the industrialized western world.

Our study was based on Shirere, because it was assumed that, it is representative of the peri-urban area and that experience gained would be used elsewhere in Kakamega. We looked at the various aspects of the Shirere community, thus physical, social, economic and legal as the basis on which policy approach could be derived.

This study confirmed that Shirere is developing without any official guidance, and that the municipal by-laws and other legal instruments for legal control are not enforced due to various reasons such as inadequate

resources <sup>and</sup> / the land tenure system. This has brought into light numerous problems that pose a threat to the orderly economic and physical development of the area.

Although we have noted that rural-urban migration is the cause of the problems in the peri-urban areas of several towns in Kenya, it has been found that the magnitude of in-migration in Kenya is minimal and that the real cause of the problems in Shirere is engineered by the indigenous people, but it has also been felt that the growth centre strategy adapted by the government for rural development should be pursued. It aims at urbanizing the rural countryside and thereby offering some economic benefits to the would be migrants. This will lead to a low rate of rural-urban migration. This is a policy that should be given national priority if our towns are to be saved from excessive population than they can cope with.

In our literature review we found that the western concept of the fringe is so different from that in developing countries. In the western world the fringe is a place inhabited by the high income earners with a wide variety of advantages, whereas in the Kenyan case the urban fringe is an area of social disorder, uncontrolled developments and lastly an area in which the provision of services is seriously lacking.

A case has been made that planning policy should recognize the danger posed by peri-urban areas, the current practice of confining development plans to

particular areas i.e the old township area should be discouraged. A comprehensive policy statement for the development of these peri-urban areas is long overdue and should be effected soon to go hand in hand with rapid urbanization process in the country. The local authorities must be seriously involved in planning, the current practice where plans are imposed by the Physical Planning Department should be minimized, the danger is that if the preparation of the plans did not involve those affected then problems at the implementation stage are likely to occur.

Improvements have been suggested in housing developments, public utilities, etc, but these can only be possible within certain financial limits. We have suggested a review of the housing standards within the socio-cultural background of the people, but at the same time we have noted that a lowering of the standards may result in serious consequences, such as health hazards. In overcoming this problem we have called for subsidies from the central and local governments. Secondly we have called for efforts to organise co-operative housing groups in the area.

Since the land use control measures have proved ineffective, we have called for stringent measures to be adopted through appropriate legislation, and in the case of Kakamega we have delineated various zones that require stringent control and those that require minimum control

a stable economic base for the town than is the case now. The industrial base is weak and if the town is to fit in with the growth centre strategy then the appropriate methods are needed to develop a sound industrial base.

Lastly we suggest that a study be conducted as to the effectiveness of zoning as a planning tool for the rapidly growing towns in Kenya, as has been noted in this work, what is needed is proper land use guidance, with proper land use objectives and land use relationships, the researcher would be asking himself the question: 'Is zoning an answer to the current inconsistency in land use plans of our towns?'

FOOTNOTES:

1. Saad S. Yahya, unpublished Ph.d Thesis
    - (i) Urban Land Policy, University of Nairobi 1976.
    - (ii) J.C.N.Chege - Unpublished M.A. Thesis - Land Constraint for Urban Development - Nyeri Town 1977.
  2. Land Acquisition Act Cap. 295 1968.  
Kenya Constitution Section 75.  
Local Government Regulations 1963.
  3. Circular issued by the Town Clerk 1977, August.
  4. The Finance Bill 1975.
  5. The Seminar on Low Cost Housing by Housing Research Unit, University of Nairobi - Seminar held from 10th May to 12th May, 1977.
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Agriculture Act Cap.318

Land Control Act 1967

Land Planning Act No.37 of 1968 which re-enacted the Development and Use of Land (Planning) Regulations Legal Notice 516 of 1961.

Land Adjudication Act Cap. 284.

Appendix 1

General Household Questionare

- Name of Interviewer .....
- Date of Interview .....
- 1. Area Number .....
- 2. Number of Household .....
- 3. Number of Persons in the household .....
- 4. Ages of the members of the household .....
- 5. Education of the respective member .....
- 6. Employment of the respective household members .....
- 7. Monthly income of the household memberd .....
- 8. What is the mode of transport for the respective household members .....
- 9. Place of birth of the household members .....
- 10. The heads legal interest in land .....
- 11. For how long have you been on the land .....
- 12. What is the predominant use on the land .....
- 13. If the answer to 11 is agriculture what type of crops do you grow .....

SUBDIVISION

- 1. Have you ever subdivided your land .....

2. What were your reasons for subdivision .....
3. What procedure did you undertake before subdividing .....
4. Was the Municipal Council aware of the subdivision .....
5. If you did not consult the Municipal Council, what were your reasons .....
6. Who drew the subdivision plans for you .....
7. How many times have you ever undertaken subdivision on your land .....
8. What was the initial acreage of your land .....

HOUSING: -

1. The type of building .....
2. Number of rooms .....
3. Total house area .....
4. Plot coverage .....
5. In case of a permanent structure, what was your source of capital .....
6. Did the Municipal Council approve the building plans .....
7. Do you have any other house on this plot that is not for your use .....
8. If answer in Question 7 is yes, what is the building used for .....
9. What prompted you into erecting the building .....
10. If it is for rental purposes, what rent do you receive .....
11. Does your house have all the requires services .....
12. Is the house readily accessible to both vehicular and pedestrian traffic .....

SERVICES:

1. Do you have water on your plot .....
2. Do you always get the water whenever you need it .....

- 3. What procedure did you follow before you were supplied with water .....
- 4. If you do not have piped water, what is the source of your water .....
- 5. What is the means of sewage disposal .....
- 6. Do you find this convenient .....
- 7. Are you served with electricity .....
- 8. What is the means of garbage disposal .....
- 9. What services do you feel need improvements .....

GENERAL:

- 1. What do you consider a serious problem in this area .....
- 2. Why did you prefer this area to the other municipal areas .....
- 3. What are your views about a possible compulsory acquisition .....
- 4. Do you have any suggestion as to how you could be incorporated into the urban setting in case you dont favour acquisition .....
- 5. Do you encounter any obstacles whenever you want to carry out any developments .....
- 6. Are you aware of the legal control measures that affect this area .....

Appendix 2      QUESTIONNAIRE FOR TENANTS IN SHIRERE

Name of Interviewer .....

Date of Interview .....

- 1. Area No. ....
- 2. House No. ....
- 3. People in the House (No.) .....
- 4. Type of Employment .....

5. Income of the respective occupants .....
  6. Why did you prefer to rent a house in Shirere and not anywhere else .....
  7. Is the current space adequate for your needs .....
  8. How much do you pay for your rent .....
  9. What is the source of your water supply .....
  10. Are there adequate services and facilities in your house .....
  11. Size of the dwelling unit .....
  12. Does your landlord live in Kakamega .....
  13. Do you have any suggestions on how the housing situation in Kakamega as a whole can be improved .....
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