MEETING HOUSING DEMAND IN MEDIUM SIZED TOWNS IN KENYA: A CASE STUDY OF KERICHO TOWN

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A THESIS SUBMITTED IN PART FULFILMENT
FOR THE DEGREE OF MASTER OF ARTS (PLANNING)
DEPARTMENT OF URBAN AND REGIONAL PLANNING,
UNIVERSITY OF NAIROBI

JUNE, 1989

DECLARATION

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

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ACKNOWLEDGEMENTS

The completion of this thesis has been made possible through the generous assistance of a number of individuals and institutions to whom it would be difficult to acknowledge individually.

First is to the University of Nairobi through the Department of Urban and Regional Planning for offering me the Scholarship without which it would have been impossible to undertake this work.

I am greatly indebted to the members of staff of the Department of Urban and Regional Planning through the Chairman Mr. Z. Maleche for every assistance accorded to me in the course of this study.

In particular,I wish to express my sincere gratitude to my supervisor Dr. P. O. Ondiege for his constant guidance, positive criticism and patience throughout this work.

I would also like to acknowledge the contribution of the members of staff of Housing Research and Development Unit (HRDU), the Kericho Municipal and County Councils and all those individuals and organizations who in one way or another assisted me in the course of undertaking this study.

I would also like to acknowledge the support of the members of my family and last but not least to the two typists - for their patience in typing this work.

ABSTRACT

The focus of the study is on housing demand in Kericho. Housing demand is a function of income and the proportion of it that people are able and willing to spend on housing and the cost at which housing units are provided. It is considered normal in Kenya for people to spend 20% of their incomes on housing.

This study has, therefore, endeavoured first to establish the average income levels in Kericho Town and the proportion of such incomes spent on housing. Secondly, the study has focused on the issue of housing affordability. Another aspect covered in this study is the housing stock situation in Kericho town and the rate at which new units are being produced. And lastly, the study has attempted to analyse the housing need situation in Kericho Town.

Analysis in this study reveals that people in Kericho spend an average of 26% of their incomes on housing. And when related to the rent levels and housing mortgage requirements, it becomes clear that majority of the people, especially the income, cannot afford suitable housing and this explains why most of them live in the Kwa Michael and Nyagacho areas. By considering current costs in a site and

service schemes and of putting up a two-roomed houses acceptable to the Council, as regards standards of construction and infrastructure, it has been established in this study that the low and middlie income earners in Kericho cannot afford loan repayments, if given loans, mainly as a result of their low incomes relative to the national levels and high standards emphasised by local authorities.

The study has also revealed the inadequacy of housing units in Kericho town. By comparing the level of housing stock, the rates at which new units are being produced and the rate of formation of new households, it has been established that there is a large housing need in Kericho town and that most of these needs are to meet the housing requirements of the low income.

After consideration of what people can afford in Kericho town, it has been established that the current programmes oriented towards home ownership in urban areas, for example, the site and service programmes, are not actually benefiting the target beneficiaries - the low-income earners. This study has thus emphasized the shift of emphasis from owner-occupier developments, to putting up rental houses.

if the low income are to afford living in houses that meet the standards required by local authorities.

So in a nut-shell, this study reveals the inadequacy of affordable housing and which measure to the standards required by local authorities, in terms of rents and housing mortgage terms, especially to the low and a section of the middle income and groups.

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CHAPTER ONE

1.0 INTRODUCTION

1.1 STATEMENT OF THE PROBLEM:

A central point for every Kenyan family is a home. A home is not only valued for the shelter and facilities it provides, but for the entire environment surrounding it, including accessibility to employment. It is also significant financially since on the average it absorbs between 15 and 20 percent of family income in urban areas. In addition housing construction contributes both directly and indirectly to increases in employment and output. Because of the special importance of housing, the government takes considerable interest in the entire housing situation and the need for its improvement.

Inspite of the notable progress in housing development which has been made since independence, this area of development remains an important challange to the government and all those concerned. In urban areas,the main indicator of the housing problem is the extreme shortage of urban housing units to accommodate the population. The general standard of housing is unsatisfactory for most urban population. There is overcrowding, unauthorized construction of unplanned dwellings built of unsuitable materials and without

proper sanitation. The high rates of urban population growth, coupled with the rise in rural-urban migration is one of the root causes of urban housing problems. The financial base of young Local Authorities like Kericho is weak compared to the level of expenditure needed to serve properly the urban population. Thus the development of urban amenities and supporting services for housing development has lagged behind the desined level. In Kericho, such a situation is slowly but steadily being manifest. Slums such as Kwa Michael, Nyagacho and Kambi Somali are clear examples. Indeed it is estimated that about 35% of all urban households in Kenya live in squatter settlements and slums.[1]

In 1983, it was estimated that the total housing stock in Kericho town was 9,202 units.[2] These included public, semi-public and private owned houses, rental or non-rental. By projection, there were about 9,226 households in the town at that period. Assuming that each household has to be housed separately a quick comparison of the two figures, though not quite revealing in themselves, points towards existence of a deficit in housing.

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1. Kenya Government National Development Plan 1974-78.
2. Housing Survey, 1983.

The difference between the number of households and housing stock in 1983, does appear insignificant, but there is alot concealled. According to the housing survey of 1983, of the total 9,202 housing units in Kericho Town, 5,694 (61.8%) were built of temporary materials (outer walls, roofs and floors are made of non-durable material and lack basic services utilities such as water, sewarage, roads, etc. (Chapter two - quality of services). In assessing housing needs, these type of houses are considered inadequate and need to be replaced. On the other hand, the rate at which new public housing units are being produced is very low (Table 6). In 1956-60 period, there were an estimated 256 public housing units in Kericho. By 1981-85 period for instance, the rate at which new units were being added to the existing stock was only 4.5 percent i.e. 24 double housing units. What this means then is that, though the difference in 1983 appear rather insifignificant, the rate at which new households are formed and the volume of inadequate housing stock are for more than the rate at which new units are being produced such that the gap slowly but steadily grows.

From population growth trends, we observe that the towns' population grows at a rate of between 4 and 5% per annum and as has become apparent from the study the rate of production of new housing units is less.

Thus the disparity between housing provided and the households to be accommodated continues to grow.

The issue of in-migration of population to the town is also to be contended with. The impact of this on housing and the urbanization process in general in Kericho has been underscored in the District Development Plan 1984-88. In which it has been noted that the town lies in a highly agricultural region with alot of potentiality for development, as result of which influx of population is expected - and who inevitably have to be housed. All these arguments point at one thing that there are inadequate housing units to cater sufficiently for all the towns' households or population. But is it only the problem of inadequacy of houses per se? Supposing new houses are put up inrespective of costs and therefore high rents, will the problem be solved? Such questions help one to understand and articulate the housing problem in Kericho more objectively. For what it calls for is the consideration of the issue of affordability.

In considering affordability, it is not simply a question as to whether people can afford a particular kind of housing. It is whether they really want to afford that kind of housing or whether in fact, they really want to pay that much for housing at all considering

the other things they might have to do with their income. A comparison of the incomes and rent structures in Kericho reveal that rents are rather on the high. Most tenants seem to spend more than what is considered normal in Kenya, i.e 15-20% of their incomes on housing[1] and as it were straining themselves to have accommodation. Technically, they are paying what they cannot afford inspite of being housed. A more objective summary of the housing problem in Kericho could therefore be, inadequate housing units that are within the affordable reach of the majority of the population as opposed to the mere inadequacy of housing units per se.

1.2 STUDY OBJECTIVES

The aim of the study is to analyse the housing situation with respect to the demand for such houses and future housing requirements in relation to future building rates that should have to be maintained for the building programme in Kericho Town to ensure adequate provision of affordable housing.

i) The main objective of the study is therefore to determine the level of demand for housing in Kericho Town. This demand depends mainly on

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1. Kenya Government. National Development Plan 1979-83.

the households' income and the prices at which housing is made availiable (both rental and mortgage). From this, the extent to which this demand expresed by the various income groups is being met will be assessed and also it will be possible to determine the type of housing that can meet the housing demand for the different income categories without straining them.

ii) The other objective aims at assessing the level of housing requirements in Kericho town. Growth in urban population invariably leads to increase in the number of households. This will necessitate similar growth in production of new housing units. So the study by considering these two variables - the population size and the housing stock and the rate of production or supply of new units, it will be possible to asses the level of housing needs in Kericho Town.

1.3 SCOPE OF THE STUDY

Essentially, the focus of the study revolves around the theme of housing provision in Kericho Town with particular emphasis on housing demand. Due consideration is therefore paid to the existing housing situation in the town i.e. housing stock. There is also an analysis

of the housing need in the town as well as the demand for the various categories of housing i.e. low, medium and high income housing.

The study is divided into five chapters.

Chapter one starts by an examination of the Kenya government housing policies and strategies. Policies are essential guidelines in directing development in any sector of the economy. The role of housing and housing sector in an economy like Kenya is also highlighted. Also included in this chapter are the statement of the research problem, the study objectives, the research methodology and literature review pertaining to housing provision in other parts of the world with more or less similar experiences with Kenya..

Chapter two of the study covers aspects on housing supply in Kericho Town. This starts with an assessment of existing housing stock in the town - covering Council houses, the mortgage and tenant purchase houses, the site and service schemes, privately owned houses and others that are for rental purposes. Annual housing production by the agencies involved in these is determined - the sum of which serves as an indicator of the annual rental housing production in the town.

Chapter three and four mainly contains the findings of the research - that is through data analysis, it gives an insight into the situation of housing provision for different income groups in Kericho Town in relation to their levels of affordability. The main issue dealt with in Chapter three is housing demand in the town. Housing demand is the willingness and ability to pay for housing and depends mainly on the households income and the prices at which housing is made available. This means therefore income levels for the various households in the town have to be determined. And also the average monthly rents for the various categories of housing - low, middle and high income. Using this, assesments have been made on the proportion of the population that can or cannot afford to rent houses. It then becomes possible to point out the type of housing that majority can afford - and this is important in guiding future housing developments. The impact of planning and construction standards on the building cost and therefore on rents charged has also been covered.

In Chapter four various aspects of housing needs/ requirements is covered - both current and future needs. Two important variables in assesing housing needs are population size (number of households) and the number of housing units available. So current population has been

estimated and future projections made and these have been considered alongside the existing housing units in the town to give an indication of the housing need situation. Based on these results, estimations of the number of units required to be produced annually to meet the needs can be determined. And also based on the analysis of demand and affordability, the type of houses that need to be produced is given, for it is not the need for such houses per - se that is crucial but it is their affordability.

In Chapter five, recommendations have been made on how to overcome problems pertinent to housing provision in the town with respect to affordability and finally, the research conclusion.

1.4 RESEARCH METHODOLOGY

1. Sampling Techniques

Sampling is inevitable in research due to the constraints of time and resources that researchers always encounter. However, for a sample to be useful and meaningful it must be a fair representative of the population from which it is drawn such that its statistics provide adequate knowledge for making inferences about the corresponding population parameters. In this study the population is all the households residing within the old boundary of Kericho Municipality.

It would have been impossible to interview all the households during the research period between July and September 1988. Residential estates were therefore delimited as the units of observation. Therefore, the technique of stratified systematic sampling was employed because it reduces the unrepresentativenes of the sample.

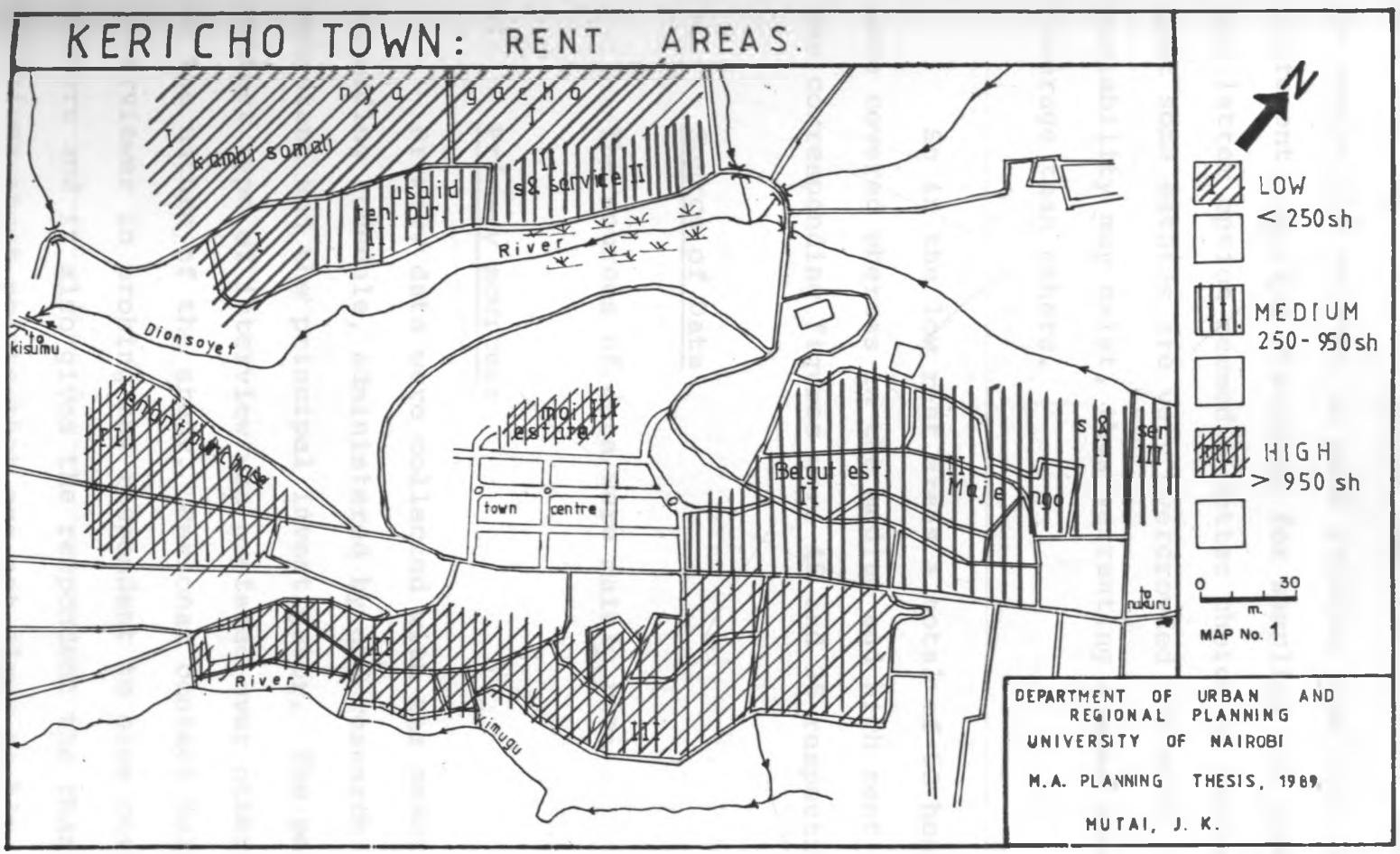
To facilitate data collection and consequent analysis, the residential areas were stratified into three broad categories or strata based on median rents per month. They fell under: (Map 1).

a. The low rent areas (below Ksh. 250 per month): Kwa Michael, Nyagacho, Tengecha, Kambi Somali and Swahili village.

b. Medium rent areas (between Ksh. 250 - 950 per month): Belgut, Mama Ngina, USAID tenant purchase housing.

c. High rent areas (over Ksh. 950 per month : Site and service scheme I and II and the mortgage houses scheme I and II.

After the stratification of the estates, there were two options for drawing the sample: either to sample the estates in each stration first and then use


KERICHO TOWN: RENT AREAS.
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to kisumu
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MAP No. 1
DEPARTMENT OF URBAN AND REGIONAL PLANNING
UNIVERSITY OF NAIROBI
M.A. PLANNING THESIS, 1989
MUTAI, J. K.

the sampling fraction across the three strata, or to sample the estates in each stratum and then use different sampling fractions for sampling the households. The latter option seemed a better choice on grounds that some estates are very overcrowded and much internal variability may exist, thus warranting a more intensive coverage than others.

So in the low rent areas a total of 60 households were covered whereas in the medium and high rent areas the corresponding figures were 45 and 35 respectively.

II. Source of Data

The sources of data were mainly two:

i) Primary sources:

Primary data were collected with the means of a recording schedule, administered by one research assistant and the principal investigator. The personal contact type of interview was prefered over others because of the nature of the study. Personal contact helps the interviewer in probing the respondent to give correct answers and it also gives the respondent the chance to ask questions about points that are not clear to him. thus ensuring reliability of the results received.

Table 1

The number of respondents interviewed per stratum

Strata	No. of households interviewed
1. Low rent areas	60
2. Medium rent areas	45
3. High rent areas	35

There were also interviews with heads of department concerned with general physical and economic planning and those concerned with the provision of housing.

These included:

i) The Town Clerk

ii) The District Physical Planning Officer

iii) The housing and social services officer (Kericho Municipality).

Also during the period of the research, personal observations were made about the town which may be difficult to obtain formally.

ii) Secondary sources

These covered library work in both published and unpublished works. Data was also gathered form official records of the town like Annual Reports, rent books, annual reports of NHC, and others.

1.5.0 OPERATIONAL DEFINITIONS

Housing Demand

Is the willingness and ability to pay for housing. It depends mainly on the households' income and prices at which houses are made available (rents). Affordable rents depends on the value/price of accommodation that is supplied.

Housing need:

According to the U.N. Mannual on methods of estimating housing needs,[1] housing need is used in a social sense to express the extent to which housing conditions fall below the level or norms considered necessary for health, privacy, and development of normal family living conditions. It can be a measure of housing deficit which is the difference between total households and the number of dwelling units available. Though there are cases where more than one household share one unit. It is expressed in terms of standards which have nothing to do with the peoples' aspirations but give

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1. U.N. "Methods of estimating housing needs," 1973

some numerical size of the housing problem. Assuming that the established norms are to be maintained for the future, then future housing needs resulting from new household formation and decline in the housing stock must be compared.

Affordability

Is the ability to pay for a particular type of housing. Computed as the proportion of income to be spent on housing and is set as a ratio - affordability ratio. In Kenyan urban areas, it is considered that people spend between 15 and 20% of their incomes on housing.[1] Therefore spending above this on housing is deemed unaffordable.

Household

The concept of a 'household' is based on the arrangements made by persons individually or in groups for providing themselves with food or other essentials for living. A household may have a distinct head or it may consist of two or more people who have decided to live together as equal partners under one roof inorder to minimize their living costs. It is also possible to have many homeholds living in one dwelling unit.

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1. Kenya Government Development Plan 1979-83.

Overcrowding

This phenomenon occurs when there are more people than the maximum number that should stay in a dwelling unit. In Kenya, the occupancy rate is not more 2.6 persons per habitable room.[1] A unit with more than this is deemed overcrowed.

Housing supply

This is the provision of dwelling units over a period of time. The supply at any particular point in time include the already existing stock of houses that falls vacant and the ones that are constrated as a response to demand.

Housing

Housing units are heterogenous in that they differ in a number of dimensions. There are differences in the physical units themselves, number of rooms, architectural layout and style, structural amenities and condition. Therefore a housing unit comprises more than simply the structure because of the localization functions refered to above. It is a package consisting of the structure, the land lot, the neighbourhood and the configuration of accessibility to different desirable destinations within the urban area and outside.

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1. Kenya Government "Housing Survey" 1983. Physical Planning Department.

1.5.1 CRITERIA TO DEFINE A MEDIUM SIZED TOWN

In 1983, a housing survey was done in thirty two urban centres in Kenya, in which a criteria was developed to categorize the Kenyan urban centres appropriately.[1] And this has been adopted in the definition of a medium - sized town as used in this study.

Table 2 Categorization of Urban Centers

Population Size	Category of Center
Over 100,000	Large
40,000 - 100,000	Medium
2,000 - 40,000	Small

From the population projections done, at the time of the research (1988), Kericho town had a projected population of 48,220 (Table 24) and hence the reference to it as a medium - sized town. If the current growth rate continues, then by the year 2010, the population of the town is expected to have passed the 100,000 mark.

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1. Household Survey, 1983.

1.5.2 INCOME LEVELS

Income levels can never be uniform for all people. Every year, the Central Bureau of Statistics comes up with a categorization of income groups. These categories are carried at by considering the incomes earned by individuals in the various sectors of the economy (agriculture, industry, etc.) and correcting for inflation. It is this categorization that was adopted in this study and is summarized in the table below:

Table 3 Income level categorization

Income group	Year	Income Ksh. per month
Low	1989	Less than 3,000
Middle	1989	3,000-11,000
High	1989	Over 11,000

Source: Central Bureau of Statistics, Statistical Abstracts 1986 and 1987.

Base Year 1975 = 100

Values have been corrected for inflation using an inflation rate of 10% per annum.

NB. The inflation rates are subject to variations from year to year.

CHAPTER TWO

2.0 LITERATURE REVIEW AND HOUSING PROVISION

2.1 Housing Policy, Objectives and Strategies

The prime long term objective of the Government housing policy in Kenya is to move towards a situation where every family in Kenya will live in a decent home, whether privately built or state-sponsored, which provides at least the basic standards of health, privacy and security. These are the sentiments exposed in the Sessional Paper No. 5 of 1965/66 on Housing Policy. It is stated in this paper that the Government's housing policy is to organize, in collaboration with local authorities, a programme which seeks to develop housing projects which provide essential housing and healthy environment to the urban dweller at the lowest possible cost to the occupants.

The government currently considers the minimum requirement for a decent house to be a two-roomed habitable house constructed of permanent materials with a separate kitchen and basic sanitary facilities such as toilet and shower compartment.

In the 1979-78 development plan, the government realized the need to concentrate in housing in the urban areas, for urban crowding requires more sewarage,

water facilities than are needed in rural areas. The governments' objective then was to increase the annual rate of construction of all categories of housing four fold. During the plan period approximately 60,000 units ranging from serviced plots to core housing units were to be provided in urban areas throughout the country.

The same commitment in providing housing by the government was echoed in the 1979-83 development plan. The government's objectives then were to:

1. Increase the stock of housing in the urban areas to keep pace with the demand caused by urban population growth.

2. Meeting the housing shortfall that already exists in major urban areas.

3. Ensuring that houses provide benefit in particular to those families in the lowest income groups whose needs for shelter is greatest.

In order to realize these objectives, the government has come up with specific policies and strategies to enhance development in housing provision. In the 1974-78 Development Plan period, the government spelt out specific policies and which have continued to recur in the successive development plans. These

are:

1. To accelerate housing development using both government and private resources

2. To retain and develop all the existing housing agencies both public and private and to direct housing funds so that a maximum number of housing units in all cost brackets in proportion to the need of different income groups are developed.

3. Ensure that housing design and construction conform to government standards and that each housing unit constructed in urban areas shall have at least two rooms, its own kitchen and toilet.

4. To intensify use of local materials and increase employment opportunity in housing sector.

Inspite of all these, it is necessary to appreciate that several other factors interact to govern the extent and success of any housing programme planned, for instance the amount of funds available, the minimum building and construction standards and the estimated housing requirements in relation to different income levels and the amounts that can be reasonably spent on housing.

In its basic needs strategy[1], the government seeks to assist 'Wananchi' to have better shelter adequately serviced to ensure good health and well being. While the government provides some housing for the low-income groups, its primary role is as a catalyst to the housing industry. Hence the government directs much of its investment in this sector to provision of site and service schemes. These have been argued as a proven method of reaching the majority of all urban families, in that expenditure in these schemes have greater impact on total housing needs than would follow from similar levels of expenditure devoted to the construction of complete units.

But inspite of all these, the general standard of housing is unsatisfactory for most urban population. There is overcrowding, unauthorised construction of unplanned dwellings built of unsuitable material and without proper sanitation. It is estimated that about 35% of all urban households exist in squatter settlements and slums. The root cause of this urban housing problem has been attributed to the high rate of rural-urban migration. The financial base of most local authorities is weak compared to the level of expenditure needed to service proper urban population. Thus the development of urban amenities and supporting services for housing

1. National Development Plan 1979-83

development has lagged behind the desired level. The other bottleneck mainly concerns land. The servicing of land and the whole mechanism of urban land assembly proceeds at a very low pace. Many projects have therefore been unable to start when planned due to land being unavailable when it is needed - particularly shortage of land with minimum services for low cost housing is major bottleneck to production of authorized housing.

The other bottleneck is the irrelevance of standards in the current building code - they are too high and restrictive. The building code currently being used is in some places cumbersome to apply or completely out of date. But it is encouraging that in the 1984-88 development plan period, the government was committed to implement the recommendations of the low-cost building by-laws. This will permit construction of low cost housing within urban centres using non-conventional but functional locally produced building materials.

2.1.1 Low-cost urban housing programme

In the 1974-78 Development Plan, the government increasingly realized that more emphasis needs to be given to houses for people in low income category. Hence the emphasis on the self-help aided site and service scheme programme. These were conceived as a

realistic way to provide decent housing for low income people and to encourage private home ownership for this group. What one should consider is whether such a programme has worked as perceived.

Whereas the government will continue to devote the greater part of its resources to low cost housing, the need for medium and high cost housing is also recognized. The government through the National Housing Corporation continues to provide tenant purchase housing subject to availability of funds.

The government has also been encouraging the private sector and individual initiative to continue playing a significant role in housing development. Participation by the private sector in the development of housing is being facilitated through:

- Injection of long term finances into the mortgage market by such agencies as Housing Finance Company of Kenya, Savings and Loans Company of Kenya, East African Building Society, NSSF and others.
- Improvements in the lending terms of mortgage institutions and
- Provision of serviced sites.

The governments' long term objective of providing decent housing to every family is still strongly emphasised in the 1989-93 Development Plan. All along various strategies and programmes e.g. tenant purchase schemes, site and service schemes, rental accommodation, etc have been adopted by the government with a view to alleviating shortage of housing in urban areas. Efforts have been put towards elimination of constraints to housing development including availability of land, cost of building materials and construction finance, inadequate financing mechanisms, inappropriate building bylaws and standards, rapid population growth, etc. For instance, the government is committed in making land in urban areas easily accessible for urban expansion and in having ministries and local authorities adopt more appropriate engineering standards for construction of infrastructure and buildings[1].

As already stated, the current provision of housing in urban areas still falls far short of requirements. Due to rapid urban growth, approximately 38,000 new households are added in the urban areas each year surging the demand for housing to over 60,000 units per annum. At this rate, it is likely that close to a million people will be seeking decent

1. Sessional Paper No. 1 of 1986.

housing, the absence of which will increase the number of unplanned slum structures[1]. Experience gained through the implementation of housing development schemes mentioned above indicate that the rationale for low-cost housing based on the principle of "housing needs" rather than ability to afford a house has resulted in a situation where higher income groups and not the target population have acquired ownership.

It has been recognised in the 1989-1993 Development Plan, that the most obvious constraint to housing development throughout the nation has been shortage of and more particularly inaccessibility to funding for the middle and low income groups. To ensure more housing development funds are mobilised, the government hopes to:

a) Restrict government borrowing from the financial system, thus releasing an increased pool of funds for housing finance institutions - some of which will be committed to housing development.

b) The government will allow such institutions gain easier access to pension funds mainly from National Social Security Fund and Post Office Savings Bank.

1. National Development Plan 1989-1993

c) The role of Co-operative Savings and Credit Schemes and Co-operative Housing Societies will be further strengthened to give a greater access to funds for housing development.

As regards land in urban areas, thorough consideration was to be given to the following aspects of land policy[1]:

a) Means by which local authorities in urban areas of all sizes can obtain land expenditiously for needed expansion especially to accommodate small scale manufacturing and service industries.

b) The appropriate infrastructure to utilize land allocated for public facilities to promote rural urban balance.

In the rural-urban balance strategy, the urban centres have been recognized as important in facilitating linkages that will stimulate the growth of both the centres and the rural areas.

1. Sessional Paper No. 1 of 1986.

These many linkages can be forstered through investments in infrastructure, financial and managerial support for local authorities and measures to stimulate small scale, often informal, manufacturing sector. The first strategy in the Rural-urban Balance is infrastructure to promote the further expansion of small rural centres, the larger towns and small cities serving rural areas. Yet evidence in recent years shows clearly that the provision of basic physical infrastructure has been lagging behind the increase in urban population.

Providing this greatly increased level of funding from both public and private sources presents a challenge. This will necessitate the government to pursue several policies[1]:

1. Ministries and local authorities will be required to adopt and follow more appropriate engineering standards for the construction of infrastructure such as roads, water supplies and sewarage systems. The revised standards will reflect the relative scarcity of capital.

1. Sessional Paper No. 1 of 1986.

2. In order to maximize returns on public investments in urban development, government agencies will be urged to charge market prices for the services and facilities they provide. This applies especially to the sale and renting of housing and housing plots and to the leasing of government land in urban areas. These and other charges must be raised, in part because the stated objective of subsiding the urban poor is rarely achieved.

2.1.2 National housing strategy to the Year 2000

Since independence, the national population has more than doubled, the number of urban residents trippled while the share of National resources available for housing has declined and the general quality of the dwelling environment of the Kenyan people has deteriorated[1].

The structural adjustment programme of fiscal and monetary policy measures, which was put in effect in early 1980s has resulted in considerable reduction in rate of inflation[2] and enhanced positive real

1. National housing strategy for Kenya 1987-2000 Department of Housing.

2. This had reached a peak of 22% in 1982. "Housing Finance Systems in Kenya: USL International inc. 1986.

interest rates in Kenya after a very long period of stagnation. The recent amendment to the Banking Act together with current review of Building Societies and Specialized housing finance companies will instil much more needed financial stability in the financial system. The combined effects of new financial stability, reduced government borrowing, and a flexibile interest rates regime ought to yield the desired effect of greater financial flows into housing. Access to housng credit for the majority of the middle and low income households in Kenya is probably the single most important factor in their attempt to improve their dwelling.

With the Government decentralization initiative, the District Focus for Rural Development, the new housing policy and the national housing programme need therefore accord preferential treatment to rural housing, to housing needs in small towns and potential contribution of the informal sector in the shelter production process.

The government has made in roads into the area of construction and building standards with the primary aim of reducing the cost of housing and improving access to housing by low income families. The government is moving towards persuading local authorities to adopt revised by-laws as a matter of urgency.

The revised policy urges the finance sector to adopt the same by-laws for purposes of credit underwriting. The private developer will be encouraged to invest in low-cost housing and in low rental housing because that is the areas of greatest distress.

Well planned housing and infrastructure of reasonable standards and affordable costs, when continued with essential services, affords dignity, security and privacy to the individual family and the community as a whole. Besides the social function, housing investments contribute directly and indirectly to employment generation and incomes and support growth of the building materials and construction industry.

In recognition of this, the government takes great interest in the entire housing improvement. Consequently in 1986, the government decided it should undertake the development of comprehensive housing strategy in the light of growing deficits in urban areas and the staggering additional housing needed in the years ahead to satisfy legitimate housing needs driven by increased population and urbanization.

2.1.3 Housing demand and need

Housing demand as defined, is the willingness and ability of an individual to pay for a house. According

to USAID methodology[1], housing demand consists of the following factors: population growth, household formation, household income and distribution and alternative mortgage lending terms. The Kenya Urban Housing Survey[2] emphasizes that to understand housing demand, the following three factors have to be understood.

a) Household income

b) Proportion of income devoted to housing

c) Monthly cost of housing.

Establishing a reliable level of effective demand for housing is necessary for agencies concerned in the housing delivery system (Fig.5).

An important factor in the analysis of demand, is to establish affordability levels of any housing project beneficiaries (In Kenya it is considered normal for an individual to spend 20% of income on housing)[3]. To do this, household incomes are projected and estimates of the proportion of income likely to be spent on housing (Fig. 1). Alternate sets of financial terms are assumed to compute affordable investments in housing by various segments of the population. These affordable investment levels are

1. USAID "Preparing a national housing needs assessment". Washington 1984.
2. 'Housing Survey' - Physical Planning Dept., 1983
3. Development Plan 1974-1978

compared with prototypical levels of housing services to derive estimates for housing in each category of price and service characteristics.

The total cost of new housing units and upgrades of existing housing units required to meet total projected requirements are calculated on the basis of unit costs provided by the user in accordance with design standards specified for each strategy. To determine what level of public subsidy, if any, would be required to implement the programme that has been specified, the planner compares these costs with the maximum housing values that households in each bracket of the income distribution are estimated to be able to afford.

Key factors affecting the total cost of housing programmes defined in this manner include growth in total household growth in rate of urbanization, rate of escalation of construction costs and especially the minimum design standards and corresponding unit costs specified for the housing programme.

Of these variables, minimum housing design standards and costs lend themselves most directly to public intervention. The interplay of housing design standards, programme costs and housing affordability through successive interations of the model (Fig.2), can help housing planners and policy analysts structure

a realistic approach that will satisfy basic needs through the adoption of standards which, while offering real improvement over informal sector housing conditions, are also affordable by most low income household.

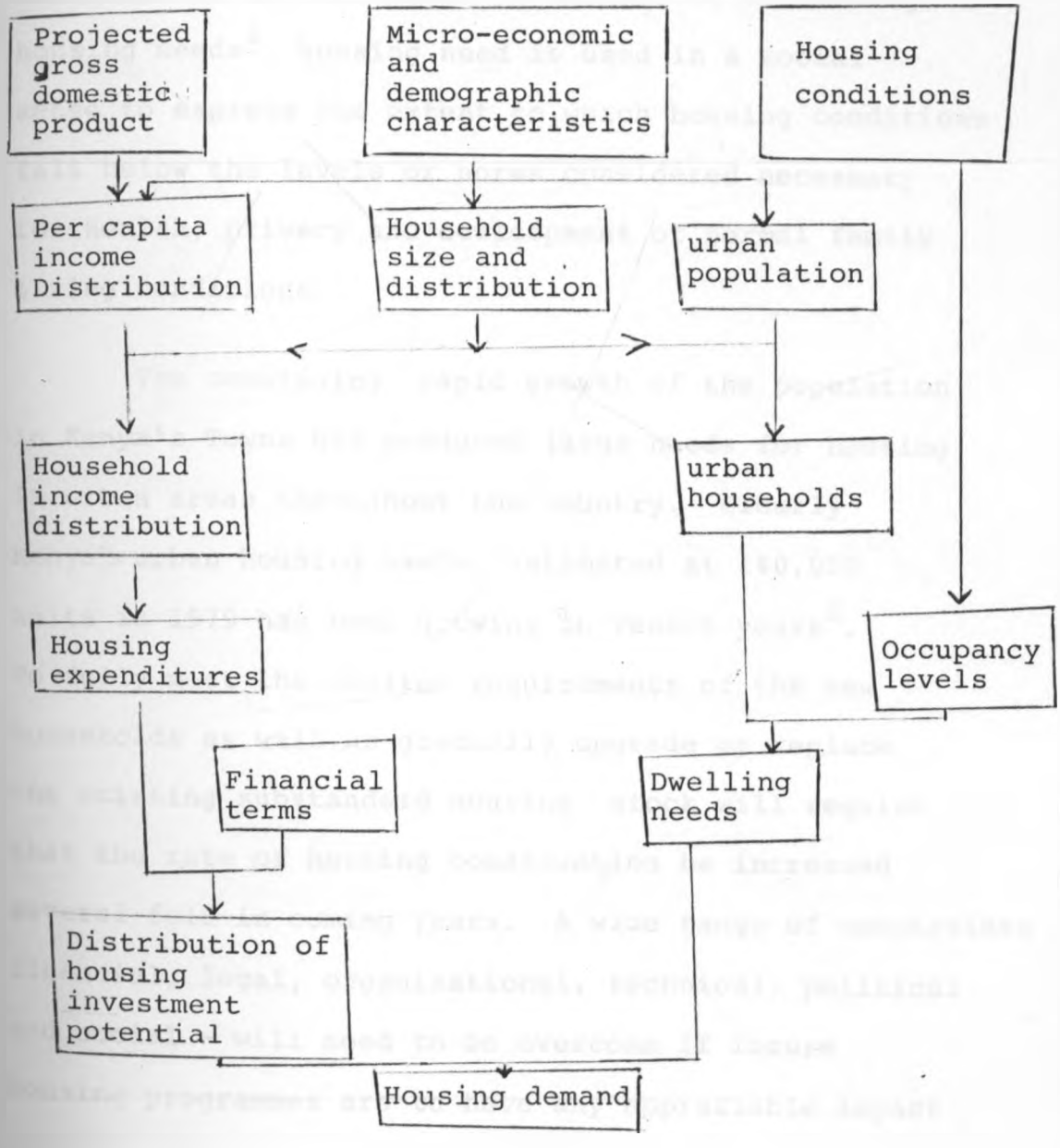

Fig. 1 Schematic view of Demand Analysis.

Source: Lemer, A.C. "Urban and Regional Planning in Developing Countries",1980.

Housing need on the other hand, is the number of dwelling units required by a given population. But unlike housing demand, it does not consider the ability of an individual to pay for a house. According to the UN Manual on methods of estimating housing needs[1], housing need is used in a social sense to express the extent to which housing conditions fall below the levels or norms considered necessary for health, privacy and devleopment of normal family living conditions.

The continuing rapid growth of the population in Kenya's Towns has produced large needs for housing in urban areas throughout the country. Clearly Kenya's urban housing needs, estimated at 140,000 units in 1979 has been growing in recent years[2]. To fully meet the shelter requirements of the new households as well as gradually upgrade or replace the existing substandard housing stock will require that the rate of housing construction be increased several fold in coming years. A wide range of constraints - financial, legal, organizational, technical, political and social - will need to be overcome if future housing programmes are to have any appreciable impact

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1. U.N. "Methods of Estimating housing needs", 1973.

2. Rouk, P. and Roscoe, A. "Assessment of housing needs in Kenya 1983-2003", 1984.

in reversing current trends.

Central to the resolution of these constraints, as it is aptly stated in the 1984-88 Development Plan, is the adoption of realistic and performance oriented standards especially in the area of low cost housing (Fig. 2).

> "The majority of Kenyans simply cannot afford housing which conforms to the by-laws of the existing Building Code, and the government charged with financial obligations of a wide-ranging development programmes, cannot afford to subsidize housing units built of these standards in numbers required to meet the needs of urban population"[1].

From the foregoing, it is clear that housing needs consists of several factors. The urban housing survey identified these factors as[2]:

a) The need arising from the net addition to the total population

b) The need arising from obsolescence or demolition of some of the existing units.

c) The need from people who are improperly housed or who are not housed at all.

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1. Development Plan 1984-88

2. Housing Survey, Physical Planning Dept. 1983.

Housing need is therefore seen as a function of new households, depreciating stock and inadequate stock. It is measured as the total of new or substantially upgraded dwelling units required to house the growing urban population.

2.1.4 Housing finance

Both the National Housing Corporation, the Municipalities and Local Authorities, carry out the functions of a financial institution in implementing their programs. That is, they provide long term loans to finance the housing units (or in some cases, serviced plots) that they develop. In the case of the National Housing Corporation (NHC), most of its financing is in the form of loans to local authorities who in turn on-lend or rent. Also in the case of NHC, its "middle class" housing projects are sold directly to individuals with long term financing provided by Housing Finance Company of Kenya (HFCK). The long term financing for most of these programmes comes from the government in some cases utilizing external funds.

Presently there are many other specialized housing finance institutions in operation. These fall into two main categories: Those which are limited liability companies registered under the Companies Act and licensed under the Banking Act

and mutually owned building societies which are registered under the Building Societies Act. The former comes under direct supervision of the Central Bank and the latter under the Registrar of Building Societies. The limited liability companies come under the definition of a non-financial institution and include, HFCK, Savings and Loans Kenya Limited and East African Building Society. By 1986 March, there were 32 licensed Building Societies[1].

Both types of housing finance institutions receive their resources primarily through deposits. These deposits fall into four main categories.

1. Shares (in case of building societies) or savings accounts.

   These include the small accounts and the money that can be drawn on demand.

2. Investments shares or accounts. Require a minimum, say Ksh.500 and require notice of withdrawal such as a month.

3. Fixed deposits - usually upto a year.

4. Insurance of housing bonds, the interest of which is tax free.

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1. Housing finance System in Kenya. USL inter. inc. 1986 by Rounk, P. and Roscoe, A.

Since the primary purpose of the housing finance institutions is to lend for long term residential mortgages, it is their interest to obtain funds on a long term basis as they can. This is why new building societies are aggresively marketing variations by offering slightly more favourable rates e.g. 12.5% on regular savings. What does not exist, however, is any access by the housing finance institutions to the long term funds which would adequately support their long term lending.

The short term nature of the resources utilized by the housing finance institutions has thus significantly affected their lending activities.

In the site and service schemes, the NHC get money for low cost rental houses from the government at 6% for 40 years. It on-lends to local authorities for 20 years at 6.5% interest. The local authority lends to the purchaser for 20 years at 8%[1].

The commercial banks are limited to 14% interest on loans while the Non-Bank financial institutions and building societies can charge the present maximum of 19%.

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1. Housing Finance System in Kenya.USL inter. inc.1986

Qualifications for residential mortgages and loan terms vary to a considerable extent among the different institutions. Down payments ranges from 10% to as much as 30% with maximum loan from Building Societies being Ksh. 750,000 unless approval is obtained from Registrar of Building Societies (Table 4). Most building societies and housing finance institutions are currently charging 19% for residential mortgage loans, the maximum permitted by the Central Bank. The other institutions, however charge less. Savings and Loans Kenya, East African Building Society, HFCK, charge 16% (Table 4). Repayment periods range from 20-25 years with 15 years being the most usual.

2.2.0 Housing Policy formulation

A critical component in the formulation of any national housing policy is an undertaking of exactly what is needed in terms of housing accommodation. It is a stated objective that all the worlds' people will one day enjoy acceptable housing! Meeting this objective must be through an increamental process and must begin with the establishment of realistic housing standards - standards that will be affordable both by housing occupants and by society at large. USAID places affordability in the context of housing standards. The setting of such standards must be based upon the concept of affordability[1].

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1. USAID "Preparing a national housing needs assessment". Washington D.C. 1984

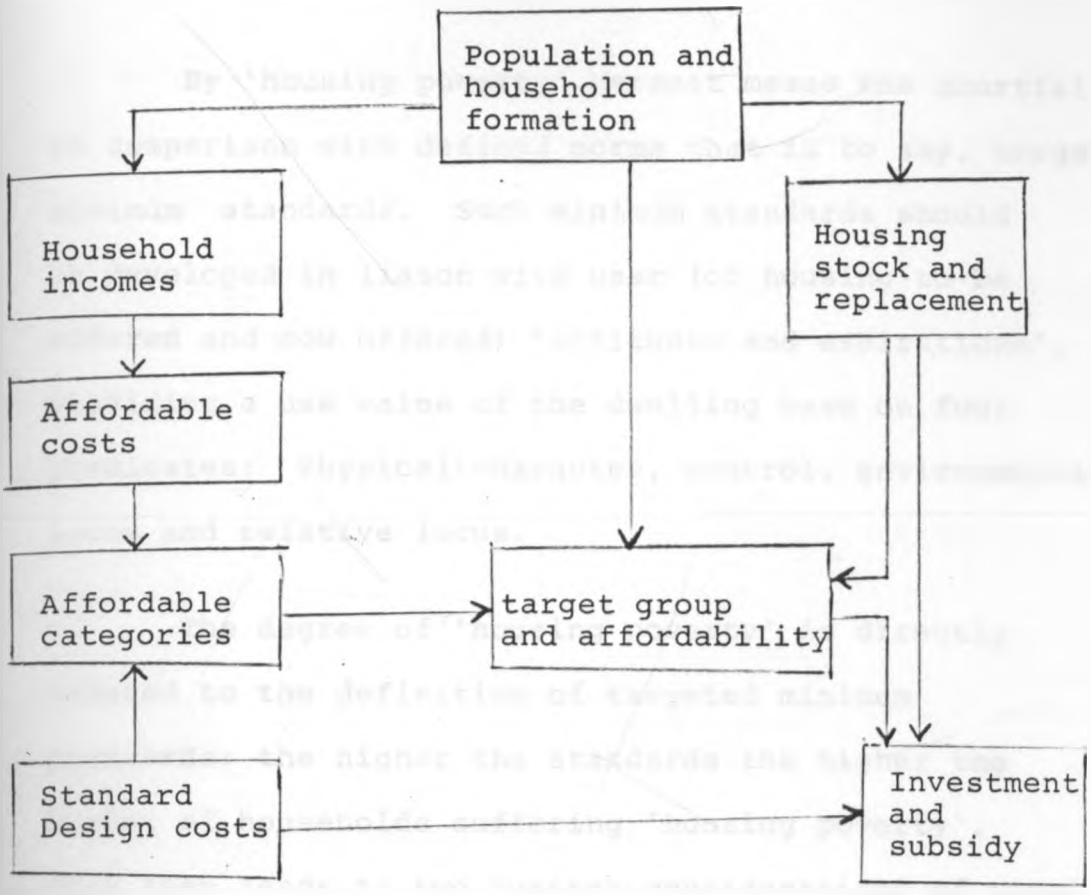

Fig. 2

° Main components of the housing needs assessment model as expounded by USAID!

In his study Merrett (1984) attempted to come up with a contextual basis for policy formulation using the housing consumption requirements. Such requirements are defined by what he calls the "existing scale and nature of housing poverty" and demographic projections[1].

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1. Merret, S. "The assessment of housing consumption requirements in developing countries. Third World Planning Review. 6(4) 1984.

By 'housing poverty' Merrett means the shortfall in comparison with defined norms that is to say, targeted minimum standards. Such minimum standards should be developed in liason with user (of housing to be offered and now offered) "attitudes and aspirations", providing a use value of the dwelling base on four predicates: Physical character, control, environmental locus and relative locus.

The degree of 'housing poverty' is directly related to the definition of targeted minimum standards: the higher the standards the higher the number of households suffering 'housing poverty'. This then leads to two further considerations of vital importance: the political context and effective demand.

The setting of standards is partly a technical issue , to be addressed by technical expertise, and partly a political issue, encompassing the different pressures applied to the definition of standards, first by users, generally seeking higher standards with regard to their general well-being, and secondly by the policy makers generally seeking lower standards with regard to resource base. In setting this then, the planner should seek a mean between the two.

Also in formulation of minimum standards, regard must be given to effective demand, that is, what people are prepared to pay for any dwelling. If standards are

set beyond the willingness or ability of users to pay, then the proposed solutions will prove ineffective. Thus, flexibility is a critical criteria in preparation of targeted minimum standards. No single standard can meet all the needs of all the households in any given country. The strength of Merretts' study, is that it is far more accessible to the ultimate beneficiaries with its concern for popular feedback loops in determining targeted minimum standards.

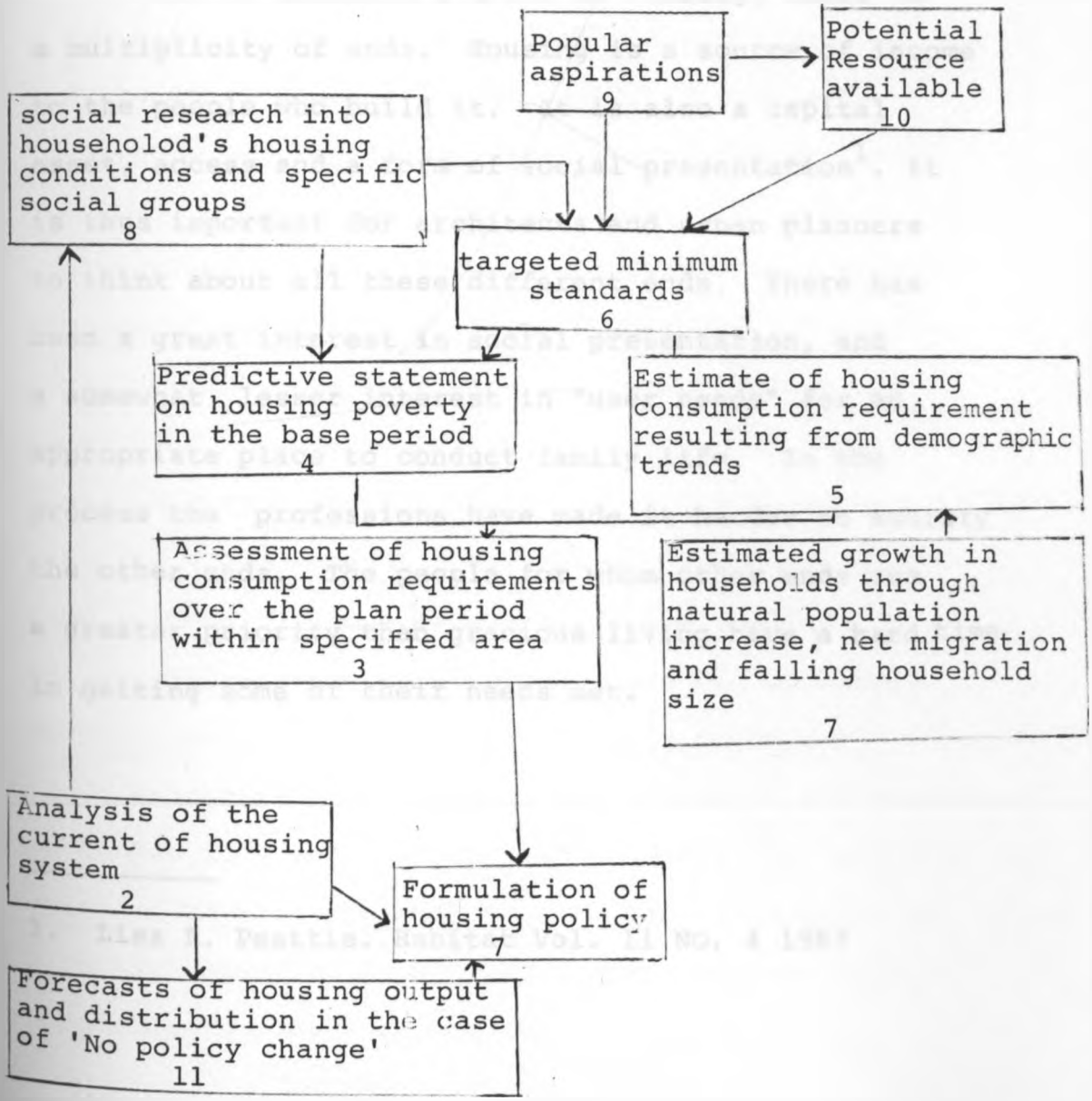

Fig. 3

° Housing consumption requirements as expounded by Merret. Third World Planning Review 6(4) 1984)

Whereas in the USAID publication, the objective that all the world's people will one day enjoy acceptable housing is well stated. But it does not go further to indicate to whom the housing is acceptable. If the assumption is that it should be acceptable to the beneficiaries, then, in order to achieve credibility, a definition of need is required that takes into account their preferences and requirements.

In the creation and use of housing, there is a multiplicity of ends. Housing is a source of income to the people who build it. It is also a capital asset, access and a form of social presentation[1]. It is thus important for architects and urban planners to think about all these different ends. There has been a great interest in social presentation, and a somewhat lesser interest in "user needs" for an appropriate place to conduct family life. In the process the professions have made it harder to satisfy the other ends. The people for whom other ends are a greater priority than gracious living have a hard time in getting some of their needs met.

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1. Lisa R. Peattie. Habitat Vol. 11 NO. 4 1987

The easiest way to identify the problem is to say that there is a conflict bwtween "standards" and 'affordability' and that the professionals tend to care more about the quality of housing - standards - and hope that the issue of affordability can get worked out somehow.

Other than the issue of standards and affordability, another question which one might ask as regards housing is - who finances housing? Here there seems to be a sharing of difference between the industrialized countries and the third world. In the developed countries, housing is generally bought via a substantial loan, paid over a period of years and there are large formal institutions - banks and others, often with government support which offer such loans. In the third world, formal credit like this is available only to a small section of relatively well-to-do people and others; thus most people pay for their housing by building a bit at a time out of their own savings and help from relatives. To a large extent the lack and inaccessibility to formal credit is a big problem. Where it exists, people are reluctant to borrow - because it is expensive and because their income is too uncertain to commit to a monthly repayment. Loans are certainly critical on projects that require people to build to a certain standard by a certain time; but are such requirements really necessary?

When we look at the problems of financing housing, we have to recognize the fact that housing lasts a longtime. Financing housing should not be thought of as a single event, but as a continuous process. Financing, then, must include the means and the incentives which will keep the housing stock continually regenerating itself.

As noted earlier, about 35% of households in cities in developing countries live in slum areas and squatter settlements. But in persuit of any housing programme, slum clearance should be avoided. It is wasteful to destroy housing in the face of housing shortage, and it is unjust to destroy the property of those who have the least. There may be occasions on which demolition of substandard housing is necessary, this should be thought of as a painful necessity not a good thing. One should not therefore think of a district of cheap housing as in need of demolition and replacement or drastic upgrading; but should think of it as an invaluable social resource, to be protected through policies which will stabilize its constituent neighbourhoods and maintain its buildings. Since most housing is built, and even government - financed housing maintained, by increamental investments by private individuals, a working housing policy should center around creating incentives to build and maintain affordable housing. This will mean looking at the

dynamics of neighbourhoods, not just buildings.

The problems of housing in developing countries are such that governments cannot expect satisfactory conditions to be realized on the necessary sale without an active and strategically well chosen role. In order to develop feasible approaches, it is necessary to make a thorough analysis of the problem with all its varifications. Present needs and the development of future needs must be known quantitatively as well as qualitatively[1]. The size of the problem and the limited means that can be made available may well make the emanating system of equations appear to be insoluble, even with standards that are considered as definately low. Difficult and harsh decisions have to be made: for instance concerning the amount of scarce capital that should be invested in housing, where housing has to compete with other urgent investment needs such as for agriculture, infrastructure, industry, health and education. Standards have to be scrutinized and priorities set, which implicitly means the formulation of an answer to the question of who shall be sacrificed for whom, to what extent and for what period.

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1. Economic Commission for Africa: Report of the North Africa sub regional working group fo experts, of specific aspects of housing finance. Addis Ababa Nov. 1972.

In the past, some rather one-sided economists have argued against investment in housing because the payback period on other investments such as agriculture was much shorter, and thus supplied opportunities for a much faster increase in income than investment in housing. This type of arguement has been strongly criticised in a book by a UN consultant[1]. In it the author argues that:

- Economic development cannot go on without social development including housing, and that housing like health and education, is indespensible to the proper balance of development and to the economic activities that require it.
- The building of houses is 'economic' because houses in the less developed areas are often the small production centers for the tailor, dressmaker or storekeeper (informal sector).
- Housing plays a major role in stimulating employment direct and indirect. In this respect it can enable the absortion of unemployment, particularly in cities, where there has been an influx of migrants.

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1. Abrams, Charles "Housing in the Modern World" Seber and Feber, London, 1966.

- A housing programme can also play an important part in developing savings and in releasing productive capital into the economy. People will save for housing, even when they might not save for anything else.

Nevertheless investment in housing in all developing countries is relatively low. Clearly an increase in such percentages would open possibilities for improvements in the housing sector. However, it is obvious that such an increase in most cases should not be accomapnied by a reduction of investment in other vital sectors such as infrastructural works, agriculture and industry[1].

Housing is a complex structure, providing a combination of services that are crucial to national development in terms of both welfare and economics while first and most basic aspect of housing is the shelter offered by dwelling space the dwelling structure provides in conjctionwith the services of land and utilities, a variety of environmental services: water supply, sewarage and solid wastes disposal, energy, etc. Further there is a range of locational services available from housing, resulting from the potential spatial links between the house site and employment

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1. UN Economic and social conditions: "Some aspects of the housing mortgage market in African countries" Addis Ababa, 1977.

opportunities, educational facilities, etc (Fig.4).

Joint consideration of these various aspects of housing is critical to development of a successful strategy to meet housing. Housing must be judged from what it does to people, rather than what it is. The strategy must then deliver not just houses or structures, but rather houses as shelter and services, located so that occupants can live productive and satisfying lives.

Housing policy as it is normally formulated and implemented at national level, generally does not address all the aspects of housing shown in Fig. 4. It is important that policy makers and those responsible for policy implementation be aware of the government policy which have impact of the quality of housing as it is experienced by users.

In general terms, a strategy to meet housing may be characterized as a set of objectives, policies and activities to be applied at each stage of delivery system. The goal of the planners is to find that strategy which, if implemented, would be most likely to forster realization of the nations' housing goals and further, which will have high likelihood of successful implementation. It is this last concern which takes strategy formulation beyond the realm of strictly technical comparison of demand and supply and injects

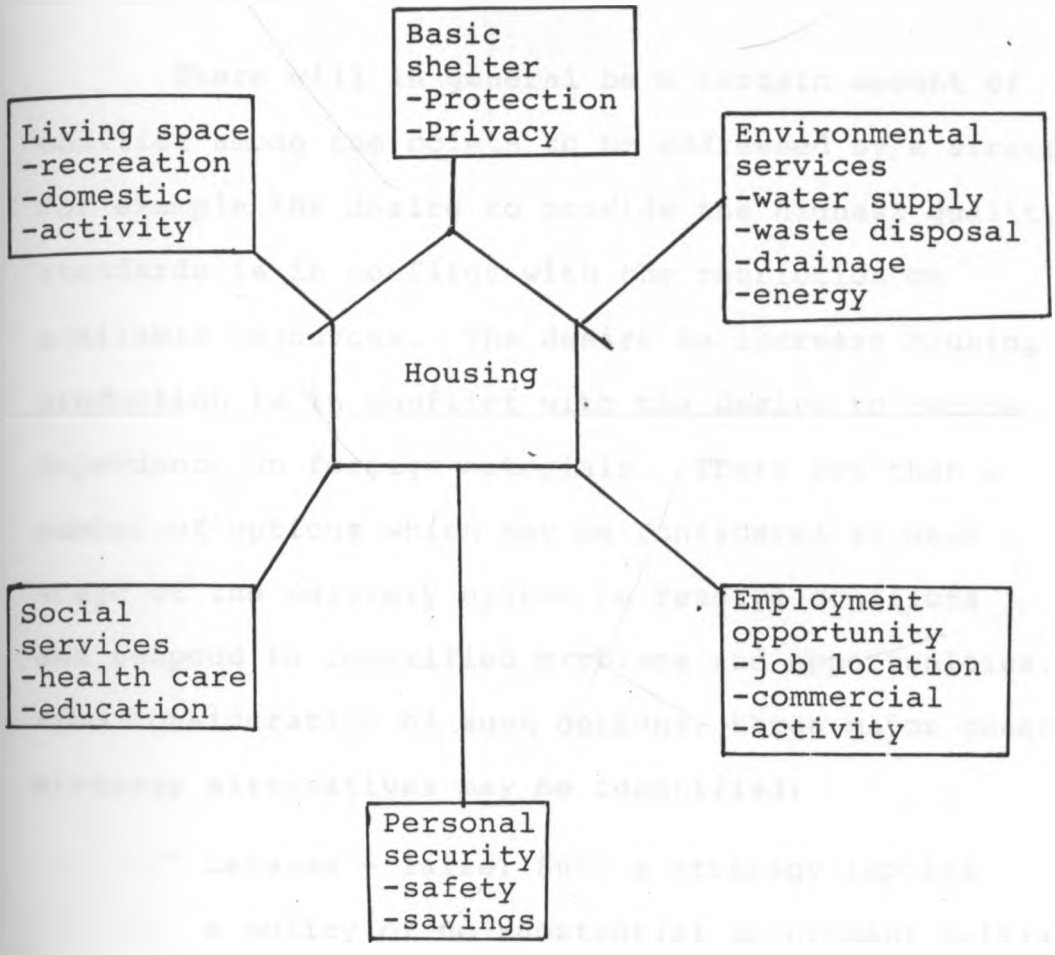

Fig. 4 Housing is a complex package of goods and services.

a strong political element.

There will in general be a certain amount of conflict among the points to be addressed by a strategy. For example the desire to provide the highest quality standards is in conflict with the resriction on available resources. The desire to increase housing production is in conflict with the desire to reduce dependence on foreign materials. There are then a number of options which may be considered at each stage of the delivery system to resolve conflicts and respond to identified problems and opportunities. From consideration of such options, three major general strategy alternatives may be identified:

- Laissez - faire: Such a strategy implies a policy of no substantial government initiatives being undertaken for intervention in urban housing sector. Under this approach, existing trends in the relationship between supply and demand would be expected to continue.

- Affordable housing: Such a strategy implies a policy of public sector initiative - direct or indirect - sufficient to supply housing consistent with what households at each income level can afford. This is essentially a no-subsidy approach under which the delivery

system is expanded and oriented to serve households at levels not being served under the Laissez - faire conditions.

° Housing to abstract normative standards: such a strategy applies standards of what constitutes minimum acceptable conditions rather than what each household can afford as the criteria for housing delivery.

The Laissez-faire alternative is the extreme case of a strategy which is easily implemented but which makes no contribution to achievement of goals for housing improvements. Indeed, it is likely that a completely Laisses-faire strategy in Kenya would forster increased prices and deteriorating overal quality, as the urban population continues to grow faster than the stock of housing.

The central concern of a national housing strategy is the housing delivery system. The process of housing delivery consist of several district steps which must be taken to produce a dwelling unit and to have one or more households occupy this unit. Over time, as the dwellings ages, it may be that the dwelling will be renewed or upgraded, thereby extending the effective lifetime, and effectively recycling land and structures through the system. These steps may be accomplished by public or private sector actions (Fig.5.)

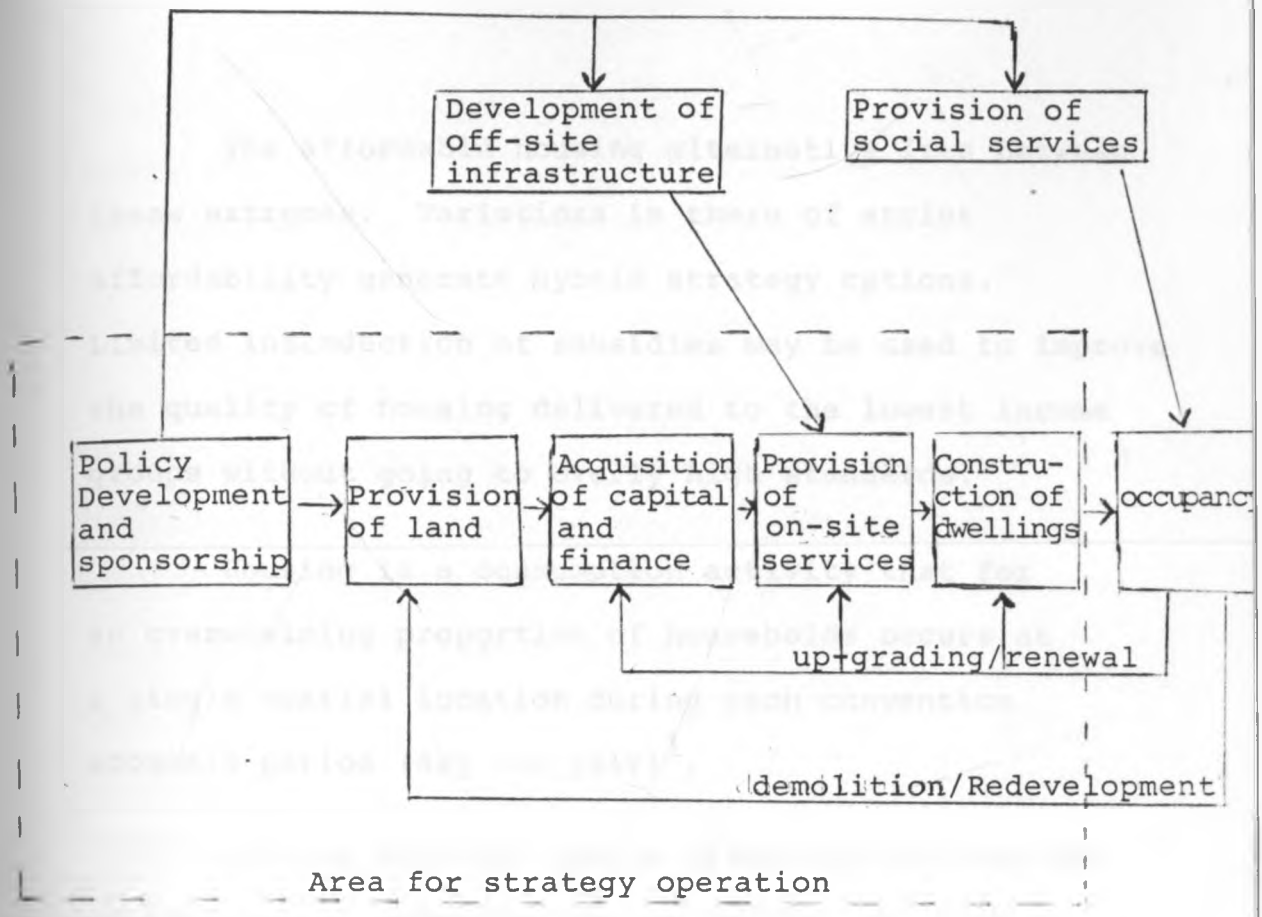

Fig. 5: Housing Delivery System.

Source: Lemer, A.C. "Urban and Regional Planning in Developing Countries", 1980.

Housing to abstract standards is too often undertaken with standards adopted (in many cases with little change) from the more developed countries. Such standards are not only inappropriate to the conditions of developing nations, but are also much too costly to produce. The resultant subsidy becomes a major drain on governments already scarce resources and cannot be maintained for extended periods of time.

The affordable housing alternative lies between these extremes. Variations in there of strict affordability generate hybrid strategy options. Limited introduction of subsidies may be used to improve the quality of housing delivered to the lowest income groups without going to overly high standards.

Housing is a consumption activity that for an overwhelming proportion of households occurs at a single spatial location during each convention economic period (say one year)[1].

Housing does not posses either the portability of the typical commodity or the variety of sites at which sequences of consumption may take place. For most households consumption of housing services takes places at a single site, where selected combination of components of the housing package exists. It therefore serves as an achieving function 'placing' a household at a particular spatial location. It is this localization that creates the concept of residential neighbourhood.

Housing is by far the most durable capital incorporated in consumer goods. Durability means more than simply the continued physical existence of a structure. It means that a structure does not

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1. Jerome, Rothenberg "Selected reading in quantitative urban analysis".

ineradicably loose its current marketability just because of growing age. An older unit remains a good substitute in the market for units just built, even at advanced age.

Housing markets are heterogeneous - This heterogeneity has some special features for urban housing. First, households differ substantially in their tastes for housing. They differ in the importance they ascribe to alternatives on each dimension of the package and in the relative importance of the different dimensions. Also households behave as though differences matter a great deal. They engage in substantial search in order to find an especially appropriate package.

The great diversity of housing packages in the market means they are not all perfect or even near-perfect substitutes for one another. They are likely to exhibit a whole spectrum of substitutive relationships from very close to nearly non-existent. The presence of this spectrum of substituability means that the urban housing market is not one market but a complex of differentially related sub-markets. Each sub-market is a cluster of units widely considered as close substitutes[1].

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1. Reid, M. "Income and housing".

2.2.1 Role of housing in an economy

We have seen that to different people housing means something different. To some housing is a form of social presentation. Housing is also access, a source of income to those who build it and also a capital asset. Housing is a form of savings, and like any capital, can be invested to make more. Real estate companies play the game of housing investment and often make their investors rich.

The building and construction industry, other than contributing to the Gross Domestic Product (GDP), generates employment opportunities thus enabling many people to earn a living. In Kenya for instance, in 1985 the building and construction industry accounted for about 3.25% of the total GDP and generated K£150.8 million in earnings by those employed in the industry[1]. In 1983, it employed 60,171 people which accounted for 5.5% of the total number of people in wage employment. Other than those in direct employment in the building and construction industry, a lot of manpower is employed in industries linked with construction e.g. materials and construction components such as nails, iron sheets,

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1. CBS. Statistical Abstract, 1986.

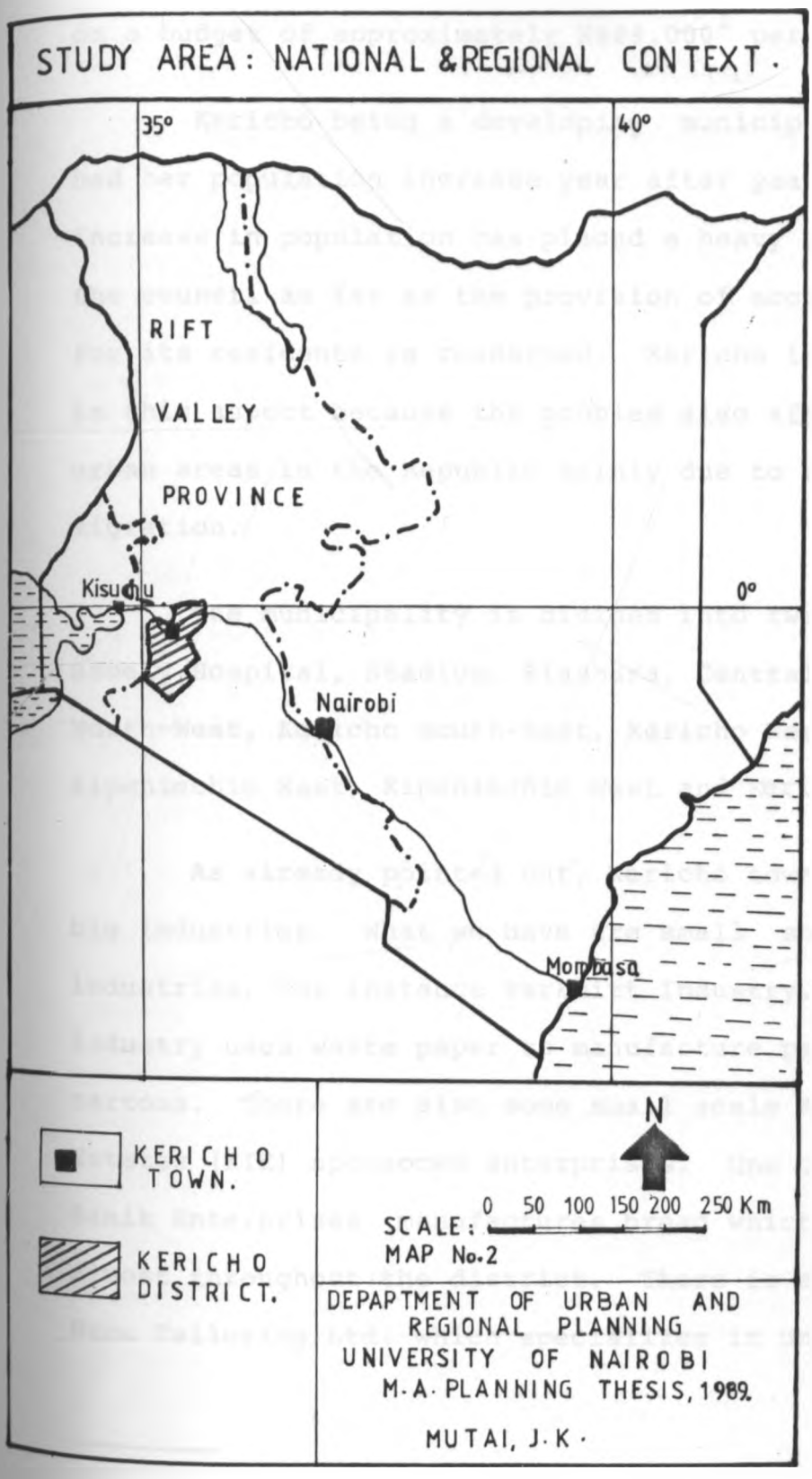
reinforcement bars, etc., transport and supplies of materials and activities connected with construction.

2.3.0 THE STUDY AREA

Kericho town is the administrative headquarters of Kericho district in Rift Valley Province (Map 2). It is one of the oldest towns in Kenya and its history goes back beyond 1924. Prior to 1973, an urban council administered the services of the town under the overal control of the County Council of Kipsigis. During that time the population of the town was 10,144 people while its area of jurisdiction was only 10.2 square kilometres. In June 1973, the town was elevated to Town Council status. Its boundaries were extended in 1973 to include a number of rural sub-locations and tea estates. It now has an area of 67 square kilometres and had a population of 29603 as per the 1979 census (Current projection is about 48,220). From the population trends, the town grows at a rate of between 4 and 5 per cent per annum, which means that by the year 2000 the population will be about 82,472.

Although the town has no big industries, its economy is heavily supported by the tea industry.

Kericho Municipal Council provides the local government services in the town. The council operates


STUDY AREA: NATIONAL & REGIONAL CONTEXT.
35°
40°
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VALLEY
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Kisumu
0°
Nairobi
Mombasa
KERICHO TOWN.
KERICHO DISTRICT.
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MAP No.2
DEPAPTMENT OF URBAN AND REGIONAL PLANNING
UNIVERSITY OF NAIROBI
M.A. PLANNING THESIS, 1989.
MUTAI, J.K.

on a budget of approximately K%89,000[1] per annum.

Kericho being a developing municipality, has had her population increase year after year. This increase in population has placed a heavy strain on the council as far as the provision of accommodation for its residents is concerned. Kericho is not unique in this aspect because the problem also affects all urban areas in the Republic mainly due to rural-urban migration.

The municipality is divided into twelve wards, namely Hospital, Stadium, Biashara, Central, Kericho North-West, Kericho south-East, Kericho West, Kapsuser, Kipchimchim East, Kipchimchim West and Kericho North-East.

As already pointed out, Kericho town has no big industries. What we have are small scale industries, for instance Perkmitt Industry. This industry uses waste paper to manufacture packaging cartons. There are also some small scale Kenya Industrial Estates (KIE) sponsored enterprises. One of these, Sanik Enterprises manufactures bread which is sold almost throughout the district. There is also the Hema Tailoring Ltd. which specializes in uniform

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1. CBS Statistical Abstract 1987.

making and other forms of tailoring.

But within the large municipal boundary, there are larger industries, for instance the Kenya Tea Packers Ltd. (KETEPA) at Kapkugermet and the Kericho Tea Factory owned by the African Highlands Produce Company.

Noting that Kericho is a high potential agricultural area, there is potentiality for future development of agro-based industries. For instance, sentiments have been expressed time and again on the necessity to have milk processing plant in Kericho town to serve milk producers in Kipkelion, Belgut and parts of Buret divisions. There also exists potentiality for establishing a maize flour milling industry.

In terms of employment, most people in wage employment in the town are engaged in the provision of community, social and personal services. In 1986, this 'industry' accounted for 41.2% (2.6 million) of the total earnings by industry in the town (Ksh.6.5 million). The other major employing sector is the wholesale, retail trade, restaurants and hotels which accounted for 9.9% (Ksh.647,000) of the total earnings[1].

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1. CBS Statistical Abstract, 1987.

2.3.1 Physiography and Drainage: Implication on future development

Kericho town lies in the highland areas west of the Rift Valley. The geology of the area mainly consists of phonolite lavas, agglomerates and tuffs. These lavas belong to the Kericho phonolitic suite[1]. The town lies in an altitude of about 2000 metres above sea level. The land generally slopes from the North-east to the south gently. The town center stands at 2020m in altitude and this drops to about 1920m in the southern parts of the town bordering the Kericho factory tea estate. The Kimugu river, which is the towns' water supply source marks the eastern boundary. Another river Dionsoyet drains right across the town and owing to its impeded flow, has resulted in marshy area which has sort of divided the town into two. The slope of the land to the west of the town is more pronounced compared to the North and Eastern parts of the town. Indeed much of the land in that direction according to the 1981 Kericho Town Development Plan, is deemed unsuitable for urban development. So in the event of future growth of the town, the most probable direction of growth is to the North and North East, mainly along the Kericho

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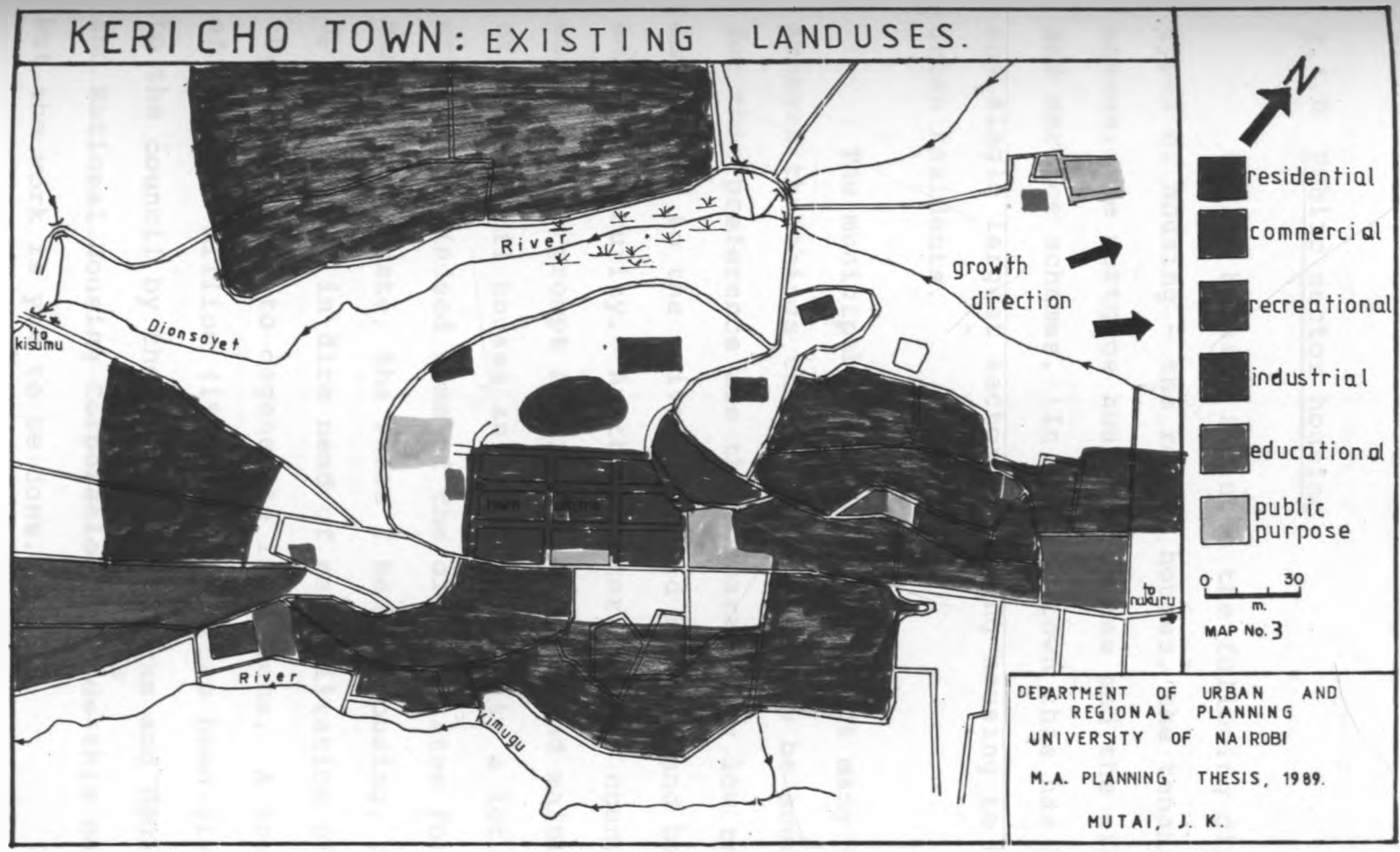
1. Ojany F.F., and Ogendo, R.B. (1973) "Kenya, a Study of Physical and human geography", Longmans, Nairobi.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MAP No. 3
DEPARTMENT OF URBAN AND REGIONAL PLANNING
UNIVERSITY OF NAIROBI
M.A. PLANNING THESIS, 1989.
MUTAI, J. K.

Kapkugerwet (Brooke) corridor (Map 3).

2.4.0 Public sector housing

Public housing includes the following different types of housing - the rental houses, the tenant purchase houses, the mortgage housing schemes and the site and service schemes. In Kericho town this has been the single largest sector providing housing to many urban residents.

The municipal rental houses attract many tenants. Amongst the things the study revealed to be accounting for this preference are the comparatively low rents compared to the privately owned houses, and better enhanced security. Another factor, on the councils side, is the prompt and regular repair and maintenance of the council houses an issue subject to a lot of criticism. Indeed some of the older estates for example, Mama Ngina Estate, the Phase I Rental housing, put up in 1959 are in dire need of rehabilitation otherwise they are likely to degenerate into slums. A total of Ksh. 1.2 million (1983/84 period) has been given to the council by the Ministry of Works and Housing and National Housing Corporation towards this course but the work is yet to be done.

Though the study did not involve a total survey or individual count of all units, information from the council did yield a pointer as to the level of

public rental housing stock in Kericho. The Council rent book records show there are 239 double housing units (two separate units with a common wall and chimney). There are also 78 double unit Tenant Purchase houses and 36 mortgage housing units. In the site and service scheme there are 389 units though some have not been fully completed.

So as per the council records, there are 743 double units and 12 that occur as individual units in the public sector housing which are for rental purposes. This gives a figure of about 1,484 units (Tab. 5) Comparing this to the number of households in the town, one gets a clue of an existing problem - inadequacy of public rental housing. Assuming that each household is a deficit of about 5979 housing units if it was only the public sector to provide rental housing (Map 4).

However, it is encouraging to note private investments pay a major role in supplementing the public sector efforts, especially in providing houses for the low income .

In a study by USAID, Habitat and the Kenya Government[1], several new institutional and project

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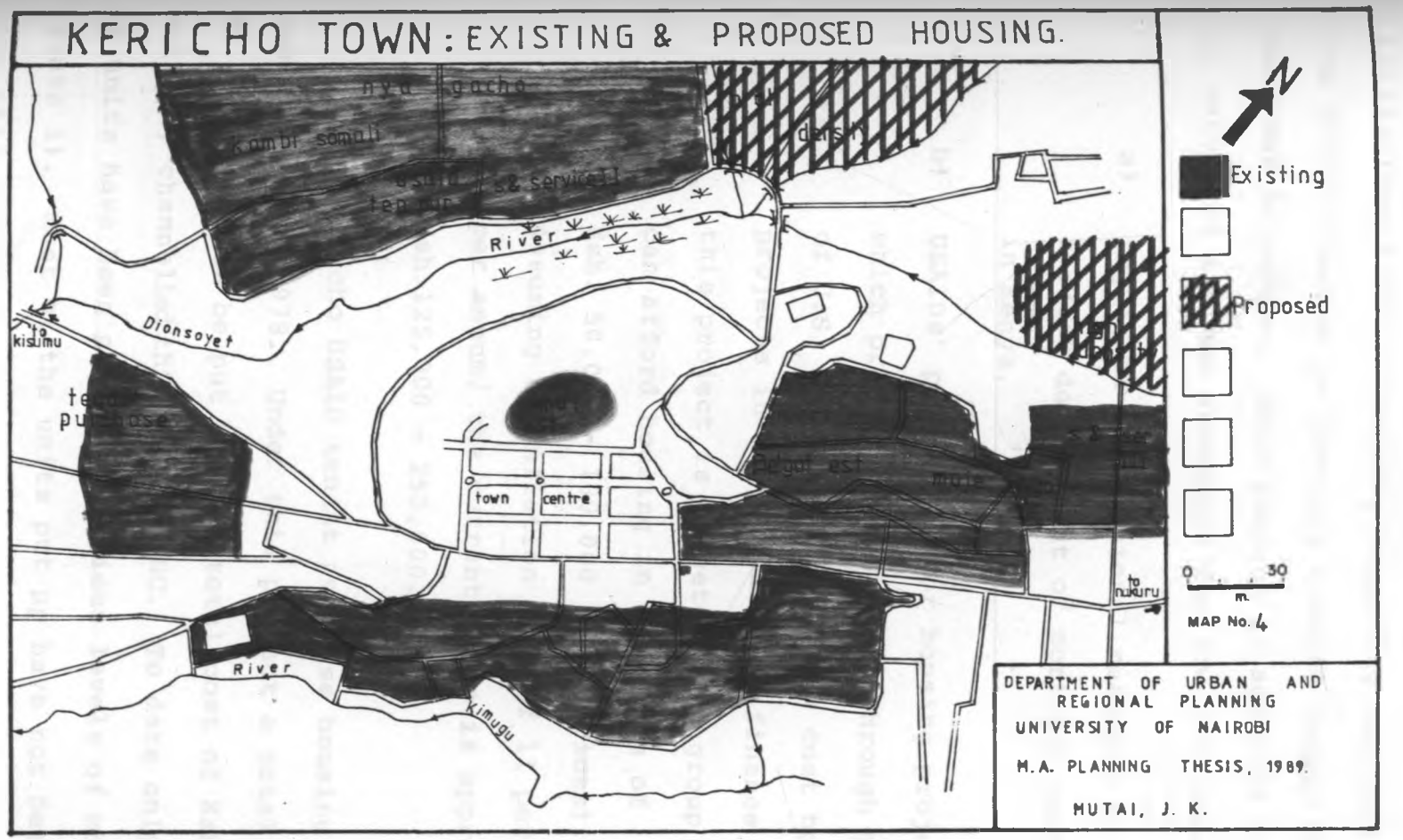
1. S. Yahya Associates and Partners. 'Role of Private Sector in housing development in Kenya", 1980.


KERICHO TOWN: EXISTING & PROPOSED HOUSING.
Kombi somali
River
Dionsoyet
to kisumu
town centre
River
Kimugu
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MAP No. 4
DEPARTMENT OF URBAN AND REGIONAL PLANNING
UNIVERSITY OF NAIROBI
M.A. PLANNING THESIS, 1989.
MUTAI, J. K.

initiatives aimed at rapidly expanding the role of the private sector in low-cost housing supply have been set in motion. This include in addition to proposals to reform of minimum standards for low cost housing:

a) Legal and institutional measures to forster development of mortgage markets in Kenya.

b) USAIDs' private sector housing project which provide seed capital through guaranty of U.S. Loans to finance low cost housing projects in Kenya. Housing finance under this project is targeted to a group which can afford housing in the range of Ksh. 50,000 - 100,000 (1980 prices). Assuming an inflation rate of 11 per cent per annum, the current range is approximately Ksh.125,000 - 250,000.

The Kericho USAID tenant purchase housing project was started in 1978. Under this project a total of 86 units were to be put up at a total cost of Ksh.7.6 million, channelled through the NHC. To date only 46 units have been put up to various levels of completion (Plate 1). Most of the units put up have not been completed mainly due to escalating costs of building (Tab. 21a).

Table 5: Public Housing Stock

Year built	Type	No. of Rooms	No. of units	Financier
1956	Tenant purchase	3	32	
1959	Rental	1	96	
1960	Rental	1	37	
	Rental	2	32	
	Rental	3	12	
1962	Rental	2	10	
1968	Rental	3	10	
1970	Rental	2	27	
1974	Rental	2	27	
	Rental	3	4	
1974/75	Mortgage housing	4	12	
1975	Site & Service	3	101	
	Tenant Purchase/ USAID	1	17)	NHC, M.O.W. & H.
	"	2	29)	
1980	Staff Rental houses	3	*6	
1981/82	Mortgage housing	4	24	HFCK
1984	Staff Rental	3	*6	
"	Site & Service	6	288	
			Total=755	

Source: Researcher's compilation

(743 Double units
*12 individual units
Grand Total 1484 units

Plate 1 USAID sponsored Tenant Purchase Housing Scheme in Kericho. Note the many incomplete units since 1978.

2.4.1 Growth in Public Housing

The growth in the production of new public housing units is very low (Tab. 5). The first public housing units were put up in Kericho in 1956 and these were tenant purchase (Tab. 5). By 1960, there were a total of 256 double units. It was only in 1971-75 period when the growth in production of new units rose significantly. This was the time when the first mortgage housing and site and service schemes were undertaken in Kericho. Such a growth was also experienced in the 1981-85 period when the Phase II and III site and service projects were started as well as the HFCK financed mortgage housing.

Nevertheless, these rates of growth in housing production should be interpreted with a lot of care, in that the housing stock as the base to compute the rate is small, such that an increase of 59.4% in 1981-85 was a mere production of 312 units. Projecting from the 1979 population (29,603) and using a rate of 5 per cent per year, the population estimates for 1981 and 1985 were 32,575 and 36,670 respectively. Using the average household size of 4.8, then there were about 6,647 and 8,096 households in 1981 and 1985 respectively. Within that five-year period, there was an addition of 1,449 households. On the average

about 298 new households were formed every year during that period. Assuming that each household had to have its own dwelling unit, it means 1,449 were needed to accommodate new households in the 1981-85 period, let alone those needed to replace the depreciating and inadequate ones. The public sector was able to produce only 312 units (some of which are actually not completed). One can therefore say that there was a shortfall of 1137 units, if the needs of the new households were to be met. Nevertheless, the private sector has to some extent contributed to alleviate the shortfall.

2.5.0 Private housing

Since independence, there has been considerable expansion in the role of the public sector in the provision of housing and related facilities. However, the government realizes that it does not have adequate resources or the adminsitrative capacity to shoulder the entire responsibility of providing housing throughout the country. It is thus encouraging that private investments plays a major role in house building to supplement the public sector[1].

Private housing plays an important part in following the gap created by the inadequacy of public

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1. Kenya Development Plan 1974-78.

Table 6: Growth in Provision of Public housing

Period	Total No. of units	Cummulative Rate of growth
1956 - 60	*256	
1961 - 65	*10	3.9%
1966 - 70	*37	13.9%
1971 - 75	*128	42.2%
1976 - 80	*94	21.3%
1981 - 85	312	59.4%
1986 - Today	6 Total=755 units	1.09%

*NB Denotes two houses but joined as one unit.

Source: Field Data

housing by the council.

In Kericho there are two Majengo Villages namely the Swahili Village with 58 units and Somali Village with 19 units, catering for a population of about 5,000 people. These are the lowest paid residents working in the town. These two villages have already been re-planned and the plot holders of these two villages will soon get permanent leases for their plots. In order for the two villages to get proper infrastructure - roads, proper drainage, sewarage, electricity, etc. the council has been appealing to the World Bank for funds to improve these two villages.

There are also illegal low cost houses provided by private individuals on agricultural land outside the old town boundaries. The shortage of housing in the town has encouraged people owning agricultural land on the outskirts of the town to sub-divide their plots and sell to speculators, who in turn put up cheap houses for letting. A typical example of this is the Kwa Michael housing estate. The estate comprises of some 165 single and double-roomed units, with a population of over 900 people. Initially this area fell just outside the town boundary, but with the extension of the boundary in 1973, it fell right within the Municipality.

Most of the private housing developments have occurred mainly in Nyayacho area. There are typical one or two-roomed houses built of temporary material. Either iron sheet or timber walls and iron sheet roofs. As estimated there are about 682 such units in the area (Map 4).

The Kwa Michael estate also has such type of houses but largely built of timber. The estate has 168 units and accommodates a population of over 900 people. Single roomed timber built houses have also sprang up in some open spaces behind the shops in the town center and according to council estimates these number about 182.

The Swahili Village and Kambi Somali also houses a large section of the lowest paid workers in the town, about 5000 people. The Swahili village has 58 units* and Kambi Somali 19 units*. Care should be taken in talking of these units, for one such unit could contain between 5 and 8 single rooms ocucpied by separate households. Although it was not possible to obtain current estimates of private housing units for rental purposes, a rough estimate based on the councils statistics shows there are 1009 such units (Tab. 7).

Table 7: Rental Private housing Stock

Estate	No. of rooms	No. of units
Michael's Estate	1	155
	2	10
	3 B.R.	3
Business cum Residential	1 & 2	182
Nyagacho	1 & 2	682
Swahili Village	-	58*
Somali Village	-	19*
		1009

Source: Field Data.

*Note that each unit has between 4 to 8 rooms occupied by different households.

So together with the public housing they comprise about 2492 housing units for rental purposes.

2.6.0 Typology of houses

The condition of houses in Kericho vary considerably from the temporary timber and iron sheet houses in Nyagacho and Kwa Michael and the mud and tin houses in Kambi Somali to the permanent stone houses in Moi Estate, Belgut and Mama Ngina estates some with private water and electricity connections.

In this study it was possible to get the typology based on a single criteria: the quality of building materials used. Four groups of building materials were distinguished and ranked according to preferences.

Type	Typical building materials
I	Mud wall and tin roof
II	Iron sheet walls and roofs
III	Timber walls and iron sheet roofs
Iv	Permanent building materials

About 40% of the houses in Kambi Somali are type I houses. Those in Kwa Michael estate (96%) and the houses behind shops (Tengecha) fall in the type III houses whereas most of the house in Nyagacho

are in the type II houses. The council rental houses in Mama Ngina, Moi and Belgut Estates, the site and service schemes, and the mortgage and tenant purchase houses are all in the type IV houses. From this analysis one therefore sees a relationship between income and type of house. Average income by the type of house shows indeed a higher average - income for the more permanent house types (Table 8). Kambi Somali, Nyagacho and Kwa Michael have houses in the types I - II and these low income group residential areas, that is people whose monthly average income as computed from the sample is about Ksh.586 (Table 11). The middle and high income groups mainly occupy the type IV houses comprising the council houses, site and service schemes and the mortgage houses. Average income levels for these groups vary from Kshs.2240-3680 per month.

The critical factor that was identified as being responsible for this type of pattern was the building/construction costs with respect to the quality and type of materials used. A building put up using permanent materials costs far much more than one put up using timber or mud. And under normal circumstances, the standard rent for a house is computed as 18% of the total building cost[1]. By implication

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1. Rent Restriction Act.

therefore, the rent of the houses with permanent material will be higher than those of low built of temporary/semi-permanent material. So to avoid spending a disproportionately high amount of rent at the expense of other things as consumption and savings where possible, the low income, have no otherwise but to live in the types I-III houses. Thus most of the type IV houses will be occupied by the middle and high income.

Table 8: Distribution of house types and some income Characteristics.

Type	Average income of residential/occupiers	Area/estate affected most
I II III	)))) *586	Kambi Somali & Swahili Village Nyagacho Kwa Michael and most houses behind the shops
IV	*2240 - 3680	Council Estates (Mama Ngina, Belgut and Moi), site and service schemes and mortgage houses

Source: Field Data

*Based on averages.

2.7.0 Kericho Site and Service Schemes

Site and service is a specific method of providing aided self-help, low-cost housing and has received recognition in the 1974-78 Development Plan, as a realistic approach to meeting the residential needs of a significant proportion of the urban population[1].

The government having realised the problems facing the low income groups as regards getting access to proper housing on a purely market oriented system where housing rents are determined by the levels of demand and supply for housing did introduce the site and service programmes as one of the ways of reaching at this target groups.

In 1975, the first site and service scheme was implemented in Kericho Town. Under this scheme a total of 101 housing unts of 3 rooms were to be put up. In 1983 the Phase II was initiated. This was to consist of 288 units of 6 rooms. This second phase was financed by NHC.

Table 9 Site and service schemes: Kericho

Year	No. of rooms	No. of units	Financier
1974	3	101	NHC
1983	*6	288	NHC

*Double units
Source: Council Records.

1. Kenya Development Plan 1974-78

Available data leads one to conclude that like any other site and service schemes in Kenya, many problems have been faced in implementing the scheme. Inspite of the serviced plots with the necessary infrastructural facilities few units have been completed to date (Plate 2).

For both Phase I and II of the Kericho Site and Service Schemes, each allotee was to pay a non-refundable deposit of Ksh. 700.00. And on allocation of the plot one was to pay Ksh. 10,000 as part of the cost towards the putting up of infrastructural facilities like water, sewarage, electricity and access roads. In the Phase I each allotee was to pay Ksh. 150 as monthly repayments which included loan charges (to NHC), maintenance, land rent, administration and rates. Whereas for the Phase II the monthly repayment was Ksh. 960 per month. Assuming that a persons' expenditure on housing should not exceed 20% of his income, then by implication it is only the people with a minimum income of Ksh.750 per month who are in a position to afford the repayments in the Phase I site and service scheme in 1975. For the Phase II scheme with a monthly repayment of Kshs. 960 per month, to afford repayment one needs to have a minimum income of Ksh.4,800 per month. Looking

Plate 2 Kericho Site and Service Scheme II
Note the high standard of housing
which has been demonstrated is beyond
the affordable levels of the low income

at the income distribution levels in Kericho town (Tab. 11), these two minimum income levels to afford repaying loans for site and service plots are fairly high and majority of the population cannot afford this. In fact 73.5% of the pop in wage employment in 1983 earned less than Ksh.2,197 per month while 96.3% earned less than Ksh.7,850 per month (Table 13). This seems then to undermine the governments intention/hopes in establishing the site and service schemes. For this type of housing as indicated by the Ministry of Housing and Social Services in its planning guidelines in the 1974/78 Housing Programme is intended for that part of urban population in the low income group earning less than Ksh. 699 per month who can afford to pay about Ksh.140 per month on housing (assuming they will spend only 20% on it)[1]. So one may justifyably argue that the Kericho Site and Service Scheme has not benefited the intended beneficiary. What has happened is that those in the upper middle income group and the higher income who can afford the loan repayments are the ones who have benefited. The issue then is, is the low income group going to remain without shelter?

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1. Adjusting for inflation upto 1989 it means those earning less than Ksh.3,000 per month and can afford to pay Ksh.600 per month for housing (i.e. 20% of the total income).

Another crucial factor with the site and service schemes is the agreement which gives the security to stay in the plot for a long time, provided the plot holder honours the agreement he will be encouraged to invest in his house and its gradual improvement. But field observation in the study pointed to one thing - the pace at which the improvements are made is poor. Most of the housing units are half complete if not at the foundation level - especially in the Phase II scheme. Indeed by the time of the study, 1988 Sept. 4 plots which were undeveloped had been repossessed by the Council and were awaiting reallocation. In the initial formulation of the Site and Service Scheme, the plot holder was to be encouraged to build additional rooms for subletting to persons who could not qualify for a plot and as such accommodation opportunities are provided for more low income earners. This is yet to be achieved.

2.8.0 Quality of services

In addition to providing a house as a structure, clean water supplies, sanitation and proper disposal of human and household wastes is essential to the well being of the population and the maintenance of a good physical environment[1]. The poor in rapidly

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1. Shankland Cox Partnership. "Third World Urban Housing". 1977.

growing urban centers are particularly prone to sanitation related diseases such as cholera and gastro-enthritis ailments. The main problem is that people tend to continue traditional rural sanitation practices which are often inappropriate to densely populated urban environment.

The basic objective in providing proper sanitation facilities in housing areas is to ensure that human waste is removed from the immediate household environment as quickly as possible and converted into an acceptable form without risk to the health of the household or community in general.

For example, the poorest areas in Kericho (Kwa Michael, Kambi Somali and Swahili Village) had no road surfacing. The better off in the other estates (council houses and site and service schemes) had sewarage and water to each lot as well as paved roads and accessways.

As already noted, efforts to fulfil the basic needs of the people - which includes housing - in Kericho has been entrusted into the hands of both public and private agencies. As stated in the governments housing objectives, it is not only her intention to ensure sufficient housing supply to resolve over-crowding, and to provide each household an opportunity

of having an individual dwelling but also to ensure that all future housing developments in terms of construction, provision of amenities and facilities both within the dwellings and in the surroundings. It should also be appreciated that provision of minimum acceptable standards, amenities and facilities within and outside the dwelling units does contribute to an improvement in the the quality of life of the residents.

A person's perception of his well being is reflected in his satisfaction or dissatisfaction with the general aspect of life. Satisfaction with housing, is used in this, study as a means to measure a residents' perception of well being. According to Morris and Winter (1978), satisfaction of housing can be measured both subjectively and objectively. A persons' "reported" feeling of satisfaction or dissatisfaction with salient attributes of the housing unit and its environment makes up the subjective component of the measurement; whereas the objective measurement of housing satisfaction can be measured by using the concept of "housing deficit".

In this study, housing satisfaction was categorized into:

a) Satisfaction with dwelling units

b) Satisfaciton with services rendered by Municipal Council.

c) Satisfaction with neighbourhood facilities.

Satisfaction with dwelling units

This variable was measured from reported satisfaction or dissatisfaction responses on 8 items describing the salient internal features of the dwelling unit. The respondents were asked as to how satisfied they were with the space available for family area bedroom, toilet, etc. (Table 10a). The same was done for their satisfaction with services and with the neighbourhood facilities.

Housing satisfaction is the amount of contentment experienced by individuals or families relative to the current housing situation (McCray and Day 1977). Satisfaction results from fulfilment of any need and dissatisfaction exists when needs remain unfulfilled. The data in Table 10c indicate that most of the residents (60.5%) were satisfied with the neighbourhood factors. A big proportion of the respondents however, felt dissatisfied with the characteristics of the dwelling unit itself (68.7%) and with the services provided by the Council (61.8%) (Table 10d).

Findings from this study indicate that the respondents were generally dissatisfied with the housing conditions and environment. This finding should be interpreted carefully. The 'Overal housing satisfaction' accounts for those services, amenities

Table 10a: Frequency distribution of satisfaction ratings for dwelling units

Dwelling features	Satisfied		Dissatisfied	
	No.	%	No.	%
Space in living room	62	44.3	78	55.7
Space in bedroom	42	30.0	98	70.0
Space in toilet	25	17.8	115	82.1
No. of bedrooms	48	34.2	92	65.7
Floor plan	71	50.7	69	49.3
Garbage line	20	14.2	120	85.7
Noise	44	31.4	96	68.9
Sink	38	27.1	102	72.8

Source: Field Data

Table 10b: Frequency distribution of satisfaction ratings for services

Services	Dissatisfied		Satisfied	
	No.	%	No.	%
Water supply	99	70.9	41	29.2
Garbage disposal	109	77.9	31	22.1
Safety	102	72.5	38	27.4
House repair	73	52.3	67	47.8
Pipe repairs	50	36.2	90	64.3

Source: Field Data

Table 10c: Frequency distribution of satisfaction ratings for neighbourhood facilities and environment

Facilities	Satisfied		Dissatisfied	
	No.	%	No.	%
Secondary School	101	72.3	69	27.8
Primary School	109	78.3	71	22.1
Shopping facilities	121	87.1	19	13.5
Clinic/hospital	104	74.5	36	25.7
Telephone	90	64.5	50	35.7
Market	124	89.2	16	11.4
Playground	87	62.3	53	37.8
Police station	47	33.4	93	66.4
Fire brigade	0	0	140	100.0
Nursaries	64	45.5	76	54.3

Source: Field Data

Table 10d: Frequency distribution of housing satisfaction

Categories of satisfaction	Satisfied		Dissatisfied	
	Ave.	%	Ave.	%
1. With dwelling unit	44	31.3	96	68.7
2. With Services	53	38.1	86	61.8
3. With neighbourhood	85	60.5	57	40.7

Source: Field Data

and facilities provided by the Municipal Council or landlords or which are found in the neighbourhood, in addition to the internal features of the dwelling units.

The other implication closely linked to the well-being or quality of life of the occupants of some of the houses in the sample. So far, some housing estates especially Nyagacho and Kwa Michael have met their objectives in providing the basic needs of the low income people. However, as Maslow's theory of basic needs state, once the basic needs are partially met other higher level needs begin to emerge and need to be partially fulfilled for the well-being of the individual. This aspect may need to be taken into consideration when planning for low income housing projects. Like in thus study, that only 40.7% of the respondents were dissatisfied with the neighbourhood facilities (Tables 10b, and 10c) should not be interpreted that they do not require the facilities. It is apparent that peoples' need for the housing structure per-se comes first and once this has been met the needs for allied services and good neighbourhood inevitably arises and has to be met.

With the introduction of the service charge, the level of service provision in the town is likely improve, particularly in the low income residential areas. For this will bring in extra revenue to the council to meet expenses in provision of such services.

The service charge is administered in a graduated scale so as to reduce the to minimum the "access price" of the areas for the poorest families to the services and this justifies an element of cross subsidy. That is the artificial lowering of the cost of the cheapest areas through surcharge on the better off.

CHAPTER THREE

3.0 HOUSING DEMAND ANALYSIS

3.1 Housing Demand

As defined, housing demand is the need coupled with the willingness and ability to pay. This definition underscores the importance of correlating the amount of monthly income that the majority of urban households are willing and are able to spend on housing. Expenditure on housing can either be in the form of rents for tenants or mortgages for owners of the dwellings.

To properly understand housing demand, detailed information is required on the following factors:

i) Household income and households characteristics
ii) Proportion of income devoted to housing
iii) Monthly cost of housing.

Establishing a reliable level of effective demand for housing of urban households , particularly for the low and middle income groups is necessary for all agencies involved in the housing delivery system.[1] Failure to establish appropriate affordable levels in project designs have necessesitated incorporation of

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1. A preliminary report - Kenya's urban housing needs/ demand study (1978-200). by Sarah Ibanda, Dec. 1978.

large subsidies (direct or indirect) housing schemes having beneficiaries being drawn from middle and high income groups instead of the intended low income earners. It is thus easy to "design out" of the project some of the most needy households if unrealistic affordability assumptions are persued by project planners.

3.2.0 Income Levels: and Expenditure Pattern

As has become clear, housing demand among other things is a function of an individuals income. Urban dwellers, spend between 15 and 20% (ideal case) on housing. Statistics reveal that majority of those in wage employment in Kericho town fall within the low and middle income categories (97.3%) (Table 13). From the sample population, average income levels for the three strata was obtained. The average income for the low income group was about 586 Ksh. per month while that for the high income was 3,680 Ksh. per month. (Table 12a). The majority of those in the high and middle income groups were employees either in the government, parastatal or private companies. By implication therefore their incomes will only rise when there is a national increase of salaries. Majority of those in low income group were employed in the informal sector - jua kali garages; as shop attendants and some in the nearly tea factories, etc. (incomes from the respondents other

sources e.g. properties elsewhere were difficult to estimate and so the peoples monthly receipts will be used as their incomes).

Obviously, income accruing to a household is spent in many ways - notably on paying rent and buying food. Expenditure patterns from the sampled households indicate that the highest expenditure on one particular item was on food. The low income group spent about 40.9% on food; the middle income 38.4% and the high income 33.6% (Table 12a).

The second major item in which the households spent most of their incomes was on rents. The total expenditure on rent for the low income group was about 25.5% of their incomes, whereas those for the middle and high income were 24.1 and 25.5% respectively. As it was difficult to get estimates of expenditure on other items like savings and purchase of other things, these were all groupes together as others and represent the remaining portion of the household incomes after expenditure on rent and food.

According to the Kenya Government Development Plan 1979-83 , the government envisages urban residents to be spending between 15 and 20% of their incomes on rent.

Analysis of the data obtained in this study reveals that it is actually more than that. The Kericho town low income dwellers spend 25.5%, the middle income 24.1 and the high income 25.5%. These proportions of incomes spent on housing are an important component in assesing affordability. From the analysis, one thing is clear the three income categories spend nearly the same proportion of their incomes on rents (25% average) whereas on the other hand the low income group spend more on food than the high income group (40.9 and 33.6 respectively) and as such one can easily deduce that the low income group are at a disadvantage.

An important thing about this analysis is that, the fraction of income spent on housing is important in establishing the affordability design level and hence the type of houses that different income groups can actually afford to rent or own.

Table 11: Average income of sampled population by rent areas.

Rent areas	No. of respondents	Average income Ksh. per month
Low	60	586
Middle	45	2240
High	35	3680

Source: Field Data

Table 12a : Household expenditure by income group (Kshs.)

Income group	% of income	Rent	Expenditure on housing	Food	% of income	Other household requirements	Others including savings
Low	25.5	*150	0.2558	240	40.9	-	200
Middle	24.1	*540	0.24107	860	38.4	-	840
High	25.5	*940	0.2554	1240	33.6	600	900

* Averaged rents.

Table 12b: Average rent After the 1989 rent increase

Income group	Rent/month	Expenditure on housing
Low	217	0.3711
Middle	750	0.3348
High	1400	0.3804

Table 13: Kericho Town: Number of persons in wage employment by income group.

Year	Low Income Ksh. under 2892		Middle Income 2893-10,341		High Income over 10,381		Total	
1982	4,338	% growth	1302	% growth	217	% growth	5857	% growth
1983	5,129	18.2	1591	22.1	257	18.4	6977	19.1
1984	5,373	4.7	1569	-1.3	150	-41.6	7092	1.6
1985	5,405	0.6	1440	-8.2	186	24	7031	-0.8
1986	6,834	26.4	1535	6.5	224	20.4	8593	22.2
	% growth 1982-86	57.5	% growth 1982-86	17.8	% growth 1982-86	3.2	Total %growth	46.7

Source: Statistical Abstract, 1987.

Base Year 1975

(Income groups corrected for inflation)

Inflation rate 10 percent.

3.3.0 Rent Structure in Public Housing

One complaint of the households sampled was that the rents charged on residential buildings were high. As a result of this, a number of sub-standard housing units have mushroomed particularly in the Nyagacho and Kambi Somali areas of the town. As a consequence the low income people have clustered in.These sub-standard housing units, those with higher incomes occupying better housing with better facilities. In the case of public housing owned by the Municipal Council, the rents range from Ksh. 180 per month to Ksh. 1500. Presently (Table 15). By the time the study was being conducted the rents ranged from Ksh. 120 to 1320. The percentage increase in the rents have been computed and are as shown in Table 15. The Phase I and II comprise the Mama Ngina Housing Estate with the houses that were constructed in the 1956 - 60 period. A one roomed house here with a small kitchen and shared toilet facilities goes for Ksh. 120-150 per month. Whereas the 2 roomed ones are let at between Ksh. 200 - 240 per month. The relatively new housing units at Belgut Estate Phase III to VII cost more. Two roomed houses with a kitchen and shared toilet facilities and slowers are let at Ksh. 500 and the 3 roomed at Ksh. 600. The staff rental houses at Moi Estate are let out at between Ksh. 900 and 1320. But with effect from February 1989 these rents were hiked by

Table 15: Public Housing: Rent Structure

Type: Permanent

Phase	No. of rooms	Old rent before 1989 Ksh	Approved rent increase 1989 Ksh.	% of average
I	1	150	180	20
II	2	240	270	12.5
	2	200	240	20
	1	120	180	50
III	3	600	900	50
	2	500	750	50
IV	2	500	600	20
V	3	600	900	50
V	2	500	600	20
VII	2	500	600	20
	3	600	900	50
Staff Rental				
I	3	900	1200	33.3
		1050	1500	42.8
II	3	1320	1500	13.6

Source: Compiled by Researcher.

varying percentages. A glance at the percentages of rent increases reveals one thing - that the Council seems have raised rents by the same proportion for all "qualities" of housing. With the rent hike it means therefore that people will spend a higher proportion of their incomes on housing than before. This is because there has been no corresponding increase in their incomes to offset the rent increase. The rent per month for the low income will now be an average of Ksh. 217, while these of the middle and high income groups will be Ksh. 750 and Ksh. 1420 respectively. (Table 12b). Holding other things constant, the proportion of expenditure on housing will be as computed. These proportions are fairly high and can strain the efforts of tenants, especially the low income group. The proportion of a households expenditure on housing has in many studies been used to establish affordability levels of such households. Prior to the rent increament ., the proportions of income spent on housing for the respective income groups were: Low 0.2558; middle 0.2410 and high 0.2554 and with the increase in rent, holding other things constant, this will rise to 0.3711, 0.3348 and 0.3804 respectively. The middle income groups seems to spend less on housing as compared to the low and high income group and the analysis to some extent agrees with the general belief that the low income earners devote proportionately more of their income to housing at the expnse of other things i.e. consumption and savings.

3.3.1 Private housing rent structure

Except for isolated cases and for the private rental houses in the site and service schemes, rents in the private housing areas are relatively lower compared to those of public housing. Most of the private housing as already noted are in Nyagacho, Kwa Michael and behind business shops. Most of these are single rooms and built of temporary materials (see typology of houses). Rents charged for these houses/ rooms range from Ksh. 130-260 per month (Table 16). Most of these are therefore within the reach of the low income, housing, having seen that they spend on average Ksh. 150 per month on housing (Table 12a).

There is no doubt therefore that these residential areas provide for the most basic needs to the low income - shelter. The only problem in these areas, as previously noted, is the poor infrastructural services and sanitation facilities.

Rents in the site and service schemes range from Ksh. 980-1500 per month. The site and service schemes were given prominence in the planning guidelines in the 1974/1978. Housing Programme.

> "The site and service schemes are therefore a realistic way to provide decent housing for low income people and to encourage private home ownership for this income group. As the low income people at present often have no alternative to illegal squatting, site and service schemes are a way to control development and reduce the element of squatting."[1]

But judging from the rents charged in these site and service schemes and comparing it to what the low income can afford to pay per month (average of Ksh. 150), it becomes obvious that it is far beyond their range to afford. (This issue is treated further under "cost of housing finance").

Table 16: Private Housing Rent Structure

Estate	Type of house	No. of Rooms	Rent per month
Kwa Michael	Permanent	2 b.r. (4 rooms)	900
	Semi permanent	1	130-140
	Semi Permanent	2	190-400
Nyagacho	Semi-Permanent	1	150-160
Houses behind	Parmanent	1	260*
Shops	Semi-Permanent	1	140-180
Swahili Village and Kambi Somali	Semi Parmanent	1	120-140
Site and Service II	Permanent	2 b. rooms	980-2200
Site and Service I	Permanent	3 b. rooms	1200-1500

Source: Field Data.

* Average.

1. "Human Settlements in Kenya" 1977. Physical Planning Department

3.4.0 Housing Finance and Credit Systems

Finance for the low-cost housing in the formal sector in Kericho, is at present mainly supplied by the Government. (This is clearly evident from Table 17). This finance is mainly in the form of loans from the Central Government to the developer, either, the National Housing Corporation, Housing Finance Company of Kenya or the Municipal Council. Other than this, there are other main sources of funds that have contributed to housing development in Kericho and whose potentiality should be exploited . These are international aid and private sector funds.

International Agency Funds:

These are funds which can be drawn from international multilateral or bilateral aid agencies. They can take the form of direct aid usually restricted to technical and feasibility studies or concessionary loans. The importance of these sources funds lies in the fact that they can be obtained for specific projects such as housing and infrastructure and can therefore be considered as supplementary to internally produced public sector funds. They can also be very substantial and are available on long-terms at moderate rates of interest in comparison with market rates. In Kericho, USAID is a typical example of such an agency. The

agency did finance one of the tenant purchase schemes in the town at a cost of Ksh. 7.6 million, the funds being channelled through the ministry of Public Works and the National Housing Corporation.

It is also with this in mind that the Kericho Municipal Council earnestly appealed to World Bank to finance low-cost rental housing and to improve the Swahili and Somali villages, according to a memorandum to World Bank in 1982.[1]

Private Sector Funds

Private sector money can also be made available more directly for housing through loans for housing purchase. This is generally typical feature particularly for small investors. The small savings can be channelled through a formalized system provided by existing building societies and other financial institutions. This is obviously more effective but also has its limitations and is often only confined to middle and upper income groups.

Expressing the Government housing policy and the target group - the low income earners, the number of housing units planned for in Kericho shows a concentration on the low income housing sector. It has been taken

1. Memorandum to World Bank. 8th May, 1982.

Table 17:

Project	Financial sources	1983/84	1984/85	1985/86	1986/87	1987/88	Total
Site and service Scheme Phase 2A & 2C 101	M.O.P.W. & N.H.C.	232,000	2,864,000	774,000	-	-	3,870,000
Usaid Tenant Purchase 86 units	M.O.P.W. & N.H.C.	150,000	4,128,000	3,376,000	-	-	7,654,000
Site and service Phase III 500 units	N.H.C.			500,000	7,250,000	7,250,000	15 million
Low cost rental housing 200 units	M.O.P.W. & N.H.C. and Kenya National Assurance	3,000,000	4,000,000	500,000	6,000,000	7,000,000	20.5 millio
Tenant Purchase Scheme 200 units	M.O.P.W. N.H.C.			500,000	7,750,000	7,750,000	16,000,000
Mortage Housing Scheme Phase III 50 units	H.F.C.K.		500,000	8,700,000	5.8 million		15 million

Source: D.D. Plan 1984/88.

here that the site and service scheme are low cost housing areas as was emphasized in the Low Cost Housing Programme in the 1974-78 Development Plan.

This picture changes, however, when the programme is expressed in terms of housing finance. The low income housing constitute about 70.4% of the planned housing and require about 50.4% of the total finance (Table 18). Whereas for the other income category houses 336 units (29.5%) are planned but require 49.5% of the total finance. A simple calculation shows that having the fiancing of the later category of housing would release funds enough to finance about 386 low cost housing units.

Table 18:

	No. of units planned		Finance required	
	Number 101 Units	% of total	Million shillings	% of total
Low cost houses including site of service scheme.	801 units	70.4	39.3	50.4
Others i.e. Tenant Purchase	336 units	29.5	38.6	49.5

Source: Compiled by researcher

3.4.1 The Cost of Housing Finance:

The cost of housing finance to the user is mainly made of interest and amortization of the borrowed capital, which can be translated in monthly payments.

The weight of the monthly payments for a given capital sum is governed by two facts:

a - The percentage of interest to be paid

b - The period during which the loan must be repaid.

The percentage of interest and the length of loan period has significant influence on the ability of individuals to afford a given capital sum. As already noted, a total capital sum of Ksh. 14,000 was given to the plot holders as a loan in the Kericho site and service scheme. Half of which was to finance construction of infrastructure and services (Ksh. 7,000) and the remaining half as a materials loan.[1] The maximum repayment period is 20 years and the interest rate was 8% per year. These loans were given in 1975.

The monthly repayment for these loans is Ksh. 150. Assuming that a person's expenditure on housing should

1. Human Settlements in Kenya. Prices quoted are 1977 prices.

not exceed 20% of his income, then only people with a minimum income of Ksh. 750 per month are in a position to afford the repayments. When this is compared with the income levels (Table 11), it becomes clear that majority of the people, especially the target group of the site and service scheme (the low income group) cannot afford this. By 1975, majority of the people in wage employment earned under Ksh. 699 per month.[1]

In the Low Cost Urban Housing Programme,[2] the governments' emphasis on development of site and service programme was to ensure that the low income people (Ksh. 300-1200 per month) could be able to own a house. From the foregoing, it becomes clear that this target group cannot afford these site and service scheme loans and as such have not benefited much from the programme as was envisaged by the government.

As already noted, the percentage rate of interest and the length of loan period have significant impacts on peoples' ability to repay the loans or to afford the loans.

A range of interest rates and loan periods in common adoption are: 13.5% by HFCK and 15% to 19% by most

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1. Statistical Abstract, 1975.
2. Development Plan, 1974-78.

financial institutions. Loan periods range from 10-25 years.[1] (Table 4)

A loan which a worker cannot afford when the loan period is short, can be brought within his reach by extending the period of repayment. On assumption that a worker can pay 20% of his income for a housing loan, a capital sum of Ksh. 14,000 in the site and service schemes in 1977 would require a monthly income of Ksh. 750 when the loan period 20 years, but could be afforded by a worker earning Ksh. 500 when the loan period is extended to 40 years (interest rate as for government housing loans).

A two-roomed low cost housing costing Ksh. 72,205[2] (Table 21b) would require a monthly income of Ksh. 8,720 when the loan period is 10 years with an interest rate of 19 percent, but could be afforded by a worker earning Ksh. 5,715 when the loan period is extended to 25 years with an interest rate of 15 percent. Table 19 shows that the monthly cost of a 15% loan with a duration of 15 years is more or less the same as a 19% loan with a duration of 25 years. From this, it can be concluded that when cheap capital is not

1. Housing Finance Systems in Kenya: USL Inter. Inc. 1986.
2. Adjusting the 1977 cost of Ksh. 24,600 for inflation HRDU. "Housing for low income workers" 1977.

available in sufficient amounts, which is always the case,[1] more expensive money should be made available with an extended loan period. In general longer loan periods would benefit the low income earner.

Table 19: Monthly payment in shillings for a loan of Ksh. 72,205 for various rates of interest and a rang of loan periods.

Interest rate per Year	Amortization Period			
	10 years	15 years	20 years	25 years
15%	1,504	1,303	1,203	1,143
19%	1,744	1,544	1,444	1,383

Table 20: Monthly income in shillings required for a housing loan of Ksh 72205 (when 20% of income is set aside for housing).

Interest rate per year	Loan Period			
	10 years	15 years	20 years	25 years
15%	7,250	6,515	6,015	5,717
19%	8,720	7,720	7,220	6,915

1. Housing Finance System in Kenya: Part IV pp. 57-65. Inter. inc. 1986

Table 21a: Annual Percentage increase in building cost index for residential building 1982-86

Year	1982	1983	1984	1985	1986
Annual % increase	14.1	6.9	6.9	13.8	6.0

Source: Computed from C.B.S. Statistical Abstracts.

Table 21b: Component of core housing unit for metropolitan and other areas. (two-roomed)

Component	Cost
Land (8.33m x 16.00 m plot size)	8,045
Infrastructure.	
Site investigations; survey	1,838
Sewarage; sewage disposal	6,825
Surface water drains	805
Roads footpaths	438
Water supply	2,345
Misc. professional fees, construction finance interest	3,338
Total	15,589
Superstructure $21m^2$ at $1120m/^2$	23,520
Miscell. Professional fees, contingencies, construction finance interest	6,481
Total	30,000
Total Unit Cost	53,635

Source: Ministry of Works, Housing and Physical Planning (1985) Kenya, Low income Housing Report, NBI.

Assuming that building costs increased by 6.9 percent per year from 1985, such a unit would currently cost about Ksh. 72.000

In the case of a site and service scheme, the current cost of providing infrastructure and the materials loan is approximately Ksh. 85,189 per plot. This is obtained by adjusting the 1982 costs, assuming an average increase by 6.9 percent per annum in the cost of building (Table 21a). (Assuming there aren't significant variations in such costs in various urban areas in Kenya, the most recent cost in a site and service project are used. In 1982, providing infrastructure in the Mathare North Site and Service Scheme cost Ksh. 17,400 per plot and the materials loan was Ksh. 36,000).[1]

Like in the case of the two-roomed low cost house, the affordability of this loan to different people will depend on the interest rate charged and period of loan repayment.

Table (20) shows that a loan of Ksh. 85,189 with an interest rate of 15% per year requires a monthly repayment of Ksh. 1,774, whereas if the interest rate is 19% per year, monthly repayment is Ksh. 2,058 if the loan period is 10 years. But if the loan repayment period is extended to 25 years, the monthly repayments

1. Raf Tuts, "Optimization of the use of resources for housing projects: Mathare North and Umoja II". PGCHS, Ka Leuven, 1988.

would be Ksh. 1,348 and Ksh. 1,632 respectively. It is also evident from the table that the monthly cost of a loan with 15% interest rate with a duration of 10 years is more or less the same as a loan of 19% interest with a duration of 20 years.

Table 22: Monthly payments in shillings for an infrastructur and materials loan for a site and service scheme of Ksh. 85,189 for various rates of interest and loan periods and the corresponding monthly incomes required to repay it assuming 20% of income is spent on housing.

Interest rate per year	Amortization period							
	10 years		15 years		20 years		25 years	
	Mon. pay.	Mon. income	Mon. pay.	Mon income	Mon. pay.	Mon. income	Mon. pay.	Mon. income
15%	1,774	8,870	1,538	7,690	1,419	7,095	1,348	6,740
19%	2,058	10,290	1,822	9,110	1,703	8,515	1,632	8,160

From the analysis of incomes in Kericho Town (Table 12), majority of the people are in the low income group (that is those earning under Ksh. 3,000 per month) i.e 57.3%. The middle income group (Ksh. 3,000-11,000) constitute 17.8%. Therefore charging an interest rate of 15% for a housing of Ksh. 72,205 enough to build a two-roomed low cost house, would require a monthly income of Ksh. 5,717 and a monthly repayment of

and a fairly realistic picture of relationship between incomes and outgoings for housing be it in terms of mortgage or rental, exists. This is evident from the fact that most of the higher income people are owner occupiers in the site and service schemes and the tenant purchase houses (Table 25).

The lowest levels of income are such that only the basic necessities of life can be afforded and there is a little residual for either house building or purchase (Table 12a). In between these two sectors is a range which varies from nothing to sufficient to support the renting or purchase of a reasonable house. Whilst it is fair to predict that housing outgoings will increase in direct proportion to income in between these two extremes, it is important to bear in mind other factors. For instance, land tenure clearly plays a key role in the proportion of income a poor household will spend on housing. A house purchaser or the owner/builder of a home in a squatter community will often invest in his housing much more than a renter since he has a stake, however insecure, in his housing and an interest in adding to its value and his security.

The proportion of income available for housing (Table 23) can be translated by applying the appropriate interest rate and amortization period to a capital

Kshs. 1,143 when the loan period is 25 years. These being the minimum interest rates and loan periods applied by most financial institutions. This then means that the low and middle income earners cannot afford this loan. (Table 23). It is only the high income (Quantite 5) who can benefit from such a loan because they can afford housing worth about Ksh. 89,000.

An important thing to conclude from this analysis is that people with lower incomes can afford housing loans from lending institutions if the interest rates charged for the loan by such institutions is low, for instance if most of the financial institutions adopted the 15% - 16% interest rates per annum and longer repayment periods - say 25 years. Otherwise, charging high interest rates say the 19% maximum per year and fixing loan periods to as low as 10 years, would make such loans quite expensive and prohibitive and exclude those who really need these loans - the low income people.

3.4.2 How much can people afford?

The question of how much people can reasonably be expected to spend on housing involves more than the mere study and analysis of expenditure patterns (Table 11a). At the higher level, levels of incomes are more stable, patterns of tenure more formalized

sum, which can be related to the housing mode.

Taking the option of putting up the low cost two-roomed house means adopting low density housing development to house the low income people. Low density development entails use of large plots so that on the aggregate, the cost of providing land to build on and infrastructure will be high. Currently such a unit would cost about Ksh. 72,205. If a loan is secured to put up the house at the lowest possible interest rate of 15% per year and maximum loan period of 25 years, then one needs an income of Ksh. 5,175 a month (i.e. monthly repayment of Ksh. 1,143) to afford this loan. (Fig. 6).

From the income analysis (Table 12a), the low-income people (assuming they can only spend 20% of their income on housing), can afford to pay Ksh. 120 per month. From the affordable cost levels in Table 23, it is evident that only those in the high income can afford such tyre of a loan to build a house.

Furthermore, many studies have shown that low density development for low income eaners, is not appropriate.[1] This is because the low income constitute

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1. HRDU - "Housing for low income workers" 1977.

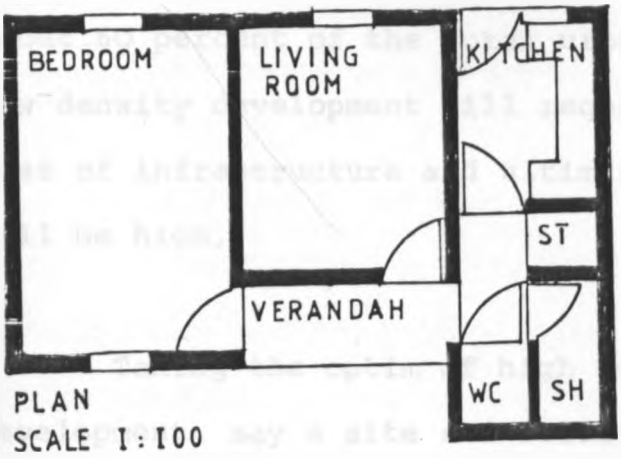

Fig. 6

Source: HRDU "Housing for low income workers', 1977.

Plan of a two-roomed house. This is the type of house recommended for the low income workers by the government in the 1974-78 development plan. It is built of permanent materials and meets both the building and infrasturcture standards required by local authorities. The current cost of putting up such a structure is estimated at Ksh. 72,205 and as discussed this is beyond the ability of the low and middle income in Kericho to afford.

about 60 percent of the total urban population and so low density development will require much land and the cost of infrastructure and ultimately the total costs will be high.

Taking the optim of high density low-cost housing development, say a site and service scheme, an infrastructure and materials loan is about Ksh. 85,189. Using the same interest rate and loan period, a monthly repayment of Ksh. 1,348 is required. It is also clear from Table 23 than only the high income (Quantile 5) can afford this, since their avarange monthly income for mortage is about Kshs. 1,300.

From this analysis, it has been established that the two options geared to benefiting the low income are in effect benefiting or will benefit the higher income groups. Is it worthwhile to continue persuing such programmes and assuming they will benefit the low income? A recommended solution to this is given below and in chapter four (need and affordability).

The gap which appears at the bottom end of between what people can afford and the minimum cost of the lowest range on the housing ladder (the two options discussed), will indicate the area within which

housing subsidies are required more intensely if at all the low income are to benefit.

Instalation of services such as water supply, toilets, roads, from the traditional services like pit latrines and unsurfaced roads (like those existing in Kwa Michael, Nyagacho and Kambi Somali housing areas), to full modern services like piped water, flush toilets and tarmac roads is very costly. A consequence of this is that a large proportion of the total investment in new housing schemes is absorbed by services instalation cost. In this respect, it is of interest to note that in the site and service schemes, the cost of services per plot may go upto Ksh. 21,960.[1] (This is based on the 1977. Cost of providing infrastructure to a site and service scheme and adjusting for inflation.[2] This more or less compares with the most recent cost of providing the same in 1982 in Mathare North site and service scheme (Nairobi), where it was Ksh. 16,492 per plot.[3]. Assuming an annual increase of 6.9 percent in building cost, it gives a current rate of about 26,309. The difference is explained in terms of the quality of infrastructural services .

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1. HRDU "Housing for low income workers". 1977.

2. "Human Settlements in Kenya", Physical Planning Dept.1977

3. Raf Tuts, "Optmization of the use of resources for housing projects. Mathare North and Umoja II. P. GCHS: Ku Leuven, 1988.

For many low income workers, this would mean that the worker could just afford to have a plot with services, but without a house to live in. This is evident in Table 23. It shows that the low income (Quintile 1 and 2), can just afford a serviced plot. Those in quantile 1 and afford a dwelling not worth more than Ksh. 11,000 and those in quantile 2, a house not worth more than Ksh. 23,000.

Therefore, alternative cheaper solutions to services have to be sought. For instance, the use of an odourless dry toilet (Mouldering toilet) can be incorporated into the housing design.[1] But this can only apply in low density low cost housing are for this requires much space.

To lower the cost of service provision and allow a greater expenditure on the actual building of the unit, the Physical Planning Department conceeded in a seminar that:

> "The inability of the low income families to afford site and service plots points to the need for aiming at phased levels of service provision. For example, in a site and service scheme, it may well be that instead of lack family having its own tap of water, communal water taps are provided. Or instead of vehicular access to each plot, some plots are served by mere footpath, instead of bituminised roads of acces, only well compacted murrum roads may be provided initially.[2]

1. HRDU "Housing for low income workers". 1977
2. Ministry of Works, Housing and Physical Planning, Kenya 1985. Low Income Housing report, Nairobi.

Table 23:

Affordable Capital Costs

(Other urban areas)

Interest rate (%) 16 - 19%)

Loan Term (years) 10-25 years

Down Payment required (%) 10%

	Thousands of currency units	1983	1988	1993	1998	2003
Quintile 1	Mean annual income	8.28	7.90	7.84	7.81	7.83
	% available for housing	25.00				
	% need for recurrent expend.	15.00				
	Monthly income for mortgage	0.15	0.14	0.14	0.14	0.14
	Affordable dwelling cost	11.71	11.17	11.09	11.04	11.07
Quintile 2	Mean annual income	16.56	15.80	15.68	15.62	15.66
	% available for housing	25.00				
	% needed for recurrent Exp.	15.00				
	Monthly income for mortgage	0.29	0.28	0.28	0.28	0.28
	Affordable dwelling cost	23.42	22.34	22.18	22.09	22.15
Quintile 3	Mean annual income	25.36	24.19	24.02	23.91	23.98
	% available for housing	25.00				
	% needed for recurrent Exp.	15.00				

Table 23 Contd.

	Monthly income for mortgage	0.45	0.43	0.43	0.42	0.42
	Affordable dwelling cost	35.86	34.21	33.97	33.82	33.91
Quintile 4	Mean annual income	38.49	36.70	36.43	36.28	36.38
	% available for housing	25.00				
	% needed for recurrent Exp.	15.00				
	Monthly income for mortgage	0.68	0.65	0.65	0.64	0.64
	Affordable dwelling cost	54.40	51.90	51.53	51.30	51.45
Quintile 5	Mean annual income	83.84	79.98	79.40	79.06	79.28
	% available for housing	20.00				
	% needed for recurrent Exp.	15.00				
	Monthly income for mortgage	1.19	1.13	1.12	1.12	1.12
	Affordable dwelling cost	94.85	90.49	89.84	89.45	89.70

Quintile 1 & 2 correspond with the low income category.

" 3 and 4 correspond with the middle income category

" 5 correspond with the high income category.

Source: The Housing Finance System in Kenya. USL. International Inc. 1986.

This is precisely what is implied by the principle of stage wise development as regards application of standards. Indeed a realistic implementation of housing projects calls for the political and administrative courage to accept initial lower standards with improvement options on a continuum basis.

3.5.0 Building and Planning Standards

The construction, services and space standards are laid down in the Kenya Building code and in the public health Act. As noted earlier, the governments objective is to build as rapidly as possible a national stock of housing of minimum standard with basic standards of privacy and security providing a healthy environment for all.

The minimum standard refered to above is a housing design and construction to conform to government standards and that each housing unit constructed in urban areas shall have at least two rooms plus its own kitchen and toilet. The recommended size of a room is $7m^2$.[1] The current rates of construction of $1m^2$ costs about Ksh. 3,000. But this can vary depending on the finishing. Putting up two rooms would therefore cost Ksh. 42,000. So adding the cost of the kitchen and toilet and infrastructural services and other development costs, this will round upto about Ksh. 72,205. And as has been

1. Kenya Building code 1968.

discussed the low income earners cannot afford this even with a loan and charging low interest rates and having long loan periods, unless given further subsidies.

The Kenya Building Code contains two sets of by-laws in practice refered to as Grade I and Grade II by-laws. Grade I by-laws refers specifically to high density or low cost residential areas and relaxes some of the space and construction standards but still enforces permanent materials and is based on full services provided - piped water, sewarage, etc. Use of traditional materials and services is not allowed in these high density areas.

Grade II by-laws cover peri-urban areas, which in many cases do not yet benefit from a full service network. Therefore they are geared towards low cost construction standards.

Continued application of these high standards apparently, is a major constraint to the provision of housing facilities commensurate with incomes of a large proportion of the low income groups.

In reality, the low income urban worker, has difficulty in complying with either set of standards. Even though the reduced Grade II standards are used

in high density - low cost urban residential areas, the public health authorities maintain strict Grade I water and sewarage regulations. The effect of these regulations is to demand a very high initial investment in housing to meet all the standards at the outset. The basic objective after determining how much a household can afford to pay, is to make sure that as much as possible of its limited money gets transformed really into useful construction and essential services.

Otherwise what happened in Dandora is likely to be perpetuated. In that particular case, the government fell into the trap of not having the relevant information before embarking on the Dandora site and service scheme project which was intended for the very poor in society. Because the poor group could not afford the standards set, they gave out their allocations to higher income groups.[1]

Currently the cost of providing full instrastructural services per plot is about Ksh. 21,968. And a complete house containing two rooms, kitchen and toilet facilities built by a contractor to a standard acceptable by the municipal council if using permanent materials and with full services would cost today presently upto Ksh.72,205.

1. "Urban Housing Survey" Physical Planning Dept. 1983.

Assuming that such units are put up for rental purposes (having seen that the low income people cannot afford to be owner/builders) the economic rent chargeable for one such unit (i.e 18% of capital investment)[1] is Ksh. 1052 per month. From the analysis on expenditure patterns (Table 12a), the low income group on average spend 25% of their incomes on housing, (as per the sample) that is Ksh. 150 per month. (Ksh. 540 and 940 p.m. respectively for middle and high income). This comparison indicates that such an amount is beyond the limits of the low income earners and also those in the middle income category.

From the foregoing analysis, although the governments aim of a two-roomed house with full modern services for each worker cannot be realized now, it should still remain the planning aim for the future. The principle of stage wise development should be adopted in that planning should have an open eye for the conditions which prevail today and allow for development in future. Any adoption of minimum standards should always allow for upgrading to higher standards in a future date.

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1. Rent Restriction Act.

Space standards

In addition to all the attitude questions, it is also essential to set a scale to the sizes of spaces that seem to provide a satisfactory settling for the things people want to do. For instance, the minimum plot size is 260m^2. For a habitable room it is 7m^2 and a kitchen is 2.32m^2, etc.[1] These minimum standards can be observed in the government sponsored site and service schemes and council housing. This is in contrast with the privately owned low income residential housing areas (Nyagacho and Kwa Michael) and the Old Municipal Council houses in Majengo where people complain of their kitchens and bedrooms and/or rooms as being too small (Table 10a). This suggests that people value space irrespective of their socio-economic level and so any future planning or replanning of these housing areas should take cognisance of this.

3.6.0 Land Tenure

Kenya has a tripartite system of land tenure. Trust land vested in the hands of the County Council in whose area the land is situated. Freehold tenure (most agricultural land) and lease hold tenure (most urban land). Private ownership of land is strongly protected under

1. Building Code (housing by-laws). NB. Plot sizes can be further reduced depending on council approval.

section 75 of the constitution. The government can only acquire land through the machinery of compulsory acquisition for which adequate and prompt compensation must be paid. There is no limit to the amount of land one can own.

3.6.1 Land Costs, value and acquisition

The inducement necessary to promote self building activity is security of tenure. To facilitate sales or getting mortgage and credit facilities people should be given tittles. To ensure that limited money produces maximum tangible results it is necessary to look carefully at the non-constructional items among the costs which have to be recovered. It is necessary to reduce the non-construction costs to the minimum. From table 21b, we see that the cost of land in housing development constitute about 15% of the total unit cost. The first matter here then, is land. We should not only know how much land will be required at such and such a date, but also where it will come from. Until now, the tendancy in Kericho has been for the low income housing to be built on land converted from agricultural use, for instance the Kwa Michael and Nyagacho housing areas. To minimize land costs, the principle would seem to charge for it at its true cost (current use value) rather than

theoretical assesment of values as regards opportunity costs, inflation rates and interest charges.

For a positive contribution to the housing programme, there is no real alternative to large scale acquisition of land by the Municipal Council. This needs to be done well in advance of requirements so as to buildup a sufficient land bank and well in advance of planning to reduce compensation payments and mitigate arguments over compensation. Currently the Municipality has about 43.6 hectares of undeveloped land in stock for all types of housing.[1] Of this 27.2 hectares are earmarked for low ard medium density residential while the remaining 16.4 hectares is far high density residential developments. Given a minimum plot size of 260m,[2] this hectarage can yield about 1652 residential plots. The council should no lcnger view this as sufficient land to accommodate all its housing developments. With the plans of putting up rental housing for low income group (about 1200 units) and tenant purchase scheme for medium income group (500 units).[3] land shortage should be envisaged to occur in a near future.

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1. Approved Development Plan 1981. Physical Planning Department.

2. Building Code (This can be reduced depending on council approval).

3. Memorandum to World Bank, 1981.

Otherwise problems will arise where land required for housing will be in private ownership. An almost universal problem, not confined to Kericho Municipality, is to determine how such land can be brought into the housing programme at a reasonable price and in particular at a price which disregards the increaments caused by public investments and is not influenced by speculation.

A suitable approach is for the council to acquire land at the current use value and planning it for various forms of development - housing included.

Currently land values around the town are high. Two acre plots in the Kipchimchim and Kapkugerwet wards of the municipality sell at about Ksh. 240,000. Using the direct comparision method of valuation (comparing similar properties and using most recent transactions as a basis for deciding on selling prices), it is possible to estimate the cost of acquiring a resedential plot ($260m^2$) at current use value (appendix 1). This is about Ksh. 7,817 per plot. This does not compare favourably with Ksh. 45-60,000/= per plot in the Nyagacho site and service scheme. In the latter case, the high values are due to the costs of infrastructure (Ksh. 7,000 per plot then) and the rest is the influence of

speculation. It is thus imperative for the council to acquire land at current use value if the cost of land is to be brought down to reasonably manageable levels for construction of low income housing - otherwise it seems there is little choice. For instance, assuming only inflation (which is currently about 12%) will operate, the same two-acre piece of land will cost about Ksh. 672,000 by the year 2000. Land banking seems the only option if future high land values are to be averted.

The other land problem is associated with the existing sub-standard housing areas of Kwa Michael, Nyagacho, Kambi Somali and Swahili Village. For the first two, the residents are tenants of the landlord and for the latter two, they are squatting unlawfully on land. In the first case, the shelter they occupy is built by landlord, whereas in the latter case, the shelter is usually but not invariably self-built and owned by the occupier.

This throws up two main problems. First, if the areas are upgraded (Kambi Somali and Swahili village as planned in the 1981 approved Development Plan), the benefits interms of increased land values could flow to the land owner not the occupier.

Secondly, the secondary self-built developments which might be expected to flow from the provison of basic infrastructure could be inhibited by lack of security of tenure. Thus the question of land ownership and how it should be rationalized to properly achieve the indirect benefits of an investment in upgrading should be resolved before upgrading takes place. This requires the introduction of legislation to ensure that ownerships are transfered to the occupier of the lot or alternatively the occupier is given complete security of tenure on return of payment of a reasonable rent for the plot.

CHAPTER FOUR

4.0 HOUSING REQUIREMENTS

4.1 Housing need

Housing need as defined, is the number of dwelling units required by a given population. But unlike housing demand, it does not consider the ability to pay.

In the analysis of housing needs a number of factors are considered:

1. The need arising from the net addition to the total population i.e. new households.
2. The need arising from obsolescence or demolition of some of the existing units.
3. Need from people who are improperly housed or who are not housed at all.

4.2.0 Demographic analysis

The first element in an assessment of housing need in a country is to answer the question.

"How many houses must be built?" This will be based on a forecast of the number of households expected, where the forecast of households will derive

from a projection of population growth.

Like most urban centres in the development countries, Kericho has had a high growth in her population over the years. In 1962, the population of the town was 7692 people and this grew to 10.144 by 1973. And by the 1979 census period, it had grown to 29,603. Currently owing to internal growth and coupled with immigration, the towns' population grows at a rate of 5% per annum. The current population projection is about 48,200 and is expected to be over 82,472 by the year 2000 (level of immigration was difficult to compute).

The following function was used in projecting the population:

$$P_2 = P_1(1+r)^t$$

Where: P_2 = Population at time 2

P_1 = Population at base period

r = Rate of population growth

t = Intercensal period (No. of years between P_1 and P_2)

The importance of this projections in housing is to assist in assessing the number of housing units to be built, assuming that each household will require a separate housing unit.

Table 24: Base Year 1979. Population = 29,603

Households = 7,463

Year	Population projection	Projected No. Households
1988	48,220	12,364
1993	58,611	15,028
1998	71,243	18,267
2003	95,472	24,480
2008	121,849	31,243

Source: CBS Pop. Census 1979

From Table 21, it is interesting to note that the number of households in the town will more than double within a period of 20 years. (1988 -2008). The government policy in housing as mentioned earlier, is to provide sufficient stock of housing of minimum standard with basic standards of privacy, security and healthy environment. Implicit in this is the desire to discourage house sharing - a common feature in many urban areas where people pool their resources so as to afford better housing. Taking this in the light of the earlier statement, it means each household should have its own house (either rented or owner occupier) and what this means then, is the need to also morethan double the number of existing housing units apart from replacing the depreciating and inadequate ones.

But of more importance is - what type of houses need to be produced?
This is determined after modifying housing need by considering the element of affordability - as done later in the chapter.

4.2.1 Household Formation and Size

For many scholars,a household has been taken to mean different things. To some a household is defined as all the people occupying a dwelling wheres for others it means a group fo peole who eat together it is this later definition that will be adopted in the study, for in the former case it is possible to have dwellings occupied by more than one household According to the 1979 census there were 7,463 households. The total population then was 29,603. Dividing this over the number of households gives us an average of 3.9 members per houshold. This nevertheless conceals a lot of information for indeed different income categories have unique characteristics and compositions. Kericho's population to the year 2000 has been projected to be over 82,472, so assuming that households will have the same average of 3.9 members, it means then, that in the year 2000 there will be about 21,146 households in the town. With the currrent estimated population of 48,220 we expect that there are about 12,364 households in the town now. The ideal state

is that each of these households should have its own dwelling unit or house and by implication it means there should be more or less the same amount of dwelling units both rental or privately owned to cater for them. Projecting to the year 2000 we have seen there will be about 21,146 households, meaning there will be some 8,782 new households. This then implies about the same number of housing units be they rental (council and private) or owner built have to be constructed by the year 2000

As pointed out earlier the average household size of 3.9 members is a bit general. According to the findings from the sampled population, variations in the composition of households in the various income groups was evident. The average for the 60 low income members was 4.4 persons; 4.9 and 5.1 for the middle and high income respectively. The average size of a household according to the sample is 4.8 members

Table 25: Average household size by income group

	Low	Middle	High
Number of persons	4.4	4.9	5.1

Source: Field Data

4.3.0 Occupancy Status

From the field survey one thing has become clear as regards occupation of housing in Kericho, that most of the people rent the houses. More insterestingly, it showed that for those in the low income category, all of them rent houses, 100% with none occupying his or her own house. This was different from the middle income group, where of the 36 sampled 80% lived in rental housing while 20% lived in owner occupied housing. Whereas for the high income group only 62.8% lived in rented houses while 37.1 lived in owner-occupied houses.

Table 26

	Sample size	Rented	%	Owner Occupied	%
Low income	60	60	100	-	0
Middle	45	36	80	9	20
High	35	22	62.8	14	37.1
Total	140	118	84.2	23	16.4

Source: Field Data

From this we see that renters dominate the housing market in Kericho accounting for 82.4% of the units while the owner occupier accounts for only 16.4%.

The interpretation that can be drawn from this is that urban dwellers in Kericho do not own the units in which they stay. It is such a situation, which is also characteristic of the other urban areas in Kenya, which prompted the government to encourage strategies which were hoped would enable some of the urban dwellers to own houses. Two such approaches have been the emphasis of the site and service schemes and the tenant purchase schemes. As pointed out earlier, these schemes were introduced with the low income earner in mind - for they are the most disadvataged group in terms of building or buying their own houses. This is because of their low incomes (less than Ksh. 3,000 per month) and spend over 60% of it on housing and consumption (Table 12a) at the expense of savings and other things. So in the final analysis it is the high income who have benefited from such schemes. This is evident from (Tabel 26) where the high income group have a high percentage of owner-occupied houses, while the low income rely mainly on rental housing. So not unless something is done, such a situation is bound to persist.

The main reasons why the target beneficiaries (the low income) of such schemes have not been able to benefit, is due to expensive loans for developing the houses and the high construction and infrastructure

and service standards that have to be met. At the time of plot allocations as seen earlier, interest rates on infrastructure and materials loan (Ksh.14,000) was 9% per year and loan periods of 20 years. Analysis showed this was unaffordable for the low income. If they are to benefit, there isno alternative but to lower interest rates on loans and extend amortization periods as discussed in Chapter three and adopt more flexible construction and service standards.

4.3.1 Average occupancy

The average room occupancy is a measure of overcrowdedness. But in practice, it is sometimes difficult to have fast and hard rules as to which units are overcrowded or not. The general definition is based on the number of people in the household and the number of habitable rooms at their disposal. Housing units which have 2.5 or more persons per room are considered overcrowded[1].

From the sample, the average household size in the low income category was 4.4 persons most of whom lived in single roomed houses in Kwa Michael, Nyagacho and behind business shops. From the analysis in chpater two (quality of services), most of these

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1. Housing Survey, Physical Planning Dept. 1983.

people complained of the rooms being too small and service provision in general, poor. A habitable room is one with a floor space of $7m^2$ and built of permanent material and served with proper infrastructure and service facilities like water, sewarage, electricity etc.[2] Even assuming they were habitable, it shows that on average there were about 4.4 persons per room (Table 22). This indicates a high level of overcrowding in what do not is the first place pass for habitable rooms.

The average household size in the middle income category was 4.9 persons. Most of the middle income people live in the Municipal Council rental houses, most of which have two habitable rooms (a bedroom and a living room plus a kitchen and w.c.). This gives an average occupancy rate of 2.5 persons per room. Whereas in the high income category, the averate household size was 5.1 persons. Most of the high income earners occupy houses with an average of three habitable rooms (excluding the stores, kitchen and w.c.) This gives an occupancy rate of 1.7 persons per room.

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1. Kenya Government.Building Code 1968.

From this analysis, it appears it is only the low income group who are experiecing this problem of overcrowding in Kericho. But a more important thing about this analysis is whether the overcrowding in the low income housing areas is due to shortages of houses per-se or a shortage of affordable housing.

The analysis of incomes and rent levels in chapters two and three, have shown that most of the low income people cannot afford rents charged in the better off housing areas, housing seen that most of them can only afford to spend Ksh.120 per month on housing. Having no alternative, they have no otherwise but to live in the slum areas of Kwa Michael, Kambi Somali and Nyagacho where rents charged are fair relative to their incomes. So in essence, the overcrowding in these areas is demand - pushed. Future housing development should therefore take into consideration the affordability levels of the low income and other groups in project designs, as discussed in various parts of this study.

4.4.0 Growth in wage employment

With the government decentralization initiative, the District Focus for Rural Development, the new housing policy and national housing programmes need to accord preferential treatment to rural housing and the housing needs in smaller towns.

Decentralization meant a lot of government officers were to be based at the District level. Kericho town since 1982, experienced significant growth in its population in wage employment. Statistics show that the number rose from 5,857 in 1982 to 8,593 in 1986. This is an increase by 46.7% in only 4 years. (The total national figure fell from 450,009 to 236,250. A decrease by 52.4%).(Table 13).

The growth in population in wage employment, other than generating income (assuming much of the incomes will be spent within the town and its periphery), had other more crucial implications to Kericho Town.

4.4.1. Implications on housing and other facilities

Among other things this new resident population has to be provided with proper housing. Statistics indicate that the number of those in wage employment grew by 2,736 people between 1982 and 1986.

This is an increaase by about 46.4%. The highest growth was apparently in the low income group (those earning less than Ksh. 3,000 per month). Assuming that each of these new employees requiring individual housing, then one can argue that roughly 2,736 new housing units had to be provided within that period (1982-1986) to accommodate these people. Both the Council and private housing developers were to produce

these units. But comparing the rate at which new public housing Units were being produced in that period (1981-85) with the growth in the number of people in wage employment, one notes a big disparity. Production of public housing then grew at only 4.5% per annum (Table 6). Only a mere 30 new units were supplied to the market. These could accommodate only 2% of those new people in wage employment. The other 80% had then to look forward to the private sector for their housing needs.

A Council survey on housing stock reveals that there are about 1,009 private housing units in the town most of which are single roomed houses.

In propagation of the "District Focus for Rural Development" strategy, the government had recognized in advance that its success would be influenced by the ability of both public and private housing developers to provide affordable decent housing units in the smaller towns to accommodate officers posted there. But the study results show that meeting this need is a problem.

4.5.0 Estimation of housing needs

Because this study did not entail a complete housing census in Kericho Town, the figures from the Housing Survey of 1983 are used in assessment of housing needs[1].

According to this survey, there were 9,202 housing units in Kericho Town by 1983. Projecting the 1979 population (29,603), the population in 1983 in the town was estimated at 34,631 and taking the average household size of 4.8 persons, then there were about 7,214 households.

To estimate housing need, this model was used:[2]

Housing need = New households + depreciating units + inadequate units

This model assumes that housing need is a function of new households, depreciating stock and inadequate stock.

Depreciating dwelling units comprise the units which will have to be replaced due to old age. For the purposes of the model, permanent dwelling units are assumed to depreciate at a rate of 2% per year as temporary/semi-permanent units at a rate of 5%. To get the number of dwelling units depreciating, the following formular is used:

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1. Housing Survey; Physical Planning Dept. 1983.
2. U.N. "Methods of Estiamting housing needs", 1973.

$$Dx_1 = (0.02 \times Y_1)t + (0.05 \times y_1)t.$$

Where Dx_1 = total number of units depreciating between any referred years.

Y_1 = Number of permanent dwellings in the base year and 0.02 the assumed rate of depreciation.

Y_2 = Number of temporary/semi-permanent units in the base year and 0.5 the assumed rate of depreciation.

t = Number of years between the base period and the year under consideration.

So upto 1988, the number of units that have depreciated in Kericho are 450 units. This is obtained as follows:

$$(0.02 \times 2,831)5 + (0.05 \times 688)5 = 450$$

Where 2,831 = number of permanent dwellings found in 1983 survey.

668 = number of semi-permanent/temporary dwellings found in the 1983 survey.

5 = Number of years between 1983 and 1988.

By the year 2003, the number of units that will have depreciated will be 1,800 units.

The inadequate housing constitute those units whose outer walls, roofs and floors of dwelling units are made of non-durable materials and lack basic services

and utilities. So given a total of 9,202 units in 1983 and 3,499 being made of permanent and semi-permanent/temporary materials, then the remaining 5,703 units constitute the inadequate housing units. Assuming that each household will occupy a separate housing unit, then in 1988 about 11,393 housing units were needed in Kericho town.

This is because there were 12,364 households then (meaning there were 5,150 new households from 1983), 5,703 units that were inadequate and needed replacement and about 450 units would have depreciated from 1983.

By the year 2003, a total of 19,619 housing units will be needed in the town. Projections indicate there will be an additional 12,116 new households making the total number households then be 24,480. About 1,800 units will have depreciated by that time (in these projections it is assumed that the level of inadequate housing will be as observed in 1983 - that is 5,703 units).

These figures have considerable implications. In order to meet these housing needs by the year 2003, it means approximately 1,401 new units have to be produced each year. The question then is how can this be met?

As pointed out already, most of the people, especially the low income, are not in a position to get access to cheap money/capital for house building due to high interest rates (13-19%)[1] charged by financial institutions and short loan periods (10-25 years). Also owing to high construction and planning standards which have to be met makes the cost of providing plots serviced with infrastructure and cost of building materials very high. Insecurity of land tenure other than preventing people from securing loans for house building, was found to be a disincentive for improvement of shelter. How to overcome these have already been discussed and further recommendations have been made in Chapter five.

4.5.1 Housing need and affordability

Need was then modified by consideration of affordability. Household incomes were estimated, by income category, and estimates were made of the proportion of income that was expended on housing (Table 12a).

Alternate sets of financial terms, that is interest rates and the periods of loan repayment, were assumed to compute affordable investments in

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1. Development Plan 1989-83.

housing by various segments of urban population. These affordable investment levels were compared with prototyical levels of housing services, that is building low density,low cost two-roomed houses and of having infrastructure and materials loan for developing high density housing, to derive estimates of demand for housing in each category of price and service characteristcs.

Taking the two-roomed low cost house, it has been established that it would cost about Ksh.72,205 currently and that the low income are unlikely to afford this at low interest rates charged on loans and shorter repayment periods (Chapter three). Putting up individual housing units will require more space and the cost of providing service and infrastructure will be higher. (But if lower but appropriate standards of construction and services are adopted then the cost can be lowered e.g. using communal water points instead of individual connections, murruming access roads instead of putting tarmac, etc). But given the land constraint, such low density housing development might not be feasible to undertake if enough housing units are to be provided to meet the demand in the town for low cost houses (both in terms of renting and construction).

Undertaking high density housing development for the low income would be more appropriate in terms of space utilization and cost reduction in provision of infrastructure and services. Infrastructure and materials loan in a site and service scheme as previously noted is about Ksh.85,189 per plot. By applying lower interest rates (15%) and longer loan repayments periods (25 years), individuals with monthly incomes of about Ksh.6,749 can afford such a loan (Table 22). From the analysis of incomes (Table 12a), we note that it is only the high income who can afford this.

It is only through renting that the low income can have opportunities to benefit from site and service schemes.

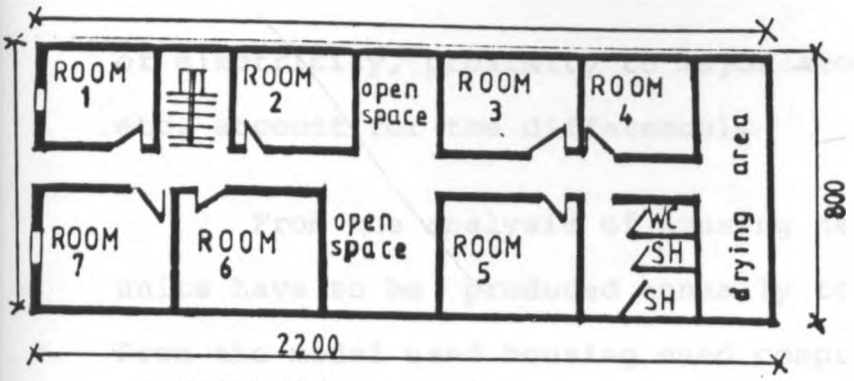
Assuming replicability of low income housing development, say in the Mathare North Site and Service Scheme, in other areas like Kericho, it is this kind of housing projects that should be undertaken. In this case, the building plan provides for building of upto six rooms per plot for rental purposes. Depending on the ability of the developer, high rise flats can be put up.

Presently, the Kericho Site and Service Schemes comprise of plots consisting of two to three bedroomed houses designed for occupation by one household, unless

there is sharing. This type of design appears unrealistic if the low income were the targeted beneficiaries of the projects. It has been shown in this study that the low income have not been able to afford loans to develop such houses and as such most of the site and service schemes have changed hands to the high income. Also the rents charged for such units after construction are beyond the affordability levels of the low income and most of the middle income earners in the town (Table 23).

Those who can afford the site and service scheme loans should then be encouraged to develop the multi-room unit by being given appropriate design plans, where different households can rent different rooms as opposed to putting up two or three bedroomed houses designed for single households (Fig.7). The latter design was to facilitate the owner (builder type of occupation and which as already outlined, might not benefit the low income earners unless there is considerable government subsidies to bridge the gap between what they can afford and the lowest cost of putting up an acceptable housing unit.

Currently, the rent levels of a single room in the Mathare North Site and Service Scheme, range from Ksh. 300-750 per month and the houses meet the required construction and service standards. (Availability



GROUND FLOOR PLAN
SCALE 1 : 100

Fig. 7
Source: Raf Tuts. "Economic use of resources: A case of Mathare North and Umoja Two". 1988 La Kaeven.

Fig.7 is a plan of a multi-roomed unit in the Mathare North Site and Service Scheme. Currently a materials and infrastructure loan in such a scheme would cost about Kshs. 85,198 and as shown in study this is only affordable to the high income. Because such a development uses less space and minimizes cost of putting up infrastructure, unlike the detatched two-roomed houses, it is more appropriate for housing the low income. Rents per room currently in Mathare North range from Ksh. 300-700 per month. Assuming replicability in other areas like Kericho, investors should be encouraged to put up such units, for rents in such single units are affordable to a section of the low income. And as discussed, development of rental housing is a better option to house the lower income earners as opposed to owner-occupier oriented developments, that the lower income groups cannot afford.

of electricity, proximity to major access routes, etc. account for the difference).

From the analysis of housing need, about 1,401 units have to be produced annually to the year 2003. From the model used housing need comprise of new households, houses required to replace the depreciating ones and the inadequate houses. By definition, the inadequate houses comprise of those whose walls, roofs and floors are made of non-durable materials, and these need to be replaced. Analysis in chapter two (typology houses) indicate that most of these houses are in the low income areas. By implication, it means most of the houses required are to meet the needs of the low income. Therefore, what is being proposed in this study to meet this need, after consideration of affordability, is construction of multi-room units in the site and service schemes, similar to those in Mathare North Site and Service. Using appropriate loan terms (low interest rates and longer loan periods) and allowing more flexible but appropriate standards, those who can afford the sites should be given design plans to develop single rooms for rental purposes in the plots as opposed to putting up three-bedroomed houses, that the low income cannot afford to rent. In otherwords, ephasis should shift from aiming at having the

low income owning their own houses in urban areas, as it appears it cannot be attained[1], to more appropriate designs of low cost rental houses where rents are within the affordability levels of the low income.

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1. Sessional Paper No. 1 of 1986.

CHAPTER FIVE

5.0 RECOMMENDATIONS AND CONCLUSION

5.1 Recommendations

It has been shown that the governments' long term objective is to build as rapidly as possible a national stock of housing of minimum standard with basic standards of privacy, security and providing a healthy environment for all. It has also been shown that it is the governments' declared aim to provide housing for low income workers.

But as the study has shown,the prevailing situation today is ample justification for posing the question why suitable and affordable housing in sufficiently large numbers is not being built especially for low income workers.

A number of factors leading to this have been identified and needs to be addressed both at the national level and localy by the Municipal Council. These factors are policy/sponsorship, land provision, finance, infrastructure and construction.

I Policy/sponsorship

The general approach here is to progressively improve conditions for all urban households by providing highest affordable standards in response to effective

demand.

a) There is need to establish affordable housing and service design standards for each income level. Higher construction and service standards may lead to better health. Viewed from a broader perspective, good health depends on more factors than building standards only. A study by Housing Research and Development Unit and Department of Community Health, University of Nairobi, showed that health conditions were not lower in areas where building and service standards were minimal when compared with areas with full services[1]. More future research is therefore needed to be carried out to correctly ascertain the relation between health and building standards.

Other actions that need to be taken are:

b) Establish programmes to encourage formation and legitimazation of co-operative housing societies with ability to act as developer and long term property and loan manager bridging the gap between individual dwelling

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1. Future Planning of Majengo. HRDU, March 1976.

occupant and formal finance agency.

c) Identify and remove regulatory impediments to production of lower cost housing.

d) Establish realistic local planning and housing design criteria.

e) Establish a system for monitoring and reporting housing production and current conditions in major urban areas.

II Land Provision

Both the government and the Council should provide maximum assistance to private and public development of housing by using existing legal powers to assemble and make land available for growth of housing stock. Currently the procedure to make land available for a housing scheme requires a large number of steps. This is time consuming and delays planning and subsequent construction of housing. There is necessity therefore to shorten this procedure. This could be achieved by arranging a number of meetings, between the professionals concerned so as to arrive at an optimum solution for the scheme.

The following actions then need to be taken:

a) Within the context of the urban development, identify areas targeted

for residential development and co-ordinate planning for infrastructural services in the areas.

b) Establish an efficient administrative mechanism for the release of land for residential development to both owner-occupants and multi-unit developers along with appropriate sub-division regulations.

c) Develop a sufficient land bank in the town to reserve land and provide for timely release and allocation at a pace consistent with demand.

d) Establish a mechanism for compensation of owners of developed or occupied land through transfer of development rights or shares improved values as well as cash compensation.

III Finance

It has been established in the study that lack of affordable finance is a major hinderance in housing development especially for the low income. The general approach should therefore be to provide adequate capitalization for growth in housing production

and open system to access by broad cross-section of urban population.

a) It is therefore necessary to develop framework and incentives to mobilize private capital and savings into the housing sector including expanded formal lending institutions operations and support for private and co-operative savings institutions.

b) Establish lending instruments for formal or legistimized informal lending institutions with flexible terms and collateral requirements appropriate to low income households especially on a group or project basis.
This can be achieved by lowering interest rates charged on loans i.e. 15% per year (rate applied by government financed housing with an element of subsidization) and making loan repayments periods longer, say 25-35 years, instead of the current rates of between the maximum 19% per year and loan periods of 10-25 years[1].

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1. Kenya Government: Development Plan 1989-93

c) Establish a programme of financial assistance to aid small-scale building contractors.

IV Infrastructure

As regards infrastructure, it is necessary to ensure co-ordination of needed infrastructure and services along with housing development. Action should be taken to:

a) Plan residential development together with insfrastructure for maximum efficiency.

b) Select appropriate technology consistent with affordability and geoclimatic context.

There is therefore need to co-ordinate budgeting of infrastructure and services consistent with expected demand for housing at both the national level and local level.

V Construction

As regards construction, steps should be taken to facilitate growth in housing production through improvements in productive capacity and efficiency of indigeneous resource utilization. In the two-roomed

low cost house by HRDU, it was established that the cost of a house built with traditional construction methods is only a fraction of the cost of a house built in permanent materials. Nevertheless, there are disadvantages of these building materials that need to be borne in mind, for example low durability; more maintenance costs; etc. So in this respect, it is not a full solution to the problem of providing low cost affordable housing to the low income poeple. More research should therefore be focused on low cost traditinal constructions with acceptable levels of durability and hygiene. Actions therefore need to be taken to:

a) Avoid over-industrialized and over-capitalized building technologies which raise costs.

b) Maximize use of indigeneous materials and methods to reduce dependancy where cost effective.

c) Extend University-based building research programme (HRDU) to explore and document practical ways of improving labour and materials productivity in housing development with centres throughout Kenya.

d) Support building materials industry.

Conclusion

The main focus of this study has been the issue of housing affordability in Kericho Town. It has been established in this study that there are inadequate affordable housing units in Kericho town. With the low levels and rather "high standards" of available housing, majority of the people who are mainly the low income cannot afford either to rent or buy such houses. Also owing to this, they cannot afford repayment of mortgage loans for house building or to develop plots in the site and service programmes.

The current programmes aimed at housing the low income, for instance, the site and service programmes have been seen to be ineffective to that effect and as such it has been recommended in this study that emphasis should shift from emphasizing owner occupier oriented housing developments to production of rental housing if the low income are to be housed.

The high standards required by local authorities, in both construction and infrastructure and the high cost of land have also been seen to raise the cost of buidling. This has been seen to have effect on total cost of putting up housing units, thus making them more unaffordable to many urban residents. So appropriate recommendations about building and infrastructure standards and acquisition of land have been given so as to bring down the non-construction costs in building thus reducing the total costs of building.

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HOUSING QUESTIONNAIRE

(HOUSEHOLD)

1. Name of household head ----------
2. Sex ----------
3. Place of birth ----------
4. Period of residence in Kericho Town ----------
5. Occupation ----------
6. a) What is your monthly income if employed ----------

   b) Do you have other sources of income?

Source	Amount/month (Ksh)
a.	
b.	
c.	

7. a) How many members are in your household ----------

   b) How many of them are employed and how much do they earn.

Type of occupation	Monthly income (Kshs)
1.	
2.	
3.	

8. a) How much do you pay as rent per month ----------

b) Do you feel this is low or high or just enough?

(i) ----------

(ii) ----------

(iii) ----------

c) If it's high, how much are you willing and able to pay per month ----------

9. a) Who owns the home you live in?

Council
Private
Owner/occupier

b) Do you share it with another household ----------

If yes, how large is that household ----------

How much do they contribute towards the rent ----(Ksh

10. a) Which of these services provided within the housing unit.

Inside W/C	
bath	
Kitchen	
Showers	
Sinks	

b) Are these exclusively for your household or are they shared? ----------
which ones are shared ---------- (list).
---

11. a) How many habitable rooms has your house (excluding small kitchens and W/C) ----------

b) Are these sufficient for your household ----------
(Give reasons) ----------

---

c) Would you prefer a better accommodation? ----------

---

d) Which part/estate in the town would you prefer? ----
Why? ----------
---

12. a) Condition of the building

Good	
Fair	
Bad	

b) Types of materials used

	Type	State
Wall		
Roof		
Floor		

HOUSING QUESTIONNAIRE

(MUNICIPAL AND COUNTY COUNCIL)

Name of the Council: ----------

Physical Planning Status: ----------

Administrative Status: ----------

WAITING LIST FOR COUNCIL HOUSES:

1. Do you have a waiting list for Rental, Tenant-Purchase, Mortgage housing and site and service plots.

   Yes ----------

   No ----------

   (a) If you have a waiting list what does it indicate to you (in terms of people presently on waiting list, their income, maximum/average time on list, procedure of dealing with people on list and any other findings)?

(b) If you have a waiting list, from when did this start?

DENTAL ACCOMMODATION

2. How many rental housing units had your council in Kericho township as at 31st August, 1988.

	Number of Units
Single roomed	
1 bed roomed	
2 bed roomed	
3 bed roomed	
4 bed roomed	
5 bed roomed	
Total	

a. Does subletting take place in your rental housing schemes, if so to what extent?

---

b. What is the rent per room sublet in Council rental units?

From ---------- To ---------- Ksh. p.m.

b. How much do you estimate that your tenants spend on housing as a percentage of their regular incomes?

TENANT PURCHASE ACCOMMODATION

4. How many Tenant Purchase Units had your Council in Kericho Township as at the 31st August 1988.

Single roomed	
1 bedroomed	
2 bedroomed	
3 bedroomed	
4 bedroomed	
5 bedroomed	
Total	

a. How many tenants do you estimate are subletting their houses completely or partially in Tenant Purchase Schemes?

Subletting	Number
Completely	
Partially	

b. What is the rent per room sublet?

From ---------- To ---------- Kshs. p.m.

5. HOUSING STOCK:

What is your latest estimate of the total number of houses within your administrative boundaries? (All Housing, including private, pool, institutional, and temporary houses).

Types of ownership		NUMBER OF HOUSES	
		Within old boundaries	in extended total boundaries
	Staff		
	Rental		
	Pool/		
	Institutional		
	Other		
	Temporary		
Public	Residential		
	Business/cum Residential		
	Unauthorized		
TOTAL			

6. a. Does the housing stock consists of big units such as 4 - roomed and 5 roomed units or of small units made up of one room? If possible give break-down in numbers.

No. of bedrooms	NUMBERS		
	Public	Private	Total
1			
2-3			
4-5			
6 or more			
Total			

b. What percentage of your housing stock is built of permanent materials?

---

c. How many houses and business-cum residential buildings have individual matered water connections?

Number	

HOUSING DEMAND

7. How do you assess the housing demand in your administrative area? with respect to:-

	Yes	No
1. Size in terms of housing units required.		
2. Demand from public and private sector		
3. Monthly payments people are willing and able to pay		
4. Locations that are favoured.		
5. Others		

8. What are the reasons for people wanting Council Housing as opposed to ther housing?

---

9. What are the reasons given by people shifting within Council housing? ----------

---

---

10. What is the current approved rent structure of your Council Housing Schemes? ----------

---

---

11. What is the rent for private rooms in authorized and unauthorized housing?

	Kshs. p.m.
Authorized	
Unauthorized	

12. What is the occupancy rate per room in Council Housing?

Number of people per room	

13. Are there vacant houses at present in your administrative area, such as those for emergency cases, or undergoing repairs or very expensive?

Yes
No

a. If yes, how many houses are vacant?

Number

b. For question 14, if the answer is yes, what are the reasons for vacant houses?

PRESENT HOUSING PROBLEMS

14. What is the present housing situation for the f following categories of Council staff, with regard to: Housing shortgage, overcrowding, sharing houses, substandard houses etc.

a. Low income: All those earning up to Kshs. 800 per month?

---

b. Medium Income All those earning between Kshs. 800 to 2,000 per month

---

---

c. High Income: All those earning 2000/= and over per month.

---

15. What is the present housing situation for the following categories of Government staff. With regard to housing shortage, overcrowding, sharing houses, substandard houses etc.

a. Low Income: All those earning between 800 to 2000 shs. per month - ----------
---

b. Middle Income: All those earning between 800 to 200 shs. per month ----------
---

c. High Income: All those earning Kshs. 2000/= and over per month ----------
---

16. What is the present housing situation for the following categories of semi-government organisations and large private firms with regard to housing shortage, overcrowding, sharing houses, substandard houses etc.:

Low Income: All those earning up to Kshs. 800 per month. ----------
---
---

b. Middle Income: All those earning between Kshs. 800 to 2000 per month ----------

c. High Income: All those earning Kshs. 2000 and above per month ----------

17. What is the present housing situation for the following categories of the Public at large (all those not covered in questions 15 - 17) with regard to housing shortage, overcrowding, sharing houses, substandard houses etc.

a. Low Income: All those earning up to Kshs. 800 per month ----------

b. Middle Income: All those earning between Kshs. 800-2000 per month .----------

c. High Income. All those earning Kshs. 2000 and above per month ----------

---

---

18. PLANNING

If you are aware of any plans for Private New Housing Developments in your administrative area, other than your own schemes by:-

Co-operative ----------

Private developers ----------

Owner builders ----------

Please give descriptions of the projects below:

---

19. If your council is planning any new housing please give the names of the schemes, description of the schemes and sources of finance:

Scheme	No. of units	Source of Finance			
		NHC	COUNCIL	OTHER	(STATE BODY)
Rental					
Tenant Purchase					
Mortgage					
Site & Service					

20. What type of housing development is most urgently required in your administrative area? Please give reasons for the choice you make.

---

21. Do you give any assistance or encouragement to private developers other than the supervisory role (that is ensuring that the building byelaws are followed)?

---

22. If you are aware of any present or future major development projects much as industrial, commercial, administrative or agricultural which may create an extra demand for housing, please give brief descriptions.

---

23. Does your Council have sufficient land for current purpose (i.e. upto to 200) and for thefuture (that is 2000-2020) housing development?

	Yes	No
Current		
Future		

a. If the answer is yes, to current and/or future land for housing development, please give amount of land available.

	Hectare
Current	
Future	
Total	

b. How much of the available land is already serviced with water supply, wage, storm water drainage, roads, etc. If partly serviced (e.g. water only) please indicate what these services are.

	Hectare	
	Fully serviced	Partly serviced
Current		
Future		
Total		

c. What is the allocation the available land for the different types of housing development by density in hectares.

Density	Hectares	
	Current	Total
Low		
Medium		
High		
Total		

d. What would he your current and future land requirements for housing development by density in hectares.

Density	Hectares		
	Current	Future	Total
Low			
Medium			
High			
Total			

Appendix I

Cost of 2 acre plots in Kipchimchim and Kipkungermet

= 240,000/= per 2 acres.

2 acre = 0.8 hac. = 8,000 m^2

Given minimum plot size of 260m^2

This gives 30.7 plots

∴ Dividing 240,000 by 30.7

Gives approx. 7,8, 17 Ksh.

per 260m^2 plot.

Appendix II

Computation of monthly repaymen-s and income levels required

$$\frac{(\frac{15}{100} \times 85{,}189) \times 10}{120} = 1774$$

$$\frac{(\frac{15}{100} \times 72{,}235) \times 15}{180} = 1303$$

etc.

4 monthly repayment is Ksh. 1774 income level required, assuming 20% of income is spent on housing is:

$$1774 \times \frac{100}{20} = \text{Ksh. 7520 per month.}$$

The same was done for the various interest rates and loan periods based on the formular: (HRDU "Housing for low income workers").

$$M = Cx \left(\frac{i}{1 - (1+i)^{-n}}\right)$$

c = Capital sum

i = rate of interest per month

n = number of months of loan period.