CONSTRAINTS TO THE DEVELOPMENT OF CHUKA TOWN TO A GROWTH CENTRE

By

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

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ABSTRACT

In Kenya, like in many other developing countries the growth centre strategy has been adopted to foster development, with particular emphasis on the rural sector. The principle underlying the policy is the belief that using the growth centre strategy, the distribution of national resources is made efficient and more equitable. The development of the rural areas is thus kept abreast with the more rapid development of the urban areas. The overall development of the country could be realised through the interdependence between the two (rural and urban) sectors; both forming integral parts of the national monetary economy.

The development of growth centres faces various setbacks, most of which stem from urbanization. Difficulties such as inadequate sanitary conditions, uncontrolled settlements, and general maladministration of land use are thus caused. Other problems relate to the unconducive physical environment around the centre and insufficiency of funds for general and physical development of the upcoming urban places.

The field survey was conducted to identify factors that do or may inhibit Chuka from performing the functions of a growth centre viz. population

interception, incubator of (small scale) industry, market for local produce, distribution point for farm inputs and tapping of unexploited development potential of the surrounding areas. For this purpose, investigations were launched on the physical, socio-economic, and infrastructural conditions of both the town and its hinterland.

It was found that Chuka is not so far "eligible" for growth centre status. Although it is favoured by its administrative potential, high agricultural potential of its hinterland, accessibility and proximity to population concentration, it fails in many other aspects. The town has a weak economic base, a result of lack of diversified economy and employment. It also heavily lacks in infrastructural provision, besides having a weak linkage with its hinterland. In view of these (among many) shortcomings, Chuka is not a viable growth centre for the present and within the near future. It thus will have to remain an urban service centre until it attains growth centre attributes.

Recommendations have been made that are expected to improve the conditions and for the development of the town to the desired standards. Such measures as avoiding difficult areas (e.g. steep slopes and marshes) in the future development, provision of adequate infrastructure and social amenities have been

proposed. Promotion of the economic base of the town and the hinterland has also been suggested.

Finally, proposals have been made to serve as a guide to the future planning of the town – in a long term perspective but programmed in short term phases. However, since the study was not specifically focused on the physical development of the town the latter section has only been briefly dealt with. It has therefore been recommended that further research be instituted to establish requirements for various land uses, upon which detailed planning of the town could be carried out.

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CHAPTER I

GENERAL INTRODUCTION

1.0 INTRODUCTION

This Chapter aims at introducing the reader to the whole study. It opens by outlining the basis on which the study was carried out, thus giving the background of the problem being investigated. After the statement of the problem, the objectives and justification of the study are spelt out to make the reader aware of what it (study) sets to accomplish, and how it is relevant to overall planning, particularly in Kenya. The assumptions and hypotheses of the study are also outlined.

The method of investigation is the next task of the chapter. Included here are methods of data collection, and the selection of samples used to generalize on the studied phenomena. The penultimate section indicates the coverage of the study, both in analytical context and geographical extent - hence scope and limitations. The final section gives a brief outline of the subsequent chapters.

1:1:0 BACKGROUND OF THE STUDY

In Kenya over 90 per cent of the population live in the rural areas. It has been felt therefore that any endeavour to achieve economic development must, in the main, be geared towards the achievement of rural development. Growth-centre policy has been adopted in this country as a strategy for the development of the rural areas, being seen as the best way to distribute national resources. The guiding principle of this strategy is the realisation that "... rural development cannot be a self-contained process. The rural areas must be knit closely to urban markets for both supplies of farm inputs and consumer goods, and outlets for farm produce if they have to become an integral part of the monetary economy".[1]

The interdependence between rural and urban areas grows in a process of development and with it comes the enhancement of the role of the town as the producer of goods and services required by the majority of rural residents. As the towns continue to perform their role 'urbanization' takes place, which results from the expansion of economic opportunities. Urbanization is encouraged and seen as complementary to rural development in the effort to achieve national development goals.

1:1:1 Statement of the Problem

In the course of their development growth centres face formidable problems. As a result of urbanization, the centres face difficulties such as lack of adequate housing, unemployment, squatter and uncontrolled settlements, transportation and urban sprawl. Those most salient in Chuka are uncontrolled settlement, transportation and general maladministration of land use. There has not been an effective agency concerned with the specific development matters of the town. Even after the elevation of the town's status to an Urban Council much has not been achieved mainly due to insufficiency of funds for development and lack of skilled manpower. These two owe to the fact that Chuka is a small town, with only a limited range of sources of revenue. Moreover, most of the financial matters fall under the County Council of Meru, and hence the Urban Council of Chuka has little command over its financial matters.

The development of the town may not proceed at the expected pace due to the identified problems. In order to establish the magnitude of the problems inhibiting the growth of the town, investigations are made of the extent to which the physical layout and existing land use pattern affect the town's further development. Secondly, attention is paid to

socio-economic factors and infrastructural facilities, which indicate whether or not the town qualifies as as a growth centre i.e. whether it has attained self-sustaining growth. Finally it is questioned the extent to which the town serves the catchment population within its hinterland. Answers to these questions will help to establish whether or not Chuka Town is a viable growth centre. It should be observed however, that such viability could be attained if and only if the constraints are minimized or completely overcome.

1:2:0 OBJECTIVES OF THE STUDY

The purpose of the study is to identify the factors that do or may prevent Chuka from performing the functions of a growth centre. Such functions are as population interception, decentralization of industry, market for local produce and distribution point for farm inputs, strengthening of regional urban hierarchy and tapping of unexploited development potential, especially in the neglected/backward areas.

The study endeavours to examine the problems that a town of Chuka's scale faces in its development and functioning as a growth centre. In the light of this, the study will come up with suggestions as to

how best to develop the town, i.e. find the best way of solving the problems that inhibit the effectiveness of Chuka as a growth centre in Nithi Division, the hinterland. Policy priorities will be stated that may make the town more effective in service provision to its hinterland. Thus, recommendations and proposals will be made which, the author hopes, will serve as a useful guide for future development plans for the town.

1:2:1 Justification

The results of this study should form the basis for future plans which will provide a guide to meaningful development of the town. The functions of the town can be well planned only if the existing situation is examined, the problems inhibiting development identified, and possible solutions found to make the town an effective growth centre. Furthermore, lessons could be learnt from this so that planners, in selecting and planning such towns in future, could be aware of the preliminary problems that need to be tackled.

1:3:0 ASSUMPTIONS OF THE STUDY

The study was carried out with a number of assumptions:

(a) That Chuka will continue to perform the functions of administrative headquarters[2].

(b) That population will continue to increase through natural growth and immigration, and thus requiring urban space for accommodation.

(c) Given a steady rise in population, there will be pressure on the existing urban functions and services and hence there arising a need to expand the services to meet the increasing demand.

(d) The hinterland will generally develop, and that the prosperity of the people will make it possible for them to demand urban services that will be provided by the centre.

1:4:0 HYPOTHESES

(i) The relative weak linkage between the town and the hinterland makes the town unable to fulfil its roles adequately.

(ii) The town does not offer job opportunities to the population within its hinterland. Hence it does not serve as an interception point for the potential migrant population.

(iii) The topographic nature of the town is a handicap to its development, particularly due to high construction costs that are involved in erection of buildings.

1:5:0 METHODOLOGY

To facilitate testing of the above hypotheses certain procedures and techniques have been employed for purposes of data collection and analysis, and inference from the observed phenomena.

1:5:1 Description of Research Approach

Much of the research is a survey of the existing situation in the town and sets forth a basis for the investigation of causal relationships among variables both within the town and between the town and its hinterland. Urban services are taken to be the independent, while attendance (influx of residents) from the hinterland (to utilize the services) constitutes the dependent variable. These are analysed to investigate whether the urban services serve as an attration or pull factor to the catchment population. This will be established by comparing the proportion of people going to Chuka with those preferring other centres for service provision.

1:5:2 . Data Collection and Recording

Three survey techniques were used for collecting and recording data.

1:5:2:1 Informal Interviews

This technique was employed to gather information as follows: interviews with various officials, particularly with Meru County Council and Chuka Urban Council officials helped to gather information regarding the past performance of the town, the problems (administrative and financial) it has faced, and the possible trends of future development. The Clerk to the County Council, the Establishment Officer, and the Assistant Administration Officer in charge of the County Council Office at Chuka; the Clerk to Chuka Urban Council and the Revenue Assistant, were interviewed. These officers were selected by virtue of their positions, which the author believes were/are in the best position to give an account of the performance of the town's development.

Other key informants included officers of the Ministry of Local Government at the Headquarters (Nairobi) and Provincial level; the Provincial (Eastern) and District (Meru) Physical Planning Officers, Provincial Administration Officials at Chuka (D.O. Nithi and Chief Karingani) and a number of Departmental heads

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at the Divisional level. The Local Government officials, physical planning officers, D.O. and chief, were expected to give information regarding the extension of boundaries of the town. The departmental heads in charge of agriculture and livestock were particularly useful in giving an account of the economic performance of Nithi Division, Chuka's hinterland.

Regarding the historical development of the town, much was obtained from a local ex-chief, who was at one time Meru District Market Inspector. Also for the purpose a few old men and women were interviewed. The method of selection was purposive, based on the belief that they had particular knowledge that the interviewer needed regarding the subject.

1:5:2:2 Secondary Data

Information was obtained from various sources and documents. Among the sources are Survey of Kenya, Ministry of Local Government, County Council of Meru, Chuka Urban Council; the Kenya National Archives, Central Bureau of Statistics (Documents such as Meru District Development Plans, Population Data etc), Ministry of Water Development, Ministry of Agriculture, etc. Matters pertaining to the economic and employment trends of the town, activities (commercial,

agricultural etc) in the town and surrounding areas were thus ascertained. The physical characteristics and to a great extent, the historical development of the town were known through use of secondary data.

It should be noted that the above are not the only sources of secondary data. Others will be mentioned in the thesis where relevant. In all, however, the method of descriptive content analysis was used.

1:5:2:8 Use of Primary Data

Two research tools were used to collect information from the field.

(a) Visual Observation:

This rather obvious method helped to record the information regarding such things as types and conditions of housing, landscape and terrain, etc. It was used where recorded information was not necessary, and to ascertain the physical features that were perceived as critical to the planning procedure of the town.

(b) Questionnaire Method:

This was the major instrument used for collecting primary data. Four sets of structured questionnaires were used and they were all administered by the author himself. The questions

asked were mixed some open-ended and others closed. The open questions specifically sought to record the opinions of the respondents while the closed ones presented predetermined possible alternatives thought vital by the researcher.

(i) Business/Trade Questionnaire

This was conducted in Chuka town, Kibugua (market centre), Marima (rural centre) and Kabece (urban centre that falls within the proposed Chogoria Urban Council). It also included questions relating to open market but these were meant for Chuka Town only.

The questionnaire was meant to establish the nature, ownership, and relative strength of the commercial activities in the centre (particularly Chuka versus others), sources and types of items and income, employment potential, factors of location and problems facing the businesses. The questionnaire also sought to know the attractiveness of the Centre i.e. establishing the range of purposes of the market goers.

(ii) Industrial Establishment Questionnaire

This was concerned with type, ownership and age of industrial establishments; inputs (type, quantity and sources); output (products, volume

and destination). It also sought to find out the socio-economic contribution (positive and negative) of the industries to the hinterland. It is also concerned with location factors and problems facing the industrial activities in the town.

(iii) Urban Household Questionnaire

It dealt with socio-economic characteristics of Chuka Town, distribution, and provision of services (and utilities). It was also directed towards establishing residents' perception of the town, and its linkage with other centres, regional and national.

(iv) Rural Household Questionnaire

This was intended to convey information pertaining to such issues as the social and economic characteristics of Chuka's hinterland. Such information is meant to establish the potential support the centre can elicit from its hinterland. Thus, it seeks to establish the interaction and interdependence of the town and hinterland in terms of flows of goods and services from the centre to the hinterland, and vice versa. It may be discerned therefore, whether or not the interrelationship is hampered by any problems - these would then have to be identified.

1:5:3 Sample Selection

It was stated above that the survey questionnaire was the major instrument for collecting data in the field. Except for one instance, i.e. industrial questionnaire, all the other three were administered to a selected (small) number of units of investigation. In each case a sample was needed because it was difficult to observe the entire population given that time, money and manpower were limited.

In administering the questionnaires three sample designs were used simultaneously. Systematic sampling, which consisted of selecting every K^{th} sampling unit of the population used simple random method in selecting the first unit. Stratified sampling method was also used, which ensured that all characteristics (strata) of the population were included in the sample.

(i) The industrial questionnaire was administered to all the four firms in the town.

(ii) To select the sample for the business/trade questionnaire some factors were considered. First, it was found necessary to administer these in Chuka and three other centres as explained in the above section (1:5:2:3(i)).

In Chuka, a sample of 15 commercial establishments was selected out of around 160 operating units,[3] a proportion of nearly 10 per cent. In the other centres 6 units were considered a fair sample since only a few shops (30 on average) in each were operating at the time of the field research. Secondly, it was considered necessary to compute a stratified sample for each centre to ensure both wholesale and retail, specialized and general businesses were included in the sample. Thirdly, the open market questionnaire was split into two to take information about sellers and buyers. Of the 40 (average daily)[4] stalls in the open market 8 (20 per cent) were interviewed. This proportion was adequate since the range of goods sold was very narrow. 20 buyers were interviewed on diverse days. They were selected randomly, but members of both sexes, and various ages were included.

(iii) In drawing the urban household sample about 10 per cent of the households was selected. The total number of households was estimated at 667 assuming a population of 2,000,[5] and average household size of 3 (obtained from 1979 Population Census, and confirmed by field survey). Thus, 62 households were interviewed with the

eldest member of the household being the respondent. The selection was first by stratification to include all residential areas of the town, i.e. high, medium, and low income areas. In each area a household was selected randomly with others following after every fifth house. If nobody was found in the fifth house or there being no adult member of the family, the sixth was interviewed, and then counting another five to pick the next, and so on.

(iv) The rural household sample was most difficult to arrive at. This is because it was difficult to know beforehand what characteristics, social or economic, occurred in which areas of the Division. Due to the large size of the population (24,572 households according to 1979 Census), only a small proportion of this was selected. Thus, 124 households (5 per cent) were sampled. It should be noted that although the figure may seem small, it could be sufficiently representative due to the homogeneity of the population. However, the selection of areas ensured that all ecological zones were included, and so for administrative units. For this purpose, the sample was drawn from all the sub-locations in the Division, the selection of which was mainly random.

It may be pointed out that there was an inevitable bias in some areas where the homes near the paths had higher chances of being sampled.

This was dictated by the mode of transport used by the researcher. Public means was used and therefore it was difficult to enter deep into the interior of the rural areas except where the interviewer was conversant with the foot-paths or where guidance was available. This, though, was a minor disadvantage and may not be considered as having reduced the validity of the observations made.

1:5:4 Data Processing and Analysis

The data obtained from the various sources were coded to make quantitative analysis possible. The main method used for recording the observations made was classification whereby various types of information were grouped into smaller categories in order to simplify the description and analysis of the data.

Simple methods such as description of absolute frequencies, proportions and percentages were commonly used to show the characteristics of the phenomena under investigation. Apart from the descriptive method of analysis, use was also made of auxilliary devices such as tables and graphs. Ordinal method was also used, thus enabling ordering (ranking) of relative importance among variables. Analytical (non-quantitative) statements are also made in describing and analysing information obtained, especially from informal sources.

1:6:0 SCOPE AND LIMITATIONS

The aspects that have been selected for detailed analysis include the physical characteristics of the town, economic and socio-infrastructural bases of the town and its hinterland. The topography and soil conditions have been studied as major elements of the physical base of the town. Industrial, commercial and employment sectors have been examined to establish the economic base, while population, land tenure and residential pattern of the town represent the social characteristics.

Infrastructure services that have been selected for close examination include water and sewerage, communications, power, education and health facilities. These, among many, are considered to be most significant since they constitute the basic attributes of growth and service centres. Problems relating to these are therefore of considerable magnitude as far as the development of the centre is concerned.

The services rendered to the town and rural residents are examined, with the view of understanding the ability of the town to cater for its residents and also to establish the interaction between the centre and its hinterland. It is expected that out of such investigation the major constraints to the development of the town would be identified and hence make it

possible to find solutions to them.

The concern of this study is restricted within the town and administrative boundaries of Nithi Division. The rationale for that spatial limitation is the fact that Chuka town is a centre within a sub-region of Meru District, a wider region whose core is Meru Town. Except for the judicial function of the centre which extends to Igoji Location of South Imenti Division, the other services are restricted to Nithi Division. As such it would have been unnecessary to examine areas outside the range within which growth impulses of Chuka Town spread.

1:7:0 SUMMARY OUTLINE OF CHAPTERS

Chapter I is the general introduction to the project. Chapter II constitutes a review of growth centre literature. It considers policies that have been formulated and applied within the context of growth-centre theory. A close examination of Kenya's growth centre policy is made; the way it has been adopted in development planning. Finally an elaboration is made of how the term and policy have been applied in this study.

Chapter III deals with the study area. Included here are geographical setting, historical development, physical, social and economic bases, and existing

land use pattern of the town. Outlined also is the range and extent of services rendered by the centre. Chapter IV examines the characteristics of the hinterland. It looks at the economic, social and resource bases of the region in relation to what is expected of it in supporting the centre and level of services expected of the centre to spread to the hinterland.

Chapter V comprises the findings of the research, emphasizing on the analysis and evaluation of those findings. It thus represents the major observations of the study.

Chapter VI, the final chapter, is the summary of the research findings. It outlines the major conclusions of the study, upon which recommendations for future policy measures are based. In that case the proposals for guiding future development planning are presented as the last task of this project.

Footnotes

1. Kenya Government Development Plan, 1979/83, p. 45.

2. Speculation has it that Meru District may be divided up into two districts. If such were to happen, chances are that Chuka would be District Headquarters for the Southern District.

3. The figure was obtained from Meru County Council, and was a compilation of Licensed businesses in 1981. It could not be verified by counting individual business units. However it may be expected that the figure could only have decreased rather than increased because of the economic depression that has affected most parts of the country - and hence potential businessmen - in the recent years.

4. The figure given by the market master.

5. The figure could be higher at present but this was used for convenience and to suit the period when the research was conducted.

CHAPTER II

REVIEW OF RELATED LITERATURE

2:0 INTRODUCTION

This Chapter provides the theoretical framework of the study, as it reviews what has been written regarding the growth centre subject. It starts by defining the key concepts that are commonly used in the study, viz. growth poles. growth centres, and urbanization. It goes further to elaborate on the development of the growth pole/centre theory. Within that theoretical framework the functions and impact of growth centres are stated.

On the basis of the theoretical background and functions of growth centres the policy application is examined. Policies of various categories of countries are reviewed i.e. as applied in developed and developing countries. This is followed by an examination of Kenya's growth centre policy. In the Kenyan case it is observed that growth centre strategy is supplemented by service centre policy - their distinction has been considered as important. Lastly, on the basis of the theoretical background and within Kenya's policy context, a guide to the evaluation of Chuka Town as a growth centre is presented.

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2:1:0 DEFINITION OF CONCEPTS

2:1:1 Growth Poles

The concept 'Growth Pole' may be viewed as the starting point for the concept and hence theory of growth centres. 'Growth Pole' term was first coined by Francois Perroux (1950). He was concerned with development, not just growth[1] i.e. concerned with quantitative as well as with the process of structural change. He took economic development to be bound up with polarization. From his conception, the key element of growth pole concept is that growth does not appear everywhere at the same time. It manifests itself in points or 'poles' of growth with variable intensities. Perroux defined growth poles only and specifically in relation to abstract economic space and not in geonomic (or geographic) space, which he dismissed as 'banal'.

In his definition of space as a field of forces, he viewed growth poles as "... centres, (poles or foci) from which centrifugal forces emanate and to which centripetal forces are attracted. Each centre being a centre of attraction and repulsion has its proper field which is set in the field of all other centres".[2] From this definition the poles are likely to be firms or industries, or groups of firms or industries.

It is within the poles that growth and change is initiated, while the connections between the pole in terms of the flows of inputs and outputs, transmit the forces generated.

Ever since the introduction of the term, it has been associated with a wide variety of indistinct and ill-defined concepts and notions which have arisen partly from the ambiguity of Perroux's initial formulation, partly from mistranslation from French to English and vice versa, and partly from the semantic confusion of many authors. However, most authors agree with Perroux that growth poles have 'propulsive' industries which must be of large-scale, growing faster than the rest of the economy and having a high degree of inter-linkage with other sectors. The 'propulsive' element is emphasized by Hermansen further when he writes "not every centre of nodal region qualifies to be called a development pole. Only those which contain propulsive firms i.e. large-scale firms, technically advanced ... and are capable of generating sustained growth over a prolonged period of time - should be regarded as geographical poles of growth."[3]

What is most apparent from most authors is the overlap between the term 'growth pole' and 'growth centre'. Various authors (and sometimes indeed the

same author) use different terms combining the words 'pole', 'centre,''growth' and 'development' in different ways to designate the same phenomenon. What is common among the authors and of general consensus is the idea that development is selective in its initial incidence i.e. it is polarised.

2:1:2 Growth Centres

Like the term 'growth pole' the concept of 'growth centre' does not have a definition of universal application. However, extensive literature is available concerning the idea and policy of growth centres. Many authors have defined it in various ways. Here an examination is made of meaning attached to the concept by a few of the many authors who have attempted to define it. European Free Trade Association (EFTA) defines it as "... an urban core (however small) and its surrounding area defined by an acceptable journey-to-work, and capable either of spontaneous growth of population, economic activity and income level, or of potential growth". A feature of such a centre is that "the benefits of its growth are likely to be felt also in the surrounding area".[4]

Allen and Hermansen define growth centres as "modes or geographical locations where development impulses are expected to disseminate into the hinterland areas".[5] Fox writes "... an urban place of less than 250,000 people which acts as the vital heart of its development district".[6] He seems to set an upper limit for centres that can be called 'growth' centres, but does not give an alternative term for centres exceeding such population. Nichols gives the following definition: "... an urban centre of economic activity which can achieve self-sustaining growth to the point that growth is diffused outward into the pole region and eventually beyond into the less developed regions of the nation".[7] All the above definitions have a common idea, that growth centres are points where growth or development emanates and eventually spreads to the surrounding (rural) areas. Such definitions contain recurrent themes, relating for example to urban status, size, functional role, location and growth, but emphasis varies and few authors explain the relative importance of the characteristics they list.

It may be asserted, therefore that there is no clear object which may be unequivocally termed a 'growth centre'. However, one may give a working definition to suit the task at hand. That is, examining attributes that accompany urban growth.

There are many isolated attempts to identify growth centres. Some are based on centrality of trade, economic and information flow; others on the requirement that growth centres stimulate further growth in their hinterland. Such views are held by authors like Semple, et al (1972), Casetti (1970) etc.

Some authors have attempted to make a distinction between 'growth poles' and 'growth centres'. Kuklinski (1972) for instance, sees growth poles as nodes or areas of national significance, in as much as their development affects not only the structure of regions in which they are located but also inter-regional correlation and the country as a whole; growth centres are basically inter-regional in character. This distinction is largely a matter of scale, the functional effect of growth poles being attainment of development targets at the national and/or regional level, whereas growth centres have an accessory significance in that they promote local (sometimes secondary) goals. This distinction is, however, rendered ambiguous by its failure to single out the distinct activities that are connected with either of the growth units.

Allen and Hermansen see a growth pole as a main centre in a region, providing services and also growing or showing potential for growth of economic activity, employment, population and income. It needs

to be above a certain population level to enjoy self-sustaining growth. It implies involvement of formation of clusters and/or peaks of development. Compared with the view they express (above) regarding growth centres, it may be noted that the distinction is again based on scale, growth centres being of a lower magnitude and intended to give services directly to the people of their hinterlands.

The merging of the two terms (or sets of ideas) seems to have been established by Bouldville (1966) who stated that a regional growth pole is a set of expanding industries located in an urban area and inducing further development of economic activity throughout its zone of influence.[8] The contribution of his work has extended the notion of growth pole from merely a firm or industry (as propounded by Perroux) to include its incidence in an urban setting. Consequently, the term 'growth pole' and 'growth centre' have been used inter-changeably with little (indeed, in most cases no) distinction. Thus the phenomena they represent are covered by reference to either of the terms. In this report 'growth centre' concept is adopted as a synthesis of such phenomena. It seems most fitting within the framework of this study first because it (study) is based on Kenya's 'growth centre' policy, and secondly, because such (Kenya's) policy does not give undue emphasis to

industries as is the case with growth pole theory. Such reference gives harmony to 'abstract' economic space and geographical space in recognition of the functional roles of the centre in relation to its hinterland.

2:1:3 Urbanization

It is acknowledged that in the course of their development growth centres experience 'urbanization' (Chapter I, 1:1:1 above). This implies an inevitable link between growth centres and the phenomenon of urbanization.

Urbanization is a phenomenon describing the process of change in the situs of populations due to changing conditions in society at large. Its study entails an examination of the factors which start and sustain the process as well as its implications in general broad terms.[9] In this regard we recognize two principal categories of causes of urbanization, viz. 'push' and 'pull' factors. That is 'push'[10] from the countryside and 'pull' of the city (or town), respectively. Such factors as lack of employment opportunities in the countryside force people to leave such areas to seek better opportunities in towns. This sets a trend of immigration into the towns, thus making them (towns) larger and larger-exerting strain on the facilities available in them. Other factors

like lack of social amenities in the countryside have similar effects.

The 'pull' factors are such as modern means of communications, 'attractive' social amenities, employment, housing, health and educational facilities. They make towns attractive to country residents, thus causing the inevitable influx.

The process of urbanization tends to be an intricate matrix of relationships such that major commercial and industrial enterprises tend to go to large towns where markets are more accessible. Besides, these are areas where infrastructure like water, power and sewerage, repair shops, and skilled labourforce are more likely to be available. Also interdependence of industries with others and government institutions is more possible in towns, so that one attraction factor leads to a series of others, interlinked to form a complex urban network.

While the process of urbanization is understood to be promoted by pursuit of benefits by individuals, firms and other enterprises, adverse effects of the phenomenon cannot escape mention. High population pressure, limited job opportunities - hence unemployment and squalor, slum development, congestion and general appalling physical and social conditions etc. are consequences which result from (rapid) urban

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growth and must be considered in all urban planning.

Although the study of urbanization is not the prime purpose of this thesis, mentioning its utility and consequences is important since the very idea of 'growth centres' entails urbanization. In other words, development of growth centres takes place in the form of urban development and therefore the two should from the outset be handled as one package, though most focus will be on growth centre analysis.

2:2:0 GROWTH POLE/CENTRE THEORY

A theory may be thought of as a set of related definitions and hypotheses that attempts to explain a given phenomenon. Although 'growth pole' and 'growth centre' concepts may be analysed separately, they have a common theme, namely, that growth should be concentrated in particular points (nodes or areas) from where its impulses spread to the hinterland. Moreover, it has been argued that the ideas themselves overlap and hence may be treated as one and the same strategy. The assumption in both concepts is that once resources have been concentrated in one centre or region, it will develop a viable economic base and then start spreading development stimuli into the surrounding (rural) areas.

The notion of growth centres implies that investment is best concentrated in the centres rather than scattered around in some vague quest for 'balance' or 'equity'.[11] This deliberate channelling of growth to certain favoured places is geared towards achieving wider regional or national goals of development through growth initiation and transmission. The strategy thus assumes that there will be interaction between the centre and its hinterland and that there will be spread (or trickle-down) effects from the centre to the hinterland.

The growth pole/centre theory draws heavily from central place theory, put forward by Christaller (1933). The key concepts of this theory are 'range of a good' and 'threshold population'. The former denotes the zone around the central place from which persons travel to the centre to purchase the good or service offered at the place. In theory, the upper limit of this range is the maximum sales radius. The lower limit is the radius enclosing the minimum number of consumers necessary to provide a sales volume adequate for the good to be supplied profitably from the central place. This lower limit is the threshold population. It corresponds with the argument forwarded by Allen and Hermansen (1968) that a growth pole should be above a certain population level to achieve self sustained growth. The two authors

usage of 'growth centre' may be analogised with Christaller's central places of lower order. These are central places whose central activities extend their influence over a small area, vis-a-vis a central place of higher order (growth pole in Allen and Hermansen's conception) whose central activities extend their influence over a large area. By the same analogy, since growth centres are dynamic by virtue of the functional relationship with hinterland, it may be expected that central places of lower order will grow to those of higher order-attaining self-sustaining growth.

2:2:1 Functions and Impact of Growth Centres

Growth centres are expected to perform certain functions which may in consequence, have positive or adverse effects to growth and/or development of countries in which they are established. Growth-centre effect has best evidence in the centre-periphery model of economic development, where the centre is the 'growth' centre and periphery the hinterland. In this structure of relationship, the centre is supposed to stimulate economic activities in the peripheral areas. This has the effect of promoting development in the backward areas, as investments are concentrated in growth centres to reap benefits of scale and agglomeration, and later

transmitting those benefits to the hinterland. However, in practice the centre-periphery relationship may operate contrary to the expectation as will be noted shortly.

Growth centres are expected to decentralize industrial and commercial activities in the major towns. By providing employment in such ventures in smaller centres the problem of immigration and hence population pressure in major towns is curbed. In this respect growth centres are seen as small towns in the rural areas that provide locations for decentralized industries and offer urban services to the rural residents, thereby promoting the decentralization of urban activities.

By virtue of their (large) size, role and (strategic) location, growth centres are used for the provision of infrastructure such as water and power, health and education facilities. Other services like residential, industrial and commercial establishments are also found in growth centres, the provision of which help to promote balanced growth and stimulate economic and social development in the peripheral (rural) areas. The centres are also the points for co-ordination of government and local development planning. They also are foci for innovation diffusion through trickledown effect to the rural hinterland. They serve as demonstration points

as technical personnel are stationed into them to spread the 'innovation' to their (centres') catchment areas. Thus their establishment is expected to transform people's attitudes by new ideas and this creates way for more widespread economic development.

Establishment of growth centres may have some adverse effects. Friedmann (1966) explains that the relationship between the centre and the periphery is minimal, and tends to be one-sided, supporting the centre at the expense of the periphery, which remains a backward, exploited area unable to grow because it is feeding the growth of the centre. This mainly takes place when the enterprising population moves from the periphery to the centre. Thus the 'backwash' (or polarisation) effects become more powerful than 'spread' (or trickledown) effects and the result is that the economy of the periphery is eroded and the areas become even more impoverished. Moreover, diseconomies of scale set in if residents of the centre and its hinterland are not able to pay for the services provided, and this makes it difficult for the centre to be self-sustaining.

It was observed that growth centres are essentially urban centres. As such the evils of urbanization, for example congestion, unemployment, and deterioration of physical and social conditions, caused

largely by economic and population growth, become inevitable when the centres attain higher levels of growth. These conditions act contrary to the objective of growth centre policy, achievement of development and welfare. However, in a vast majority of cases the spread effects of the centres outweigh the adverse effects. In particular the service function of the centres is important, a fact that has made academicians and politicians continue to follow the growth centre ideas inspite of the adverse effects that may result as a consequence.

2:3:0 URBANIZATION AND GROWTH CENTRE POLICY

From the foregoing it may be asserted that growth centre policies emphasize urbanization. However, urban development policy does not take direct account of the hinterlands, which growth centre policy is most concerned about. With growth centre policy, the impact on rural development is deliberate. while the outcome from urban development policy is just a 'spill-over'. Thus, growth centre policy is mainly pursued to remove the dichotomy that exists between urban progress and rural stagnance (development).

Countries that pursue the policy of urban development recognise that "urban centres perform indispensable functions in national growth. Many

critical goods and services can only be produced in urban settings. Cities, and especially large ones, bring about external economies which increase productivity". The problems that result from urbanization are considered to be inevitable, and should be regarded as "incidents of larger development".[12] Moreover in pursuing a policy of urbanization the assumption is that it is the best way of delivering essential services to the rural masses, and that concentration is inherently superior and more efficient than scattering services over the range of the region of focus. It should be recalled that the prime purpose of setting up growth centres is to concentrate growth in particular points from where its impulses spread to the hinterland (2:2:0 above). Thus the policies of urban development and growth centres have the common element of 'concentrated development' which renders it expedient to consider them within one policy framework.

A distinction should be made between growth centres and new towns. The latter's proposals call for completely new urban centres, whereas growth centre strategies are based on existing places. New towns are generally proposed as means for channelling population growth away from large cities. Although growth centres may perform this function, their primary function is to provide economic opportunities

for persons from areas with limited opportunities (Alonso, 1970, p.35-56). Thus small centres are set in the periphery, in a bid to distribute investment and also taking some advantage of urbanization economies to these areas.

The policy is adopted when and where there is excessive growth of major cities. There are at the same time regions which are peripherally located, with much slower rates of growth, lower levels of employment and per capita incomes, and high degree of outmigration which accentuates the problems of each set of regions. The policy would create within these regions some of the metropolitan advantages so that growth of employment and population would be stimulated in the regions, and in consequence, curtailed in the metropolitans. Moseley (1974) suggests that "... if growth is to be effectively promoted in distressed areas, then concentration of investment is required to provide the necessary environment for it".[13] The policy recognises other advantages like provision of infrastructure, innovation adoption and control of outmigration. If migrants from the distressed region are to be intercepted in their regions or origin, then again, large centres in the regions are required. By concentrating the services in the designated centres, the needs of the rural people are met more directly and at lower cost.

Such concentration facilitates interaction between local people. Furthermore, a person gets more than one service when he attends such a centre. There is therefore a wide range of objectives that are put forward for justifying growth centre policy.

2:3:1 Growth Centre Policy Criteria

There are some basic issues underlying policies of deliberate spacial discrimination. Hoover (1969) wrote "... the only legitimate final aim of public policy is to improve the welfare of people rather than areas as such".[14] This leads to the rationale of spatial discrimination that although people should be helped according to their needs, this is best done if 'places' are helped according to their potential. This means that towns to be designated as growth centres need to have already existing services and support populations that favour massive investment and further growth.

It is not easy in practice to apply the policy in a way both politically acceptable and economically effective. Total decentralization (dispersal) of economic activities may be most desirable politically but from an economic viewpoint this may prove irrational as much as it would be impossible. Thus, optimal selection of areas (or centres) has to balance

immediate needs against growth potential. A decision is also needed on how far, between extremes of concentration and dispersal attention should be focused. Moseley (1974) says of growth centre policies "... those policies designed to bring about a greater degree of intra-regional spatial concentration of economic activity than would otherwise be likely to occur, and to do so by favouring areas of promise rather than areas of need."[15] He and Hoover agree that more emphasis should be laid on 'potential' and not 'need'. However, this will require clear definition and weighting of the factors that indicate potential. It also leaves unresolved issues like number of centres, degree of spread and specificity of centres.

The third issue relates to implementation of the policy. It has to be established what priorities have to be taken into account, i.e. whether to emphasize export-oriented activities, using capital or labour-intensive techniques etc. All these render the policy ambiguous and make it no more clear-cut than the growth centre theory. However, the above criteria will be used to examine the implications of the growth centre policy in various parts of the world.

2:3:1:1 Growth Centre Policies in Developed Countries

Growth centre strategies have been instituted in many industrial countries in recent years. They are mainly designed to promote development of lagging regions by concentrating investment so as to reap scale and agglomeration economies. They are perceived as points of attraction of industry and hence of migrants who otherwise would go to the large congested urban areas in search of job opportunities. Hausen[16] outlined the policy in the context of U.S.A. This is based on the ability of growth centres to help spread economic activity into their hinterlands.

In Scotland there has been shift of emphasis from areas in need to areas with potential, and from accommodating growth to stimulating it.[17] That way, "economic growth can take place on the right scale and with speed."[18] In Ireland, the concentration is mainly to attract new industries and create employment, and also to curb outmigration.

With respect to France, growth centre policy is defined as "coherent efforts to stimulate the development of certain priority localities in the hope of providing a greater stimulus to the regional development of a particular area."[19] Bernard identified two kinds of growth centres in France - industrial complexes, large and small, and higher-order urban

centres, where emphasis was placed upon tertiary function. Here too, more attention is paid to potential rather than to need. This, and the industrial attraction function seems to be the chief characteristics of growth centre policies in developed countries. In these countries existing medium-sized or small-sized towns are chosen for the purpose of establishing growth centres.

2:3:1.2 Growth Centre Policies in Less Developed Countries

Many less developed countries use growth centre strategies without dignifying the name as such. It is during the last few decades that growth centre policies have become incorporated with growing explicitness into the national development plans of an increasing number of these countries.[20] Their policies are officially presented as efficient and progressive responses to the need for organising development that will reflect the economic, social and political aspirations of national governments.

Most of these countries apply the strategy of selecting and strengthening already existing centres. Others emphasize reduction of urban primacy and regional inequalities. In Tanzania, for instance, this is done by a dual thrust towards integrated

rural development and distribution of economic growth over a number of secondary centres and away from the capital, Dar es Salaam.[21] The secondary cities are promoted to act as centres for regional administration and service provision, and as foci for a decentralized industrial location strategy aimed at expanding job opportunities outside agriculture throughout the country. A number of the designated 'nine towns' were already established commercial and manufacturing centres. The others were district centres in areas of extreme poverty and under exploited resources where the promotion of urban growth was to provide a stimulus and re-orientate the existing system of cities towards a more equitable national coverage.

In Iran[22] multiple objectives of spatial policy are pursued, ranging from the provision of adequate infrastructure to securing a better distribution of benefits and facilities to all parts of the country. Here too, a number of existing major urban areas are chosen within which to concentrate major national investments, particularly industry, but also education, tourism and other economic activities. These centres are expected to attract large-scale state and private enterprises away from the capital, Tehran, to stimulate the mobilization of the natural resources of their particular regions.

·In the countries considered the strategy recognizes limited availability of resources. It (strategy) is therefore necessary because it is a major efficient way of providing government services and does so more cheaply, it also helps to promote commercial activities and hence growth of towns. These in turn attract industrial investments since most private investors prefer places where economies of scale are already present.

2:3:2 Growth Centre Policy in Kenya

Growth Centre Policy has been adopted in Kenya as a strategy for the development of rural areas. It has been adopted to encourage expansion of several towns in addition to Nairobi and Mombasa serving as designated growth centres for the country's regional development. The policy was formulated in recognition of the importance of growth centres which includes the following:-

(i) the need to decentralize industry to reduce attraction pull on Nairobi and Mombasa.,

(ii) strengthening regional urban hierarchy to improve public service delivery.,

(iii) as locations of some of the large-scale agricultural and resource-based industries.,

(iv) as incubators of small-scale industries for subsequent dispersal into the hinterland, and

(v) to reduce migration loss from regions by offering alternative urban destinations for local migrants.

In Kenya growth centres were first mentioned in the second Development Plan (1970-74). Their initial aim was to decentralize (future) urban growth to the designated growth centres, away from Nairobi and Mombasa. To begin with, seven centres, viz. Nakuru, Kisumu, Thika, Eldoret, Kakamega, Nyeri and Embu, were selected (designated) with the aim of giving them priority in public works. In the third Development Plan (1974-78) Meru and Kitale were added - all the nine were to be alternative destinations for migrants to the two cities.

The centres were chosen on their individual merits rather than on whether or not they cohered to form a national spatial strategy. Thus, the centres were selected by virtue of their large sizes with potential for one or more specialized growth functions. Some of them are strategically located relative to existing or potential population distribution, resource development and transport network, their existing economic organisation and level of infrastructure and

centres of education and administration - thus have created locational advantages for initiation of 'growth pole' industries.

Some of the centres were selected because of the administrative, commercial and/or industrial potential. Availability of infrastructure like water, sewerage, electricity and communication network were also of major consideration. The selected centres were also favoured by agricultural potential and population densities around them - they could be important trading centres with small- and medium-scale agricultural processing industries.

Inspite of such considerations some of the designated growth centres need(ed) government and private development initiative to achieve a level of self-sustaining growth. After the initial stage of government assistance and guidance they will be able to generate additional employment and investment opportunities - leading to a process of cumulative and self-sustaining growth. The nine designated centres were thus seen to have the highest growth potential, which could further stimulate growth activities around themselves.

In Kenya, the centres are encouraged by provision of some basic physical and socio-infrastructural services to serve the population living in their

hinterlands. This is felt a sure way of making them alternative population interceptors, which further helps to avoid the problems arising from the excessive concentration in the two major towns i.e. Nairobi and Mombasa. The policy may also be seen as a measure to decentralize urban activities to achieve a more equitable distribution of (urban) services. It has therefore been government endeavour to intensify service facilities to make the centres serve their catchment populations more effectively. Development of a centre would stimulate development of its hinterland in the event of offering job opportunities and market for local produce - which in turn supports the development of the centre. This way a mutually reinforcing relationship between the centre and its hinterland is established.

For effective distribution of services, and hence accelerated rural development, a planned network of designated service centres has been adopted. It is to complement and stimulate integrated rural development alongside the selection and development of the few strategically located growth centres. This suggests that in Kenya a distinction is made between growth centres and service centres, an examination of which seems necessary.

2:3:2:1 Growth and Service Centres : A Distinction

It may be observed from the outset that the distinction between the two types of centres is based on their respective functional roles. It has been mentioned that growth centres are strategically selected, designated to promote growth and to counteract excessive urban congestion in Nairobi and Mombasa. Their service functions are supplemented by others like industries which are based on agriculture and which further support agricultural productivity. They operate for wider national and regional hinterlands. Their service functions recirculate capital flows within their particular hinterlands and are therefore a result of the existence of the population rather than a cause of it.

On the other hand, service centres, usually associated with small urban places, are centres with social and commercial functions, which provide basic daily needs of the rural people. They are therefore close to the people, providing for those needs (services) not provided by the principal towns (growth centres). Since capital available for the provision of services is limited, service facilities are concentrated in certain places as opposed to dispersing them throughout the district. This ensures the most efficient use of capital resources and also ensures a more equitable and

rational geographical distribution of infrastructural and social services in terms of population distribution over the country.

Service centre policy thus aims at the provision of services and infrastructure largely (but not exclusively) to rural areas; growth pole/centre strategy aims at inducing growth functions in a few strategically selected larger centres. It may be inferred therefore, that all growth centres are service centres, but not all service centres are growth centres. It should be recalled at this juncture that self-sustaining growth is the hallmark of growth centres, a level that any service centre could achieve only through establishment of heavy investments.

However, as stated in Kenya's third Development Plan, "the strategy of concentrating urban development in selected centres will promote formation of small towns in rural areas. As these grow they will form a level of urbanization, large enough to be economically served with public water supply, sewerage disposal, and other public service facilities. Once a centre has its basic infrastructural facilities it will tend to attract commercial and industrial development which will enrich the lives of the people of the rural areas and provide improved employment

opportunities".[23] With such development the centre may be said to be performing 'growth' functions - which ensure self-sustaining growth.

In Kenya, service centre strategy - a system placed in the context of national urban policy - is based on service centre hierarchy. These centres are scheduled to provide services at four levels. The classification is based on the services provided, economic potential of the area served, population served and the spatial distribution required to promote development throughout the nation. This classification is presented as in Table 2.1

Table 2:1 Designated Service Centre Hierarchy[24]

Category of Centre	Average Population (Residents of Centre)	Minimum Population (Catchment Area)
Local	Under 300	5,000
Market	" 1,000	15,000
Rural	" 1,500	40,000
Urban	" 22,130*	120,000

* Excluding the 11 municipalities (Principal towns) the average is 4,565.

Source: Kenya Government Development Plan, 1979-83.

Within this framework of service centres, certain towns, for some reasons (stated above e.g. location in relation to existing or potential distribution of population, resource development, level of infrastructure etc), are major centres of urban growth. Their functions elevate the principal towns - growth centres - above the normal functions and size of urban centres (highest category of service centres).

The minimum number of people required to support a particular service function varies according to the type of service. For instance hospitals require more people than shops. As such the major service functions are provided in urban centres, the (other) lower categories accommodating fewer and less important functions. In this respect all the services present in lower-order categories centres are also present in the higher category. The reverse is not necessarily true. Thus the local centres are more than any other category, the highest (urban centres) being the fewest. This arrangement (hierarchy) ensures efficient utilization of services as it avoids duplication of services within small areas. Since the area of study falls within the 'urban centre' category, brief attention will be paid to it (category).

Urban centres are medium-sized towns, serving as main commercial centres, usually for an entire district, whose importance derives from administrative and commercial functions and central location. However, some are not district headquarters but have particular circumstances. Such are as Athi River, Karatina, Mumias, and presently, Chuka. Scheduled services for urban centres (other than principal towns) include,[25] administrative (preferably district) including judicial functions and police station. They (centres) should have communication services such as (at least) a national trunk road, post office facilities, telephone, regional bus service and an air strip. For education purposes there should be a secondary school with higher section (Form VI) a technical primary school and/or a village polytechnic. A district hospital is a requirement while recreational facilities such as a stadium, public library, show ground, recreational park, cinema and a social hall should also be present. All urban centres need have services like water and sewerage systems, and electricity, all which should be present at a scale capable of supporting other urban functions and activities like commerce and industry.

2:4:0 CHUKA TOWN: A GROWTH CENTRE?

The foregoing review of literature forms substantial theoretical background to this study. It forms the framework within which Chuka's viability as a growth centre may be examined. For such an appraisal Chuka town is studied against growth centre criteria which include its administrative potential, agricultural development and tourist potential of its hinterland, and proximity to such area's population concentration. The town's industrial potential, level of existing infrastructure and accessibility by communication media are other indicators.

At present Chuka is not a designated growth centre as is the case with Embu or Meru. It is classified as an urban centre by virtue of the population resident in the town, which is close to 2,500, and also the catchment population of more than 150,000 people. Besides these, it has such functions as commercial, administrative and civic roles, which also place it at the level of an urban centre. It may not be possessing all the functions (outlined above) of an urban centre. However, from the title, 'development of Chuka town to a growth centre' implies that we expect it to attain a certain status given by the range of services provided to the people both in the centre itself and those in its hinterland.

Thus, it is the task of the remainder of the project to make an evaluation of the prospects of Chuka's performance as a growth centre. This involves an examination of the conditions under which the town is or could be a growth centre, taking into consideration the potential negative (backwash or polarisation) and positive (spread or trickledown) effects of such development.

The identification of the constraints to its development to such a status should lead to justification of Chuka's designation as a growth centre upon solution of such problems (or constraints).

Footnotes.

1. 'Development', unlike 'growth', involves quantitative expansion and qualitative change. Thus, economic and social development is concerned with transformation within an economy of society - involves the spread and acceptance of new ideas and new ways of doing things. "Development is an innovative process leading to the structural transformation of social systems (Friedman, 1969, p. 4). "... economic growth means more output, and economic development implies both more output and changes in the technical and institutional arrangements by which it is produced". (Kindleberger, Second Edition, 1965, p. 3).

2. Perroux, F. "Economic Space, Theory and Applications" Quarterly Journal of Economics, (64, 90-97) 1950, p. 27.

3. Hermansen, T. "Development Poles and Development Centres in National and Regional Development, Elements of Theoretical Framework". In Kuklinski, 1972, (1972b, p. 29-30).

4. E.F.T.A., 1968, p. 21.

5. Allen, K. and Hermansen, T. "Economic Growth - Regional Problems and Growth Centres (1968) in EFTA, 1968, p. 64.

6. Fox, C. "The Role of Growth Centres in Regional Economic Development". Department of Economics, State University of Science and Technology, Ames Iowa, 1966, p.1.

7. Nichols, V., "Growth Poles: An Evaluation of their Propulsive Effects". Environment and Planning, (1, 193-208) 1969, p. 193.

8. Bouldville, J.R., "Problems of Regional Economic Planning". Edinburgh University Press, Edinburgh, 1966.

9. Jackobson, L. and Ved Prakash (Eds), "Urbanization and National Development". Article - Urbanization and Urban Development, Proposals for an Integrated Policy Base". Sage Publications, Beverly Hills, California, 1971.

10. These concepts have grown in the context of urbanization that is caused by migration from rural (countryside) to urban areas (cities or towns). Factors causing urbanization are analysed in "Urbanization in Developing Countries". An Article for the International Union of Local Authorities, Noordwijk, Netherlands, 1967.

11. Darwent, D.F., "Growth Poles and Growth Centres in Regional Planning : A Review". In Friedman and Alonso (1964), p. 547.

12. Pacific Conference on Urban Growth, Conference Highlights, p. 3.

13. Moseley, M.J. "Growth Centres in Spatial Planning" Pergamon Press, Oxford, 1974, p. 20.

14. Hoover, E.M. "Some Old and New Issues in Regional Development". In 'Backward Areas in Advanced Countries', (Ed) E.A.G. Robinson, MacMillan, London, 1969, p. 350.

15. Moseley, M.J., (1974), op. cit., p. 23.

16. Hausen, N.M., "Criteria for a Growth Centre Policy". In Kuklinski, 1972.

17. Cf. arguments by Hoover and Kuklinski (Section 2:3:1 above).

18. The Central Scotland White Paper of 1963 (Scottish Development Department, 1963).

19. Bernard, P. "Growth Poles and Growth Centres in Regional Development", Vol. III Growth Poles and Growth Centres as Instruments of Development and Modernisation with Special Reference to Bulgaria and France, Report No. 7014 UNRSD, Geneva, 1970, p. 64.

20. International Urbanization Survey Reports: Volumes on Chile, Colombia, Kenya, Nigeria, Peru, Turkey, Venezuela, Zambia (Ford Foundation, New York, 1972).

21. Outlined in Tanzania's second Plan for Economic and Social Development, 1969-1974.

22. Iran's Fifth Development Plan, 1974-1978.

23. Kenya Development Plan, 1974-78, p. 120.

24. In Kenya, every centre with over 2,000 residents is classified as 'urban'.

25. Kenya Development Plan 1979-83, p. 517-518.

CHAPTER III

THE STUDY AREA

3:0 INTRODUCTION

The task of this chapter is to give background information regarding Chuka Town. The aspects dealt with here include the geographical set-up of the town, followed by its physical characteristics. Its administrative set-up, historical development, social and economic bases follow. Finally, the range and extent of services rendered by (and at) the centre are outlined. The chapter thus attempts to evaluate the roles assigned to the town as an urban centre, and forms the basis for its appraisal as a growth centre.

3:1:0 LOCATION AND SIZE

Chuka Town is situated in Karingani Location of Meru District. It lies 0.20° South of the Equator and 37.9° East (longitude). It is about 40 kilometres to the East South East of Mount Kenya, and rises 4845ft (1450 metres) above sea level. It is about 200 km from Nairobi City and approximately 88 km. and 50 km from Meru and Embu, respectively. Map No. 1 shows the location of Chuka in the national context;

LEGEND

AREAS DEVELOPED WITHIN PERIODS

- 1913_1933
- 1933_1958
- 1958_1982

MAP NO. 3

CHUKA TOWN
'NATIONAL CONTEXT

LEGEND:

- NATIONAL BOUNDARY
- PROVINCIAL BOUNDARY
- DISTRICT BOUNDARY
- STUDY AREA
- DISTRICT HEADQUARTERS
- INTERNATIONAL TRUNK ROAD
- NATIONAL TRUNK ROAD
- WATER SURFACE
- HIGHLANDS

SCALE 1 : 1,000,000

MILES 0 50 100 150

NTHIGA, NJIRU M.
DEPARTMENT OF URBAN AND REGIONAL PLANNING
M.A. PLANNING YEAR II, 1981/82

NORTH

Map No. 1

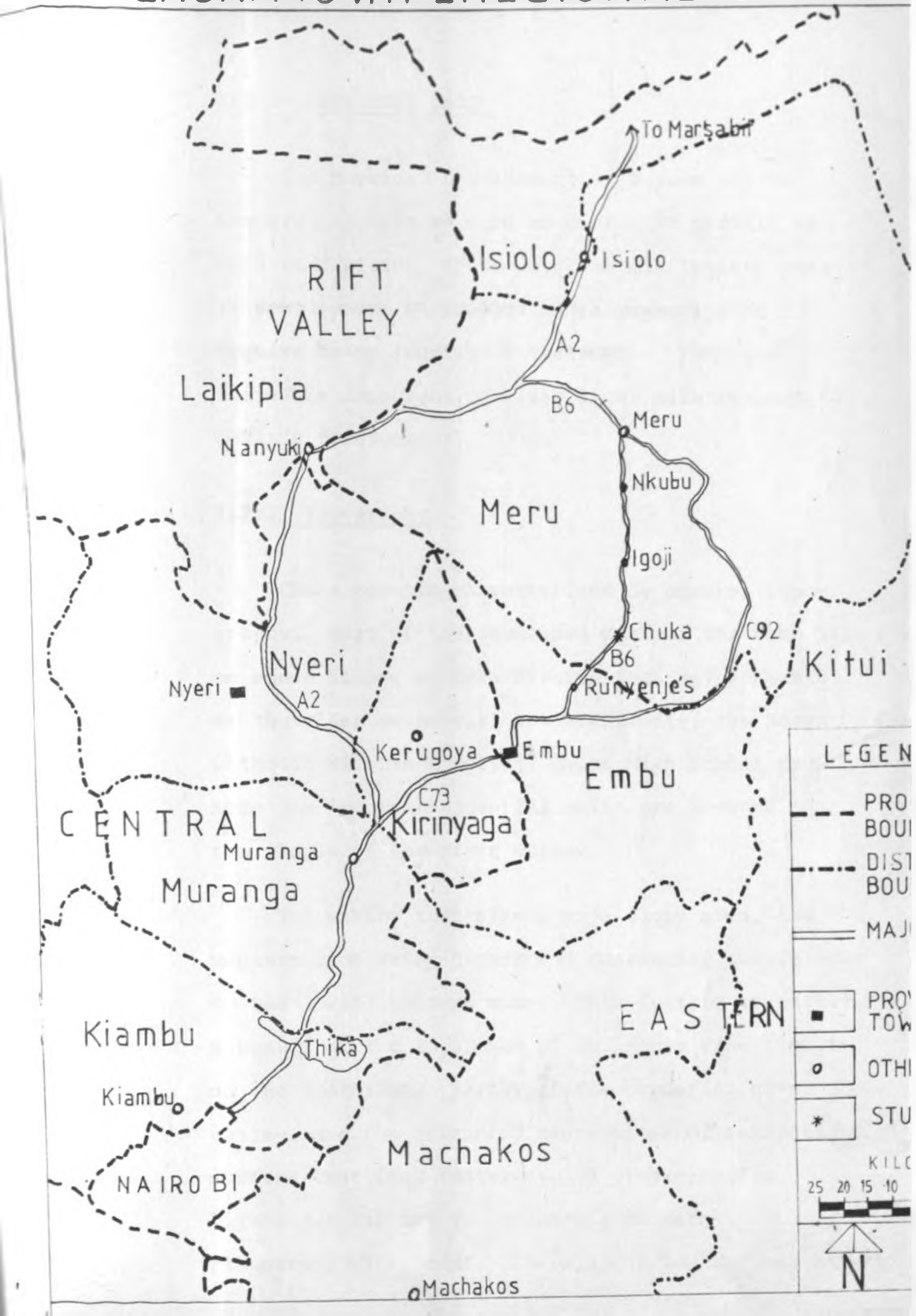
Map No. 2 gives its regional context.

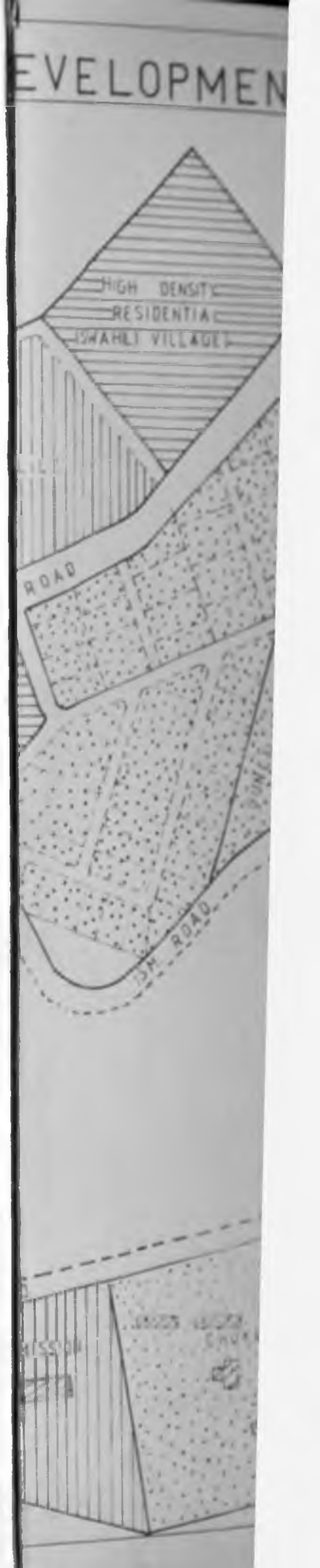
The town, which is basically an administrative and commercial centre, accommodates a population of between 2,000 and 2,500 inhabitants.[1] It is thus a service centre of urban status (footnote 24, Chapter II). Over the past few years tremendous expansion of administrative, commercial and, to a lesser extent, industrial activities, has taken place. Until 1979 the township occupied an area of 493.25 acres (approximately 200 hectares). In September 1979 the town was elevated to Urban Council status, upon which the boundaries were extended to cover an area of 66 sq. km. (6600 ha.) and and additional rural population of around 20,000 people.

At the time of the extension of boundaries, the Ministry of Local Government felt confident that the town could be self-sufficient in the provision of such services as water and sewerage system and lighting. These were noted to be likely to attract investments, hence causing further growth of the town that could bring about development within the town's hinterland.

It may be adduced from the outset that the new Urban area is too large for the council to manage effectively. This is likely to constitute a major constraint to the town's development, since at present the range of services available cover only the initial urban area of 200 ha. It will be examined at a later section how such expansion has or may affect the management of the town's affairs, and hence the development of the town both as a service and a growth centre.

CHUKA TOWN _REGIONAL CONTE>





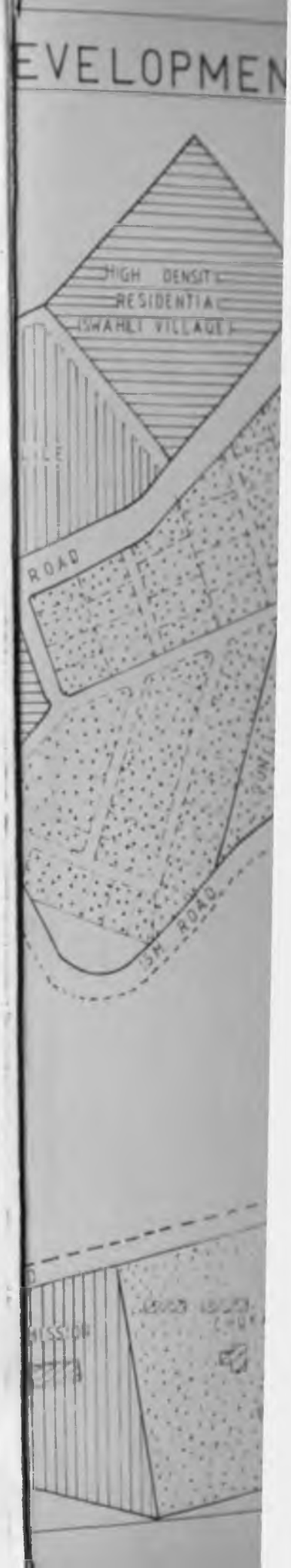
3:2:0 PHYSICAL BASE

The physical development of a town may be hampered by factors such as difficult terrain or soil conditions. These physical limitations pose as development thresholds whose overstepping require heavy (costly) investments. They are therefore important considerations with respect to Chuka's development.

3:2:1 Topography

Chuka town is characterised by diverse topography. Most of the developed part of the town lies on steep slopes of Naka River. Such developments as the older commercial establishments, the Roman Catholic Mission Hospital, Chuka High School and some low-income residential units are located on the slopes of the river valley.

The entire town stands on a slopy area, the western side being higher and descending undulatedly to the (lower) eastern side. This feature is partly a result of the influence of Mt. Kenya (the town is on the foothills), partly of the bordering river valley, and the truncated depressions of seasonal streams that flow eastwards. A cross-section Figure 3.1 and map No. 4 (contour pattern), illustrate this point. There are a few marshes between



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SCALE:

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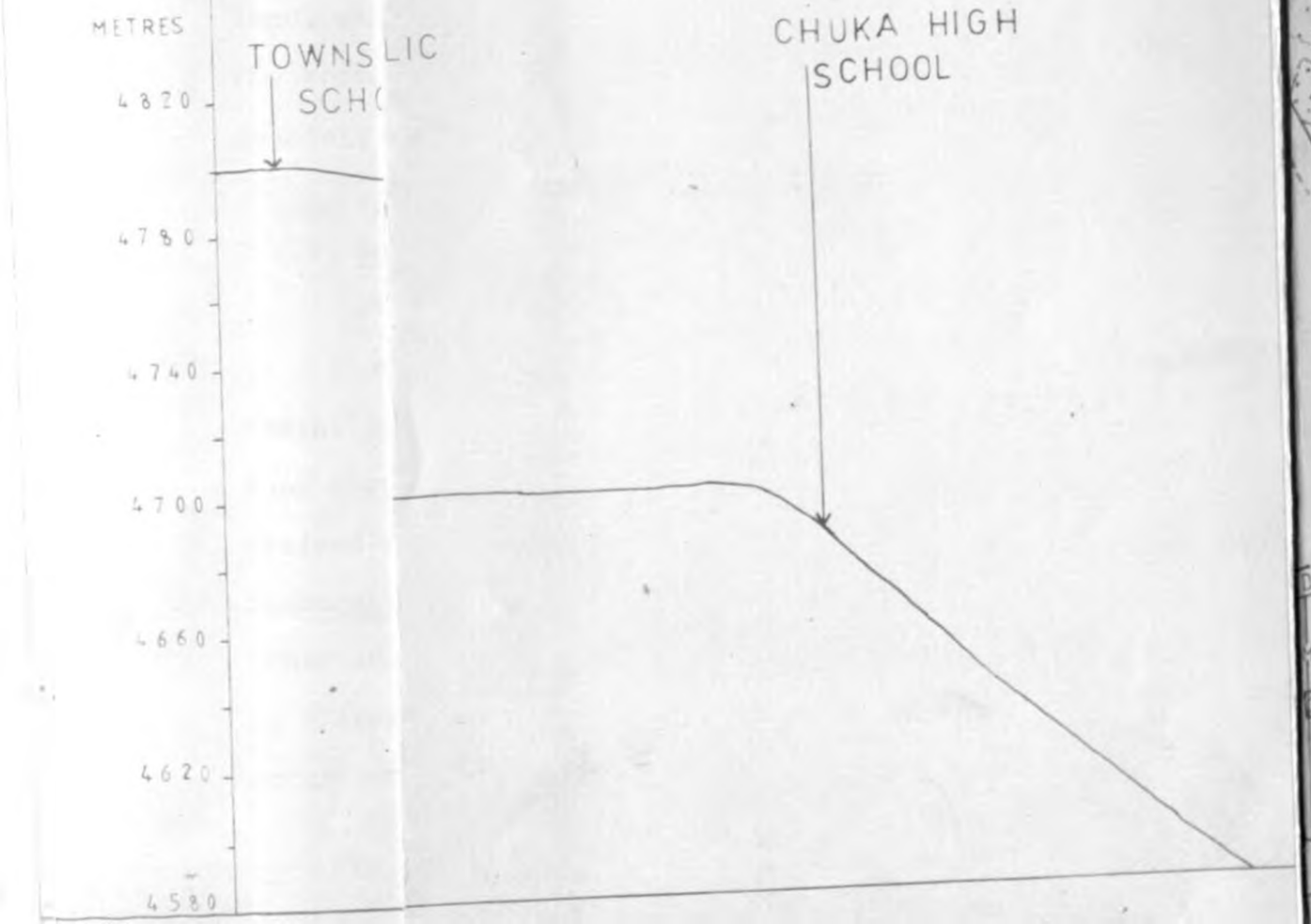
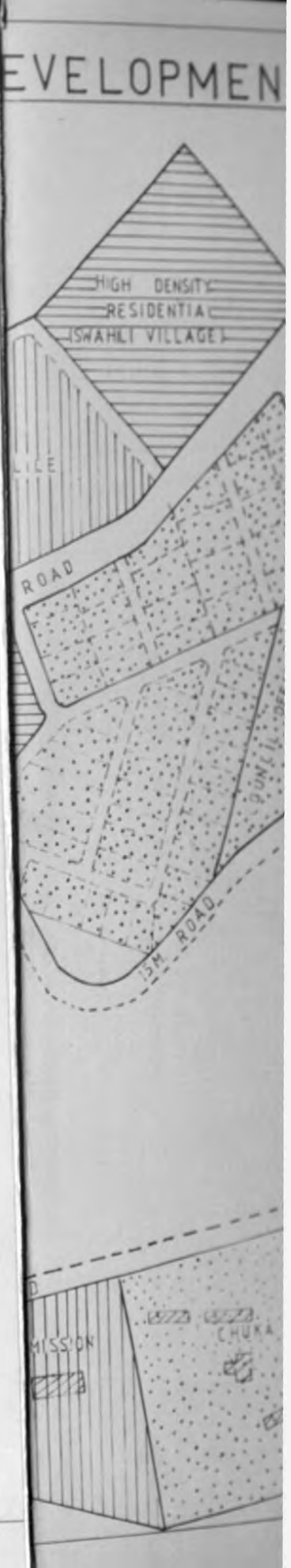
Figure 3.1





WEST_EAST CROSS-SECTION

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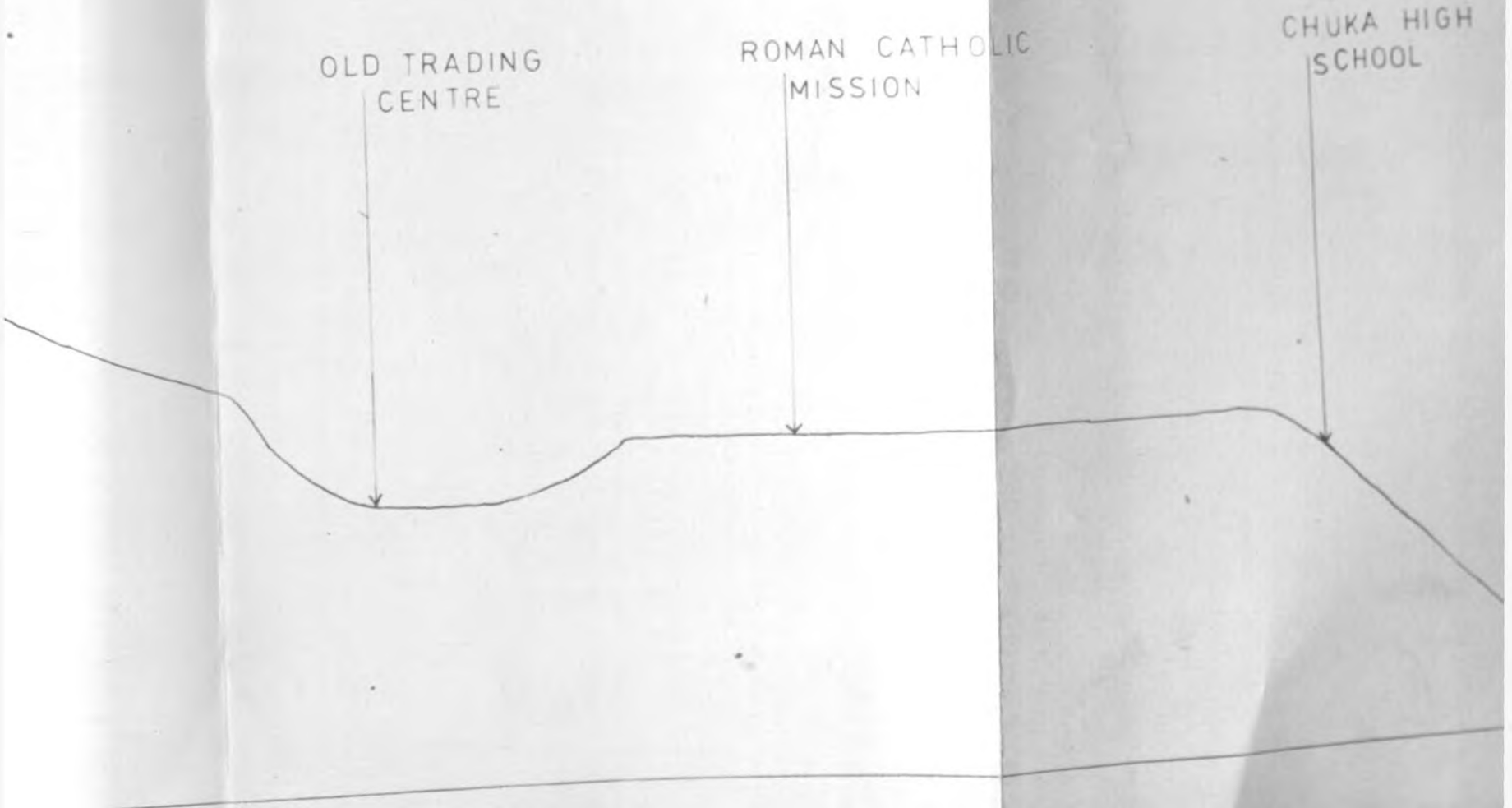
Figure 3.1

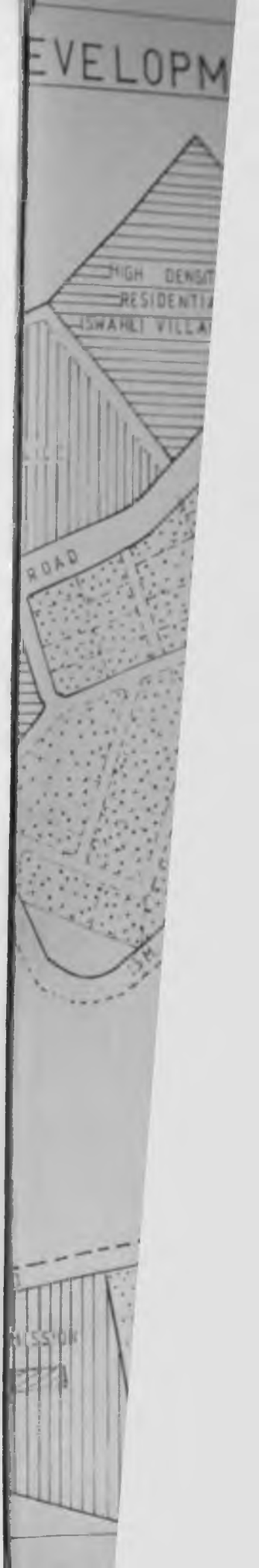


Chuka Hospital and Kathituni Boarding School. These features are likely to inhibit the physical growth of the town.

The steep slopes are unconducive to building construction - developing such areas is very costly. The varied terrain is also problematic in the laying of roads, water and sewerage networks. It may be envisaged outright that it is, and will always be very expensive to provide public utilities - which are an important component of any human settlement, particularly in urban areas - in this town. Some urban developments (e.g. industries) require flat land, which is not easily available in Chuka. The topography of Chuka town is therefore a disadvantage to its development.

3.2.2 Soils

It was noted that the town stands on the foothills of Mt. Kenya. Thus it is located on a zone characterised by volcanic rocks and with well-drained deep laterite soils. Such soils are favourable for contruction of buildings, roads and other urban functions. Chuka's physical development is therefore largely favoured by the absence of notorious black cotton soils.



3:2:3 Wind Direction

The general direction of wind is an important phenomenon as regards siting of some land uses. Its knowledge is particularly important in guiding the location of noxious industries, sewage disposal plants and any other uses that are not conducive to health or convenience. In Chuka the prevailing wind blows North-Westwards, and should be acknowledged in the future planning of the town.

3:3:0 ADMINISTRATIVE SET-UP

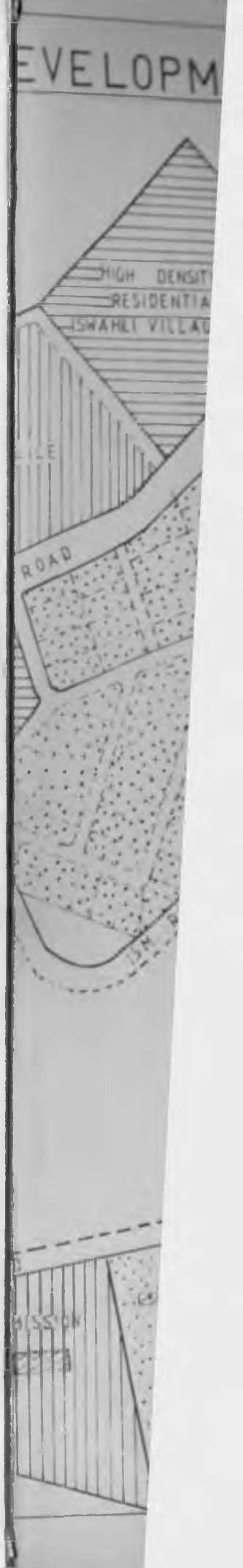
The administrative functions of the town may be examined in two categories: the Central Government agencies, and the Local Government Concerns.

3:3:1 Central Government Authority

It has been stated that Chuka is mainly an administrative town. Being the headquarters for Nithi Division, the town accommodates the office of the District Officer and Chief for Karingani Location. Moreover, Chuka Town has a full-time chief, in charge of its affairs. To strengthen the contention that the town is mainly an administrative centre, the presence of other Government agencies is acknowledged.

Located within Chuka are several Ministry Departmental offices which monitor their respective activities throughout Nithi Division. These include the Judicial Department - represented by a court manned by a Second Class Magistrate, Police - headed by an Officer Commanding Police Station (O.C.S) and Administrative Police (AP) attached to the D.C.'s office. Other sectorial departments are Water Office, Ministry of Transport and Communication's (office and camp), Co-Operative Ministry, Public Health, Probation, Agriculture and Livestock, Basic Education, Adult Education - under Ministry of Culture and Social Services, Survey and Adjudication, Forest Station (6 km away at edge of Mt. Kenya forest), Community Development (under C.D.A.), Registration Bureau, and a Kenya Tea Development Authority (K.T.D.A) office.

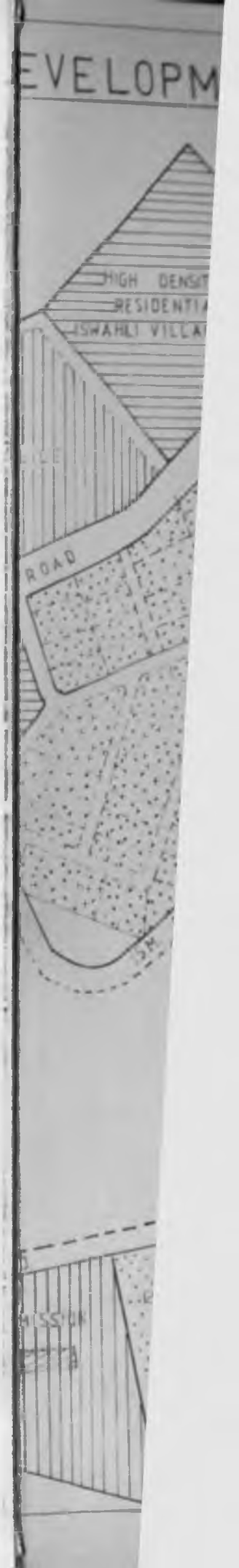
Although these (government) agencies have a part to play in the development of the town, they are not directly responsible for the management and (especially physical) development of the town. This role is vested in the Local Government agencies which are directly responsible for the provision of specified (social and infrastructural) services within the town.



3:3:2 . Local Authorities

These are supposed to provide public utility services in the towns - hence concerned with the development matters of the town. The County Council of Meru has been the main authority responsible for the provision of the services (e.g. roads, recreation and market facilities) in Chuka Town. With the formation of Chuka Urban Council[2] (barely three years old) the responsibilities have been taken up by the urban authority. However, due to its youth and inability to raise substantial funds on its own, the Urban Council is largely governed by the mother County Council. This is done by the head office at Meru and the County office at Chuka, headed by an Assistant Administrative Officer.

The Urban Council is composed of six (6) councillors representing the wards viz. Chuka West and East, Mugirirwa West and East and Muiru West and West, and headed by a Chairman to Council. However, the day-to-day affairs of the Council are run by a team of full-time employees whose chief executive is the Clerk to Urban Council. He is assisted by a Revenue Assistant, a typist and a messenger. Other employees include one Junior Market Master, two market askaris, two sweepers and a watchman. The Council has a Community Development Department with a Social Worker as the only employee.



The Council, as indicated before, is not independent financially. It thrives mainly on grants from the County Council of Meru and will continue to do so until it becomes self-reliant. It (C.U.C.) is charged with the duty of collecting plot rents. Other sources of revenue are licences (to businesses) market and poll rates. The closed market, now under construction for modernisation, will, when completed, be one major source of revenue. It will also streamline the system of market fee collection which is presently rather crude. The market master waits for the sellers to 'earn enough' to be able to pay the fee.

The Urban Council, already with a separate account with Kenya Commercial Bank, Chuka Branch, should be able to be self-reliant once the plan for Chuka is prepared (currently being prepared at the Provincial Physical Planning Office, Embu). This will enable the Council to confidently put up revenue-generating projects such as sewerage system, abattoir, nursery school and petrol station,[3] which have been delayed by the absence of a physical development plan.

Before the council can be self-sufficient, it will continue to channel its development priorities to the County Council and District Development Committee of Meru. This is done with regard to the

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needs and wishes of the Council for particular services. However it (C.U.C.) is responsible for the implementation, management and maintenance of the services within the town. These include only those services within the urbanised part of the council's area of jurisdiction - the rest is handled by the County Council along with the rest of the (rural) district.

3:4.0 HISTORICAL DEVELOPMENT

3:4:1 Background

Chuka came into existence in 1913 when an administrative sub-station (under Embu) was built at the site - then 'Gatumbi' or 'Bankumbu'.[4] Chuka and Mwimbi (sub-tribes within its hinterland) first came under nominal administration in 1907 when Embu station was established. At the time Chuka was in Embu District (Central Province) which by virtue of its vastness was difficult to administer.

In 1912 the Upper mainroad (B6) to Meru was opened up, thus opening some new country in Chuka. It was felt that the station at Embu was too far away to control Chuka and Mwimbi effectively. Besides, the enemity between the Chuka (tribe) and the Embu discouraged the former from going to Embu. Thus, the sub-station of Chuka was opened up early in 1913.

The structures put up at the time were of temporary nature except for the house of the Assistant District Commissioner which was built of stone. In July the same year, Police and Tribal Retainer's Lines were constructed, made of wattle and daub.

3:4:2 Stages of Development

The historical growth of the town can be traced through stages of development divided into three time periods each of which coincides with significant events and activities. Each of the periods represents a span in time when Chuka assumed increased administrative (and commercial) functions. These periods are:

1913 - 1933

1933 - 1958

1958 - 1982

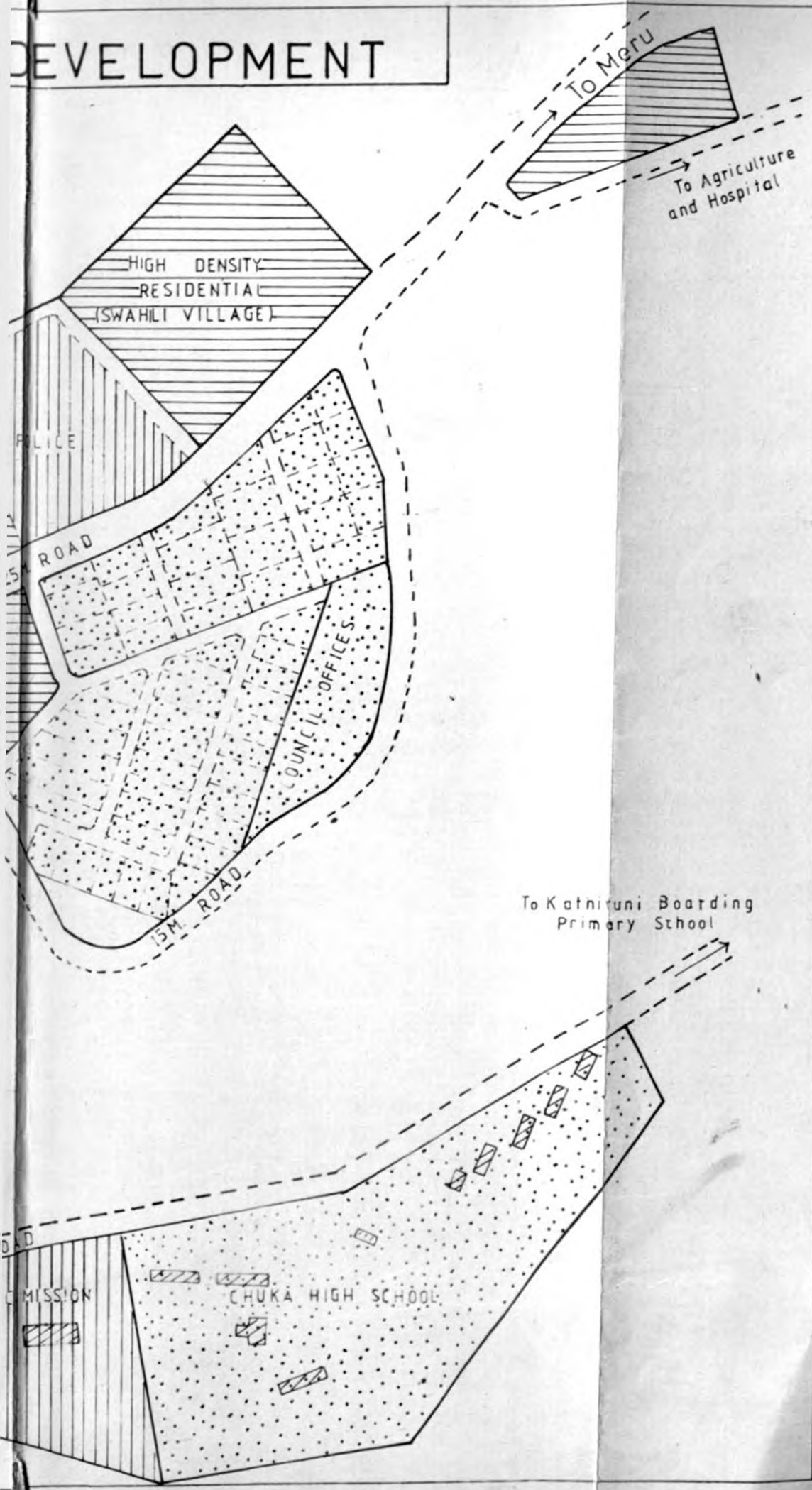
Developments corresponding with these periods are given by Map No. 3.

1913 - 1933

Construction work on the Police and Tribal Retainers lines, the ADC's house and office started immediately after the sub-station was established.

In 1914 a trading centre was opened up and one duka was started, trading in cotton, piece goods,

DEVELOPMENT



LEGEND

AREAS DEVELOPED WITHIN PERIODS

- 1913_1933
- 1933_1958
- 1958_1982

MAP NO 3

beads, wire, tobacco leaf, and hides. In April of the same year the centre was gazetted a township.[5] Apart from meeting the needs of the station the centre attracted considerable custom (trade goods) from local residents and a very promising trade sprung up. Following this, a considerable bulk of tobacco was sold out of the district. It may be noted from this that the dominance of the town's administrative and commercial functions is as old as the centre itself. The same year also saw the establishment of two government institutions. A prison and a police post were erected, which strengthened the administrative role of the centre.

In the years that followed the centre grew very slowly, which may be attributed to the First World War. In 1915 the centre was made a recruitment point for the Carrier Corps Porters for the war. However the same year saw the opening of the first permanent trading shop. By the end of the year there were seven (residential) houses and a mosque. Chuka was also made the meeting place for the Local Native Tribunal for Chuka and Mwimbi. Between 1913 and 1917 the road (36) between Embu and Meru via Chuka was constructed, and the first motor vehicle to accomplish a journey through to Meru did so in 1916. In 1918 Chuka was made a Famine Relief Camp, since it was the farthest point to which food could be transported by carts and

waggons. This further made it central to its hinterland.

It was closed as a permanent administrative centre in 1920. In 1922 it was made a medical centre, but later closed down (1925), leaving commerce as the major activity. This too was not very significant since only two shops were running on full-time basis. At this time the hinterland was also very poor and could therefore not support the centre effectively.

Between 1924 and 1925 a school was started by the Presbyterian Church of East Africa. This lasted for only one year due to lack of pupils, and so was transfered to Ndiruni, a village about three miles from Chuka. Among (other) important developments that took place by the end of this period was the opening up of the first African traders' shops (around 1930) and the establishment of a Roman Catholic school and hospital in 1931.

1933 - 1958

In June 1933 Chuka, Mwimbi and Muthambe (constituting present Nithi Division) were transfered to Meru District, which, together with Igoji and Miutini (latter was eventually integrated into Igoji Location) formed the Southern Division. The Local Native Council for the area was poor; hence the

services provided in and around the centre were fairly inadequate. For instance, there was only Chogoria Hospital (around 20 miles away) to offer medical services.

The commercial function of the town was very weak around that time, with only one shop operating by 1934. However, the situation was relieved by the opening up of more shops, which still stand adjoining Naka River. In 1935 a hides Banda (for curing hides) was built-up, owned by the Local Native Council. Within the same year inspection of beans and maize was started, for whose purpose sheds and screens were erected by the council.

At around 1946 more shops came up, extending the commercial centre to include the plots opposite the open market. The market itself had been fenced to boost trade within the hinterland. At the time agricultural produce was marketed via Embu (for export). This period also witnessed the formation of Chuka Coffee Farmers' Society (1949) which opened an office at Chuka. Then there was a limited range of services at the centre. It was not until 1950 when a hospital ward was completed at Chuka by the then Public Works Department. This was later converted into the Health Centre that has moved to the Sub-District Hospital 1 km. to the North East of the town. In the early 1950s a number of government

offices were constructed, including the D.O's office and house, chief's office, Law Court building, and the Veterinary/Agriculture office block. All these structures are still being used for the same purposes except the Court building which was abandoned after the construction of the present one in 1970.

1958 - 1982

Most of the developments presently found in Chuka have come up within this period. The major activities (especially administrative) in the town started after 1958 when 72 acres of land were set aside for the Government sub-station (abandoned since 1920). Thereafter most Government Departmental offices were started, and local authority centres were permanently erected. The African District Council[6] built the council offices in 1958, but were not occupied until in 1960 - by the then Nithi Area Council.

Gradually industrial and commercial organisations have found their way to Chuka. Among the important commercial establishments that have come up within this period are the shops above the open market and those along the Kiangondu (E 759) road, the Commercial Bank complex and the Post Office. The (timber) industrial establishments are a more recent

phenomenon, having come up between 1978 and 1979. Other physical developments of the period are the new Chuka Farmers' Offices (1959), the Water Supply, Chuka High School, National Housing Corporation (NHC) houses and new D.O.'s office (1969), new court building, and Chuka Commercial Secondary School, Chuka Township Primary School, Kathangani Boarding School and Chuka Hospital.

It may be noted however that the expansion of the town is largely attributed to the establishment of the various government departmental offices. Due to the large number of non-local population coming into the town to work in the offices, many residential structures have come up in the town, which constitute a significant aspect of the town's development.

3:5:0 SOCIAL BASE

3:5:1 Population Characteristics

For the purpose of describing the population characteristics of the town, the figure from 1979 census for the trading centre is used for reasons given above (footnote 1, section 3:1:0). However, it is clear that the population must have been higher, the figure adopted here being for analytical purposes.

Table 3.1 gives more details of the town's population characteristics.

Table 3.1: Chuka Trading Centre - Population Characteristics

Age Categories (Years)	Sex		Total
	Male	Female	
0 - 4	126	113	239
5 - 9	60	61	121
10 - 14	51	57	108
15 - 49	451	357	808
50+	51	34	85
Total	739	622	1,361

Source: Population Census, 1979, Central Bureau of Statistics.

Of the 1,361 people enumerated during the census, 739 (54%) were male, while 622 (46%) were female. This shows that the majority of Chuka's population were men, most of whom were adults. Of the total population only 34% were children below 15 years of age. This is small, contrary to the 51% for Kenya's entire population structure, meaning that the town is inhabited mainly by a population with ample (potential) labour force with only a few dependants.

From the field survey it was discovered that 45 per cent of the town's residents are immigrants from outside the District. Only 6 per cent were born within the town, while 39 per cent were born outside Chuka but within Nithi, and 10 per cent outside the Division but within Meru District.

The 1979 census revealed that there were 454 households in the town, giving an average household size of three persons. This was confirmed by the field survey. This is a small figure, especially compared to the average size of the rural households - 6 and 11 from the census and field data, respectively.

3:5:2 Future Population Growth

It would be incorrect to use the population for the trading centre for purposes of projection since this would underestimate the future population growth in the town. It is equally incorrect to use the population living within the newly acquired urban boundaries since most of the area remains predominantly 'rural'. Taking 1979 as the base year and assuming a population size of 2,000, with the growth rate of 4 per cent (see footnote 1). The following is the likely trend for the towns population growth.[7]

1979	-	2,000
1983	-	2,340
1985	-	2,530
1990	-	3,080
2000	-	4,558

Thus, using a low (4%) annual growth rate, Chuka's 'urban' population would be close to 5,000 by the year 2000. However using the general projected urban population growth rate for Kenya of 7 per cent per annum, Chuka would be having over 8,000 people at the close of the century.[8] This is a more realistic estimate if consideration is made of the newly acquired areas some of which are likely to be 'urbanized' by that (ruture) time.

3:5:3 Land Tenure and Use

Most of the land in Chuka is privately owned. Of the 200 ha. of the old Chuka Town, only half of it is under public ownership;[9] the rest of it is under private ownership. For this reason there has been very little (if any) control of land use - hence very haphazard development in the town. This may be attributed partly to non availability of public land and partly to lack of a physical development plan. As a result of the latter no zoning has been instituted to guide development in the town. The nature of development

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may be discerned from Map No. 4 that shows the existing land use pattern.

The newly annexed areas, which are completely under freehold private ownership are predominantly under agricultural use, with virtually no 'urban' development. Even some of the urban land, particularly that which is privately owned, is used for agriculture. Map No. 5 gives the extent of the Urban Council boundaries relative to the presently urbanized area, comprising the former township.

3:5:4 Residential Pattern

As was noted above (3:5:3) the town has not yet been zoned for various land uses. As such the residential plots are scattered over the various parts of the town. Most of the houses are constructed by individual entrepreneurs, which partly explains the incidence of sporadic location of residences. This gives exception to a few institutions which have provided houses for their workers.

There are a few houses built for government employees, most of which are concentrated near the administration offices, and others adjoining the County Council Staff houses. The police (including AP) are accommodated within their stations. The Meru South Farmers' Union has provided 8 permanent houses,

CHUKA TOW
TING LAND

LEGEN

- 0 Resident
- 1 Industri
- 2 Educati
- 3 Recreati
- 4 Public Pu
- 5 Commer
- 6 Public
- 7 Transp
- 8 Deferr
- 9 Agricu
- Conto
- Valley

four of which are located next to the (Union) offices and the other four within the outskirts of the town. The institution has another five (semi-permanent) houses, also close to the offices.

There is an additional 16 houses constructed by the National Housing Corporation (NHC), which are inter-mixed with County Council houses. These, and the nearby Government houses, constitute the largest single residential area, seconded by the Swahili village which is comprised of temporary mud houses. A good number of people are accommodated in single rooms at the back of commercial plots. This further adds to the fact that the residential pattern of the town is most scattered, which exemplifies the haphazardness of the town's physical development.

3:6:0 ECONOMIC BASE

3:6:1 Industrial Sector

Chuka has very little industrial activity. So far there are only three wood-based industrial establishments located within the town, and a fourth one - Nithi Timber Co-Operative Society Limited[10] - situated at the edge of Mt. Kenya Forest, a distance of about 6 km. from town. Three of them have saw-milling as the main activity, but only Nithi Timber

does not have any furniture making venture; the other two combine saw-milling with furniture making. The fourth is actually a carpentry workshop whose sole activity is making furniture and repair works.

The saw-mills take in round log as the major raw material. They are all relatively recent developments. They started operating on full-time bases between 1978 and 1979 (the Timber Society had been formed in 1972 but commenced operations in 1979). The saw mills do not operate at full capacity, but are improving as operations gain momentum. The main advantage of these industries is their nearness to the source of wood - the Mt. Kenya Forest which is less than 10 km. away. Some do however purchase logs from individual farmers at negotiable prices. Thus they obtain their raw materials at relatively cheap prices.

Except Nithi Timber which sells some of its timber to Nairobi, the rest sell their products locally. They do not produce at sustained yield basis, in some cases they saw specific quantities depending on the orders placed by customers. The prices of various items are usually not fixed and are negotiable.

At the time of the field survey, all the four establishments had a total workforce of 101, 66 per cent of whom were engaged by Nithi Timber Society. The carpentry workshop actually wholly depended on family labour. Even for the Timber Society 76 per cent (50 out of 66) of the labourforce were employed on casual basis, only 24 per cent were permanent workers. This indicates that the industries contribute very little in terms of employment generation.

Among the most important factors of location considered by the industries are transportation (of raw materials and finished products), raw materials availability, fuel, power and water. All except the Co-Operative Society cited shortage of land as the principal barrier for their expansion. In fact there is no land so far set aside for industries, a factor that has perhaps created problems to the existing industries - thus rendering them inevitably small.

By their very nature, these industries do not produce pollutant effluents, except for a little noise from the machines and some saw-dust. The measures employed to eliminate the nuisance caused by saw-dust include burning. However, no sophisticated equipment is needed for the purpose since only little

menace is caused by the said pollutants; hence they do not significantly affect the town adversely.

3:6:2 Commercial Activities

The commercial activities of the town are concentrated around the old township (east of the B6 road that runs through the town) and the commercial area surrounding the open market. There is virtually no expansion of business premises in the old commercial centre. Most of the new developments are flourishing along the main communication routes to and from the town. Many shops have recently been constructed along the Chuka-Kiangondu (E 759) road, giving an orientation of the expansion of the town towards that (westward) direction. There are a few other shops and kiosks scattered all over the town, particularly around the residential areas to cater for the day-to-day needs of the town's inhabitants.

The major commercial activities of the town are general (wholesale and retail) trade, hotel and bar business, butcheries, various repair workshops, tailoring, hardware and furniture dealings, and private services. Retail trade takes the bulk of the (shop) business (80%). Most of the shops sell general goods with only 40 per cent of them dealing with specialized commodities. Among these are furniture, food stores, a Bata shop and a Bookshop.

Although 60 per cent of the interviewed business owners indicated that their businesses were progressing, financial constraints were noted to be working against the success of many of them. 67 per cent of the declining businesses identified lack of financial capital as a major constraint, while 40 per cent of them cited market limitation (too few customers) as impeding businesses.

Few of them (7%) obtained their stocks locally, with 87 per cent obtaining (stocks) from distant markets, particularly from Nairobi, Meru and Embu. This is largely attributed to the lack of reliable wholesalers, which may be further explained by lack of capital and business acumen.

The open market sustains important commercial activities. This has been in the town since its early creation with barter as the dominant form of trade during those (early) days. The open market deals with farm produce, mainly horticultural (75%), clothing and a few other (non-farm) items. Presently the old open market is being modernized (expected to cost KShs.1.5 million), with a temporary site below the A.P. Lines being used for the purpose. The new market, once completed, is expected to be a good source of revenue for the Urban Council, besides providing sheds for the business operators. The open market so far has no enclosed shelters, rendering it

very difficult to operate during rainy days.

Few of the goods sold in the market are obtained locally. Only 25 per cent are obtained entirely from within Chuka's surroundings. 63 per cent of the items are got from external markets, especially from Karatina (Nyeri), Meru, Embu and Nairobi.

3:6:3 Informal Sector

The activities that take place in Chuka and may be put in this category include hawking, open air motor and bicycle garages and shoe-making. Others like blacksmiths, block making, watch and radio repair, and photographers may also be classified as 'informal'. They are considered thus because they are usually set up on 'ad hoc' basis by individuals based on small workshops. They thrive because they make and service things that people need for their (people's) every day life. However, they suffer from disabilities, due to lack of essential facilities like water and electricity, which are related to limited sources of capital. Official controls like licensing also limit the success and flourishing of such activities.

3:6:4. Employment and Incomes

The employment structure for the 'urban' part of the study area is mostly provided by the public sector due to the administrative function of the town. A head count conducted by the researcher revealed that around 232 people (including teachers) worked in the public sector at the time of the field survey.[11] The runner-up was the Farmers' Co-Operative Union which had 118 workers within the Chuka offices.

From the sample survey it was found that 42 per cent of the people worked in the public sector with commerce taking 16 per cent. Industry contributed only 3 per cent of the workforce, with 6 per cent working in the agriculture sector. Another 16 per cent reported working with the Union. The rest included Bank workers and those engaged in self-employment and private business. Table 3.2 summarises this information.

Table 3.2: Employment by Sector Relative to Total Employment

Sector of Employment	Percentage of Total
Public	[illegible]
Commerce	16
Industry	3
Agriculture	6
Other	33
Total	100

Source: Field Survey, October/November, 1981.

In investigating the incomes earned by Chuka's residents a classification was made of 3 income groups. The lower income group included those earning less than Shs. 800/= per month. The middle and upper income groups with incomes between Shs.800/= and 1,499/= and over Shs.1,500/=, respectively. The survey revealed that 26 per cent of the respondents were in the lower income group; 13 per cent in the middle, and 61 per cent in the upper group. In working out the figures corresponding with the income groups it had been assumed that the cost of living in the town was low enough to grant validity to such income

categories. Thus the figure of 61 per cent may give the impression that the higher proportion of Chuka's residents are affluent. This in the author's view, is not quite true since after comparing earnings/incomes and prices of commodities in the town with those of (other) larger towns - including Nairobi - it was found that the cost of living in all the towns was very much the same. Moreover, the industrial sector survey indicated that almost all the employees (except those on the managerial level) earned monthly salaries of less than Shs.900/=. On the question of other sources of income a response of 81 per cent indicated that they had no other sources than their principal sources. It seems logical to argue therefore that in real terms the majority of people in the town earn 'moderate' incomes, which could nevertheless support further trade in the town.

3:7:0 INFRASTRUCTURE SERVICES

It has been mentioned elsewhere that the presence of such infrastructure as water and sewerage, power and communication networks serve as an attraction to industrial and other forms of development. The existence of these along with sufficient provision of social infrastructure like health and education

facilities give the town a healthy environment and therefore attractive for people to live in it. All these (service) facilities are present in Chuka at varying intensities.

3:7:1:0 Physical Infrastructure

3:7:1:1 Water Supply

Water supply has great influence on the pattern and development of human settlements. In the urban context, it is required for domestic and industrial use, and also to facilitate a public sewerage system. Adequacy of the provision of water supply is therefore an indispensable element of a town's development.

Chuka is served by a public water supply,[12] whose intake is 6 km. from town, and a treatment plant about one kilometre away at the western edge of the former town boundary. The treatment plant consists of a coagulation basin and filters, in which the water undergoes coagulation, sedimentation and gravity filtration before settling into a 20,000 gallon storage tank. Water is transmitted through gravity both from the intake to the treatment plant and from there to the consumers in town.

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The coagulation basin and storage tank are too small to cope with the consumption of water in the town. Although the volume of water available is higher than that demanded, purification is fairly insufficient. Only a small proportion of water that is consumed in town goes through the treatment process. There is a by-pass pipe that supplies the town with raw water when the treated one is all used up. The town consumes untreated water for an average of 6 hours each day. This is allowed to avoid periodic shortages, and minimizes hourly fluctuations of water supply. This suggests therefore that the town is served adequately in terms of quantity but inadequately quality wise. From the field survey it was learnt that 90 per cent of the homesteads had piped water, provided either in the house or by a stand pipe. Thus, the quality notwithstanding, it may be asserted that Chuka is well served with water supply.

The pipe network of the Chuka Water Supply covers most of the already developed sections of the town. However, some newly developed parts are not connected to the main supply system. For instance, Chuka Hospital and Kathituni Boarding school have taken water from the Karingani Rural Water Scheme. There are plans of integrating the Chuka Water Supply into Karingani Water Scheme. This is perhaps

why no efforts have been made to connect the two institutions to the treated-water supply.

The main water users of the town are households, educational and (other) Government institutions. The industries are not a main water consumer, although it is acknowledged that adequate supply of water is a key factor for industrial location. If we are to expect Chuka to be an industrial town in future, then there has to be a supply that can provide sufficient clean water for any such need.

3:7:1:2 Sewerage and Drainage

Chuka is not served by a public sewerage system for which the town's growth stands out in dire need. In the absence of such a network, individual institutions have private sewerage systems. Most of them (55%) have septic tanks, some of which are not functioning due to lack of proper maintenance. Due to lack of vacuum tanks in the town it is not easy to empty the tanks. Some parts of the town have pit latrines - 45 per cent of the households visited indicated lack of water-borne sewage disposal systems, hence using pit latrines.

Continued absence of a public sewerage system may turn a serious health hazard when the load on the

existing tanks increases without frequent (timely) emptying. Already some of the tanks used by the commercial and residential plots on the slopes of Naka River are experiencing leakages. This is not only harmful to the people living in the town but also to the (rural) people farther downstream who consume the polluted water. The overflowing sewage causes smell nuisances while it flows downhill and goes into the river-untreated.

There is no organized method of solid refuse disposal. The Urban Council has so far not instituted any measures for garbage collection. Most households (61%) therefore have dug private compost pits in their compounds, while the rest dispose of the garbage by crude dumping. Due to irresponsible behaviour and lack of collective responsibility on the part of some residents it is common to find litter over residential areas. This is not only an eyesore but also a health hazard. The rotting garbage invites and helps breeding of scavengers (rats and mice) and vermin like cockroaches and flies which are carriers of terrible diseases.

In Chuka town no surface water drainage structures have been constructed. Storm water is left to find its own way to the lower parts. As a result the town experiences serious floods when it rains.

which in most cases leave deep gullies cutting along and across the roads. This makes the motorways virtually impassable after heavy rains. Due to lack of drains the floods pose as a threat to the premises on the lower side of the town.

3:7:1:3 Transport and Communication Networks

1. Roads

So far the town is not served with all-weather roads. The B6 National Trunk Road, connecting Chuka with the rest of the country (currently being tarmacked) passes through the town. A secondary road (D472) starts from the town and runs eastwards through Kaanwa market to join the lower Embu-Meru Road (C92) at Kajuki. It offers access between Chuka and the rest of the District. The next most significant raod is the E759 minor road which ends at the edge of Mt. Kenya Forest. The internal road network is highly undeveloped. Most of the distributor roads are earth-surfaced, which are impassable during the wet season. During the dry season they are very dusty, which makes life in the town uncomfortable.

2. Air Strip

There is an already existing airstrip at Ndagani. This is not used and is therefore not properly maintained.

3. Postal and Telephone Services

Chuka is served by a Departmental Post Office, with private rental boxes. The postal services are concentrated in one tiny building, which is at present inadequate and therefore needs expansion. It has a mannual telephone exchange. Telephone services are mostly in public buildings (Government offices, schools etc) and in only a few cases are there connections to private (residential) premises. Thus postal and telephone services appear inadequate to meet the town's needs.

3:7:1:4 Power and Energy

Chuka is fairly well served with electricity, particularly in permanent buildings. However in some low-income areas there are no electric power installation lines. Inspite of the presence of grid electricity there are no street lights in the town.

Electricity is mainly used for lighing purposes. Only 3 per cent of the respondents used it for cooking/ heating purposes. 48 per cent had charcoal as the main

source of energy while 77 per cent, 13 per cent and 19 per cent used kerosine, firewood and gas for the purpose, respectively. Most families used a combination of these with only 23 per cent using just one mode of energy.

3:7:2:0 Social infrastructure

3:7:2:1 Education

The town is well endowed with education facilities, which are offered at 4 levels.

1. Secondary Schools

It has within it a senior secondary school - Chuka Boys' High School. The school was started in 1965 with an initial intake of 35 students. It has four streams for O'Level students and one science stream for A'Level students. In 1981 it had 17 classes and a student population of 675. It was expected to be having 18 classes in 1982 with more than 710 students. It had 26 teachers, although they were supposed to be 28 according to official requirements.

The Chuka Commercial Girls' School has four classes with a double Form One. Started in 1970 on Harambee basis, it was first aided by the Government

in 1972. In 1981 it had 200 students and 11 teachers.

Ndagani Harambee Secondary School (mixed) is within Chuka Urban Council but not within the 'urbanized' part of the town. However, it is close enough to the centre of the town (2 km.) to be considered as one of the town's educational institutions. There are others within the Council boundaries but not within close proximity of the town.

2. Primary Schools

There are two of these within the town viz. Chuka Township and Kathituni Boarding. Kibumbu and Iriani (Kiamugi), though outside the former town boundary offer places for many children from the town. These so far are enough to cater for the town's school-going population.

3. Nursery Schools

There are not enough of these in the town. Although each of the three primary schools (except the boarding one) runs a nursery school, they are not within convenient walking distances for the infants from the residential areas. However, a modern

nursery school is one of the Urban Council's immediate priorities.

4. There are two more educational institutions not fitting in the above categories. Ndagani Village Polytechnic offers technical skills to 150 primary school leavers. A child welfare centre has been started in Chuka, intended to give education benefits to physically handicapped children. It is earmarked to start in 1983 with an initial intake of 12 children.

3:7:2:2 Health Services

The town has sufficient medical facilities. Phase I of Chuka Sub-District Hospital is complete and already in use. By November 1981 it had a turn-out of 170 out-patients on average daily basis. It also has an in-patient maternity ward which admits 45 patients on average, with an average of 40 deliveries each month.

The hospital, now operating as a health centre, is manned by a Clinical Officer, and 10 other qualified and 8 subordinate staff. It runs child welfare, family planning, nutrition, ante-natal and post-natal clinics, besides the general medical services. On completion it is expected to have 250 hospital beds.[13] Its present services are consumed by people mainly from Karingani Location, but a number of them also come from

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Magumoni and Muthambi. Only a few come from Chogoria and Kiera, chiefly due to the distance factor. However, once completed it is likely to draw more patients from these distant places since it does and will continue to offer free medical services.

The Catholic Mission Hospital has 54 hospital beds with a daily average of 48 in-patients and 65 out-patients. It also does not have a qualified doctor; any complicated cases are referred to Kieni Hospital (in Embu District) or Nkubu (about 80 km. away), which are also run by the Catholic Mission.

There are three private clinics which also offer medical services to the people within the town and surrounding rural areas.

3:7:2:3 Recreational Facilities

There is only a limited range of recreational facilities. There is a County Council social hall, but does not have full-time activities. It is rented ocassionally for functions like dances and concerts, which are performed by private groups. There is a sports field (next to D.O.'s residence) which is very poorly maintained. The Ndagani Stadium is also not in very good condition, but the Urban Council intends to modernise it (including fencing) soon. There is a

mobile cinema - film shows are offered once every month. This is not enough for the population of the town which requires a permanent cinema theatre.

The town suffers from lack of library services. The population is not large enough to warrant a public library, but there is need for (at least) mobile library services. The felt need for the (missing) recreational facilities is based on the evidence from the field survey. 23 per cent of the respondents had lack of social (service) amenities as one of the most severe problems they encountered in the town. This is much so because the majority of the towns residents are relatively young; the average age of the urban respondents was 32 years. Furthermore, lots of youth from the surrounding rural areas spend most of their leisure time (especially weekends) in the town. Provision of adequate recreational facilities would occupy the idle youngsters who could have otherwise turned to undesirable activities - involving crime - thus causing social unrest within the town.

3:7:2:4 Housing

Most of the dwelling units found in the town are of acceptable standards. 71 per cent of the homesteads visited were of permanent nature. 16 per cent and 13 per cent were semi-permanent and temporary, respectively.

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Most of the temporary housing units are in the Swahili village, which does not have a single permanent or semi-permanent dwelling structure. The rest of the temporary and semi-permanent houses are mainly found within the out-skirts of the town. Moreover, the extension of the town boundaries has brought within its jurisdiction areas that are predominantly 'rural' where most structures are made of temporary materials. Most of the permanent ones are constructed by the Government (including N.H.C. houses) and other institutions. Recently a good number of permanent houses have been put up by individuals, mainly for rental purposes.

Almost half (48%) of the homes visited had their main houses with 3 or more habitable rooms; only 23 per cent were single rooms, most of which were at the back of commercial plots. This, coupled with the fact that 55 per cent of the units had toilets and/or bathrooms within them, and 65 per cent having in-built kitchens, further supports the acceptability of standards of the houses in the town.[14]

Very few of the town dwellers occupy their own houses. Only 13 per cent of them reported living in their own houses. The rest lived in rented or staff quarters. The rental houses are mainly put up by individual entrepreneurs, supplemented by the 16 NHC

houses which are managed by the District Officer. An average monthly rent of Shs.200/= indicates that the houses are relatively cheap.[15] This may be interpreted to mean that there is no sharp demand for houses, a fact that leads to the conclusion that there is an adequate stock of houses in the town. Although the Rural Housing Scheme has been started in Chuka, very few people own houses. This calls for the need to introduce a site and service scheme in order to guarantee a more equitable ownership of housing units in the town.

3:8:0 CONCLUSIONS

The analysis of the study area may be summarised with the following observations.

(1) The varied topography of the town is unconducive to rapid physical development.

(2) The financial inability of the Urban Council inhibits efficient provision of the required services.

(3) The town does not experience a very rapid rate of population growth inspite of the high immigration of people from distant districts.

(4) The existing pattern of land use is characterised by haphazard development which may obstruct proper (future) development planning. This is mainly a result of lack of physical development plan, land tenure system - freehold private ownership, and the extension of boundaries to include vast rural areas - hence causing land use conflict.

(5) The town has a weak economic base. It is barely industrialized, while the commercial activities are growing rather slowly. The public sector is the main source of employment, rendering employment creation relatively low.

(6) Of the physical infrastructure available in the town, water (quantity not quality) and electricity are present in substantial amounts. The rest, viz. sewerage and drainage, transport and communication networks, are highly inadequate. Thus the town's attractiveness to industrial and other forms of development is minimal.

Except for recreational facilities, the town has sufficient social infrastructure i.e. education (except nursery schools) and medical services. These, however, with a little intensification should be enough to take care of an

increased population in the town.

(7) The town seems to have an adequate housing stock for the present population. However, the distribution of ownership is rather uneven. Many residents have no guarantee of occupancy. With a growing population there is need for a site and service scheme to ensure that most people occupy their own houses - hence find it cheaper and safer to live in the town.

The absence of development controls has allowed development of sub-standard housing structures. This is attributed also to the extension of boundaries. More tight controls are necessary if future development is to be desirable.

Footnotes

1 It has not been possible to make a precise projection because first, the census prior to 1979 did not treat Chuka Town as an independent entity. Rather, it was taken as part of Ndagani sub-location. Even in the 1979 census a distinction was made between Chuka Sub-location and Chuka Trading Centre (latter representing the commercially occupied area; the former included some parts of Ndagani Sub-location). The census did not take account of the (formal) boundaries of (former) Chuka Township. As such it was very difficult to work out the annual rate of population growth, which could have facilitated accurate projection of the future population of the town. However, in the subsequent projections a conventional (as per Meru District Development Plan) 4 per cent annual growth rate has been adopted.

2. The Urban Council is presently accommodated in the County Council Office complex, but there is an intention of moving to occupy the former health centre building.

3 There are some of the revenue generating projects which the Clerk to Council mentioned as priorities.

4 None of the persons available for giving the history knows why it was called so.

5 Official Gazette under the East African Township Ordinance 1903.

6 African District Councils were named County Councils in 1963.

7 According to the 1979-83 Development Plan Chuka's population was expected to be 2,500 by the year 1983.

8 Development Plan 1979-83.

9 The public land is shared between the County Council (on which commercial establishments and council buildings stand) and the Government - occupied by Government offices and houses, and institutions like schools and the hospital.

10 Nithi Timber Society draws membership from all over Nithi Division, and is affiliated to the Meru South Co-Operative Union. The other firms are privately owned.

11 This figure excludes the Police and A.P. which were not given for security reasons.

12 Chuka Water Supply is wholly operated and maintained by the Ministry of Water Development.

13 The present level and intensity of services do not warrant a qualified doctor. However, further expansion of the hospital will call for the need of qualified doctors.

14 The minimum acceptable standard of an urban dwelling unit provides that it must be self-contained with two habitable rooms, covering a floor area of 32.8 Sq. M. - Development Plan 1979-83, p. 172.

15 The highest recorded monthly rent was Shs.400/= - a two-roomed house, which in Nairobi would go for between Shs.1,000/= and Shs.1,500/=.

CHAPTER IV

THE HINTERLAND

4:0 INTRODUCTION

The task of this Chapter is to give background information relating to Nithi Division, the hinterland for which Chuka Town is the centre. It is concerned with the aspects of the hinterland that are relevant to Chuka's growth centre functions. That is, aspects that are expected to support the centre as required. Thus an examination is made of the geographical background of the Division, to include its location in relation to the rest of the District, topography, geology and soils. It also analyses the ecological variation, together with the climatic features of the area under review.

Social characteristics that are considered as relevant to the purpose of this study include cultural characteristics and demographic trends. It has also been considered important to make an evaluation of the economic base of the hinterland. Under this, such aspects as settlement pattern, road network and resources base of the Division, are examined. The final section constitutes an assessment of the economic standards of the residents of Chuka's hinterland. These aspects are important in

establishing the development potential of the centre, and hence a more sound appraisal of its growth centre status.

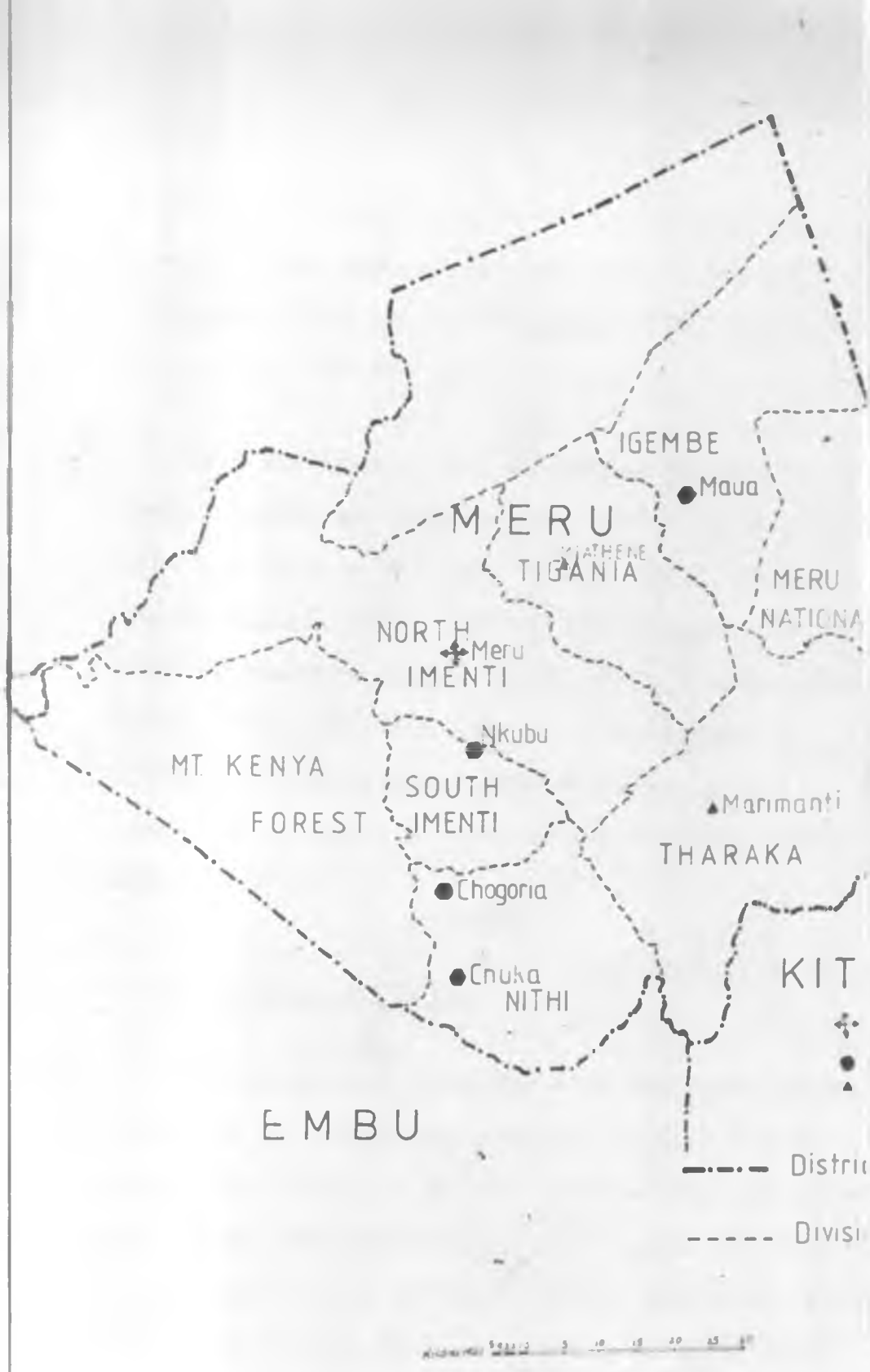
4:1:0 GEOGRAPHICAL BACKGROUND

4:1:1 Location and Size

Nithi is one of the six administrative divisions of Meru District (Map 6). It is made up of 5 locations, viz. Chogoria, Kiera, Muthambe, Karingani and Magumoni, and 26 sub-locations. Most of it falls between longitudes 37.6°E and 37.8°E, and latitutde 0.3° and 0.5° South of the Equator. Its boundaries are: Mutonga River to the North and East; Mt. Kenya Forest Line to the West; and Thuci River to the South. It covers an area of 638 Sq. Km., which is equivalent to 63,800 hectares.

4:1:2 Topography

The topography of the area under review is highly influenced by the presence of Mt. Kenya. There are wide variations in altitude which changes from 5199 metres at the summit of the mountain, sloping gently and blending to less than 900 metres at the boundary with Tharaka. This section comprises the low Eastern Plateau of Kenya. However, most of



NITHI DIVISION IN DISTRIC

Nithi lies between 1,000 and 1,400 metres above sea level. Thus, most of it comprises of lowlands stretching from the lower slopes of Mt. Kenya to the edge of the District and beyond.

The gradient of the plateau is gradual but larger rivers and streams have carved deep incisions into its igneous bedrock. These which include Thuci, Ruguti, Nithi (river) and Mutonga, flow from the Eastern slopes of Mt. Kenya towards River Tana. They have deep valleys which render it difficult to construct roads and especially expensive to build bridges across the wide river beds.

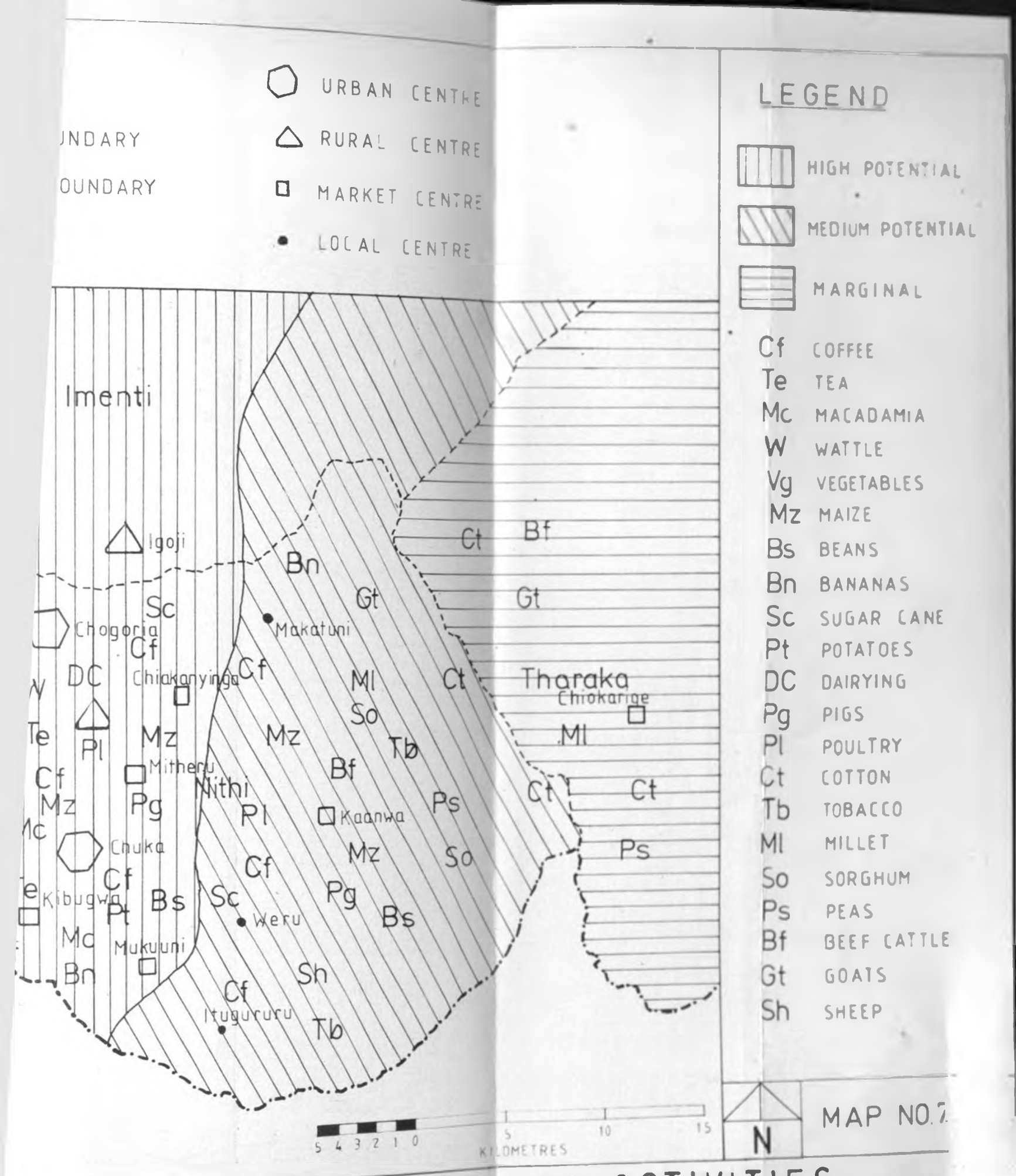
4:1:3 Geology and Soils

The geological formations of the areas on the slopes of Mt. Kenya are a result of lava emitted during the formation of the mountain many centuries ago. Thus, the tertiary volcanic rocks are confined to the upper areas of the Division, which are mainly over 1,200 metres above sea level. The volcanic materials yield to precambrian basement system rocks which are found in the lower areas. The rock types are related to, and determine the forms of soils found in various parts of the earth's surface.

. The upper (western) part, which is nearer to the mountain, is characterised by well-drained laterite soils. These are predominantly dark-red friable clays with deep humic top soil, derived mainly from volcanic rocks. They have a high moisture retention capacity and are found at altitudes exceeding 1,000 metres. They are, however, susceptible to erosion - leading to easy undermining of their fertility unless proper agricultural practices are applied. Lower down, the basement system constitutes mainly sandy and stony soils which are relatively shallow. Where rainfall is higher, they are friable and porous, and have high filtration capacity.

4:1:4 Ecological Zones

Nithi is one of the high altitude areas of Meru District, which cover high and medium potential areas on the eastern slopes of Mt. Kenya (Map 7). The high potential zone is characterised mainly by volcanic soils and heavy rainfall (4:1:5:1 below). The combined effect of climatic and soil conditions make this area very productive agriculturally. It supports cash crops like coffee and tea, and a wide variety of subsistence crops including maize, vegetables, bananas, beans and sugar cane. It also permits growth of animal fodder which supports the dairy industry.



ECOLOGICAL ZONES AND AGRO-ACTIVITIES

The medium potential zone corresponds with the basement system rock and sandy soils. Their easy "workability" and unreliability of rainfall, which lasts for relatively short periods, have led to extensive subsistence cultivation with maize, sorghum, beans, millet and other drought-resistant crops. However coffee has also proved to do well and has been adopted as a cash crop, except for the fringe areas, adjoining Tharaka, which are too dry to allow it. These are areas that border the low potential zone where only cotton can be grown as a cash crop. Some of it is however grown at the fringes of the medium potential zone, which coincides with the eastern boundary of Nithi Division.

4:1:5 Climatic Conditions

4:1:5:1 Rainfall

Different parts of the Division receive rainfall at varying intensities. The higher parts experience annual rainfall in excess of 2,000 mm. and decreases marginally as the altitude decreases. The high potential (upper zone) agricultural areas receive between 1,200 mm. and 2,000 mm. per annum. The rest receive between 500 and 1,200 mm. However, most of the Division receives, on average, between 750 and 1,000 mm. of annual rainfall. It may be noted therefore

that the higher parts receive more rainfall than the lower ones - thus allowing for a wider variety of agricultural activities. Due to rainfall defficiency and low water retention capacity of the generally shallow soils, the incidence of crop failure and livestock mortality is higher in the lower zone. Further to the east in Tharaka rainfall is below 500 mm. and so is so dry and semi-arid, unsuitable for most agricultural activities - hence low potential zone.

Rainfall is not equally distributed throughout the year. There are pronounced wet and dry seasons which are significant as far as agricultural activities are concerned. There are two main rainy seasons with maxima between March and May, and October to December, representing long and short rains, respectively. Between January and March there is a spell of dry season, with January and February as the driest months when surface run-off is below zero. Rainfall also decreases between June and October before the onset of short rains which continue up to December.

4:1:5:2 Vegetation

The type and density of vegetation cover changes from the upper to the lower parts of the area under review. Above the cultivated area is found the Mt.

Kenya rain forest which forms an important water catchment area for the entire (Meru) District. Since this area is protected by the law, no cutting down of trees has taken place, and so the natural vegetation cover is left intact. In the inhabited areas, very little of the natural vegetation is found today. This is attributed to the influence of human activities which include cultivation, overgrazing, woodcutting for fuel, and burning.

Apart from the Mt. Kenya gazetted forest, there are scattered hills and river valleys that also retain the natural vegetation. These are characteristic of the upper zone. Where such are still found the vegetation cover is characterised by woodlands, forming a stand of trees up to 18 metres tall, sometimes with shrubs. Interspaced grasses and herbs dominate the ground cover.

In the lower (drier) areas natural vegetation is of the savannah character, with comiphora, acacia - combretum and various grass species. It thus is dominated by wooded grasslands, such that grass with scattered or grouped trees form a dominant feature with trees standing out conspicuously.

In almost all parts of the Division natural vegetation has suffered through human activities. However, artificial afforestation has substituted the

natural vegetation, especially in the higher potential zone where tree planting has recently become common exercise. In the lower areas, fortunately, large sections are still not cultivated due to the sparcity of population. However, since recently there has been a shift of people from the upper thickly settled areas to the lower areas where land is still available for purchase. This is an obvious threat to the present natural vegetation cover, thence calling for measures to avert the situation through tree planting and afforestation programmes.

4:2:0 SOCIAL CHARACTERISTICS

4:2:1 Cultural Identity

The Division is predominantly inhabited by Bantu speaking ethnic groups of Chuka, Mwimbi, Tharaka, and Mbeere. The Chuka are confined to Karingani and Magumoni Locations. Muthambe is occupied by a people who speak a dialect slightly different from, but akin to Mwimbi's who cover Chogoria and Kiera. There are people of Tharaka origin living at the lower fringes of Karingani, Muthambe and Kiera Locations. They are in Nithi by virtue of the administrative boundaries, otherwise they are part of the occupants of Tharaka Division. The Mbeere are found mainly in Kamwimbi Sub-Location of Magumoni Location; the rest of them live in Embu District.

The nature of these peoples' livelihood is agrarian, with a tendency to settle in one place, practising farming and livestock husbandry. The Chuka and Mwimbi are specifically agricultural tribes with only a little herding. The Tharaka and Mbeere practise very little crop farming due to the harshness of the climatic conditions of the areas they occupy. Thus their main occupation is livestock keeping usually with each family tending a large number of cattle and goats. It is for this reason that the new agriculture directed ranches have been introduced in the lower parts, where beef cattle are found to be doing well. The economy of the area under review is therefore largely determined by the cultural practices of its inhabitants.

4:2:2 Demographic Characteristics

The population of Nithi Division has increased tremendously over the last two decades. During 1962 Population Census the following pattern of distribution by locations was revealed:

Table 4:1: Nithi Population Characteristics, 1962

Location	Sex		Total
	Male	Female	
Magumoni	7,524	8,430	15,954
Karingani	9,917	10,483	20,407
Mwimbi	15,256	15,774	31,030
Muthambe	6,336	6,388	12,724
Total	39,033	41,077	80,110

Source: Kenya Population Census, 1962, Central Bureau of Statistics (C.B.S.).

The subsequent population censuses showed marked increases as may be discerned from the tables below.

Table 4.2: Nithi Population Characteristics, 1969

Location	Sex		Total	Area in Sq. Km.	Density
	Male	Female			
Magumoni	10,641	11,515	22,160	160	139
Karingani	13,339	13,847	27,186	219	124
Muthambe	7,920	7,906	15,826	91	173
Mwimbi	18,788	18,909	37,697	258	146
Total (Nithi)	50,688	52,181	102,869	728	141

Source: Kenya Population Census, 1969, C.B.S.

Table 4.3: Nithi Population Characteristics, 1979

Location	Sex		Total	Households	Sq. Km.	Density
	Male	Female				
Chogoria	10,857	10,593	21,450	3,297	54	390
Muthambe	11,233	11,143	22,376	3,884	81	274
Karirgani	18,782	19,161	37,943	6,741	176	215
Kiera	15,034	15,600	30,634	5,442	172	177
Magumoni	14,588	15,297	29,885	5,208	155	192
Nithi	70,494	71,794	142,288	24,572	638	223

Source: Kenya Population Census, 1979, C.B.S.

Between 1962 and 1969 Nithi's population grew at a rate of 4 per cent per annum, and at 3.8 per cent per annum between 1969 and 1979. This shows that the rate of population growth was decreasing.[2]

From the 1979 census, the following is the population pattern by age and sex.

Table 4.4: Nithi Population by Sex and Age Group 1979

Age Group / Sex	0 - 4 Years	5 - 9	10 - 14	15 - 49	50+	N/S*	Total
Male	13,068	11,738	10,040	23,373	6,107	168	70,494
Female	12,954	11,851	9,826	30,033	6,968	162	71,794
Total	26,022	23,589	19,866	59,406	13,075	330	142,288

* Not Stated.

From this it may be observed that the dependent population i.e. those below the age of 15 constitute 69,477, approximately 49 per cent of the total population. The productive population (15 - 49) constitute 42 per cent. Of those above 50 years we expect a good number of them to be economically productive, particularly those below the age of 60. Due to inavailability of data, (that available highly aggregated) it is difficult to establish the exact proportion of the economically productive population, and so for the dependants. However from the data given it may be deduced that over half of the population are dependants. This is so because within the 15 - 49 age group a good proportion of them are still in school and can therefore not contribute positively to the area's economy. This figure, however gives us a good indication of the potential labourforce, thus making it possible to estimate the number of people for whom jobs must be created both within and outside Nithi Division.

Taking the 1979 census figures and assuming a steady rate of growth of 3.3 per cent per annum,[3] the future population may be projected as follows:

1979 - 142,288

1982 - 159,233

1983 - 165,180

1985	-	177,972
1990	-	214,454
2000	-	311,394

This trend can be presented graphically as in Figure 4.1.

The average population density of 223 (1979) showed an increase of 5.8 per cent per annum from the 1969 density of 141 persons per square kilimeter.[4] Future population density may therefore be expected to change as follows:

1979	-	223
1983	-	279
1990	-	415
2000	-	729

Both the gross (projected) population growth and densities present a demographic nature which indicates that the service demand and development requirements for Chuka's hinterland will have to be intensified in future. Choice will have to be made between concentrating the services in Chuka and distributing them in other (smaller) centres for the purpose of reaching Nithi's inhabitants.

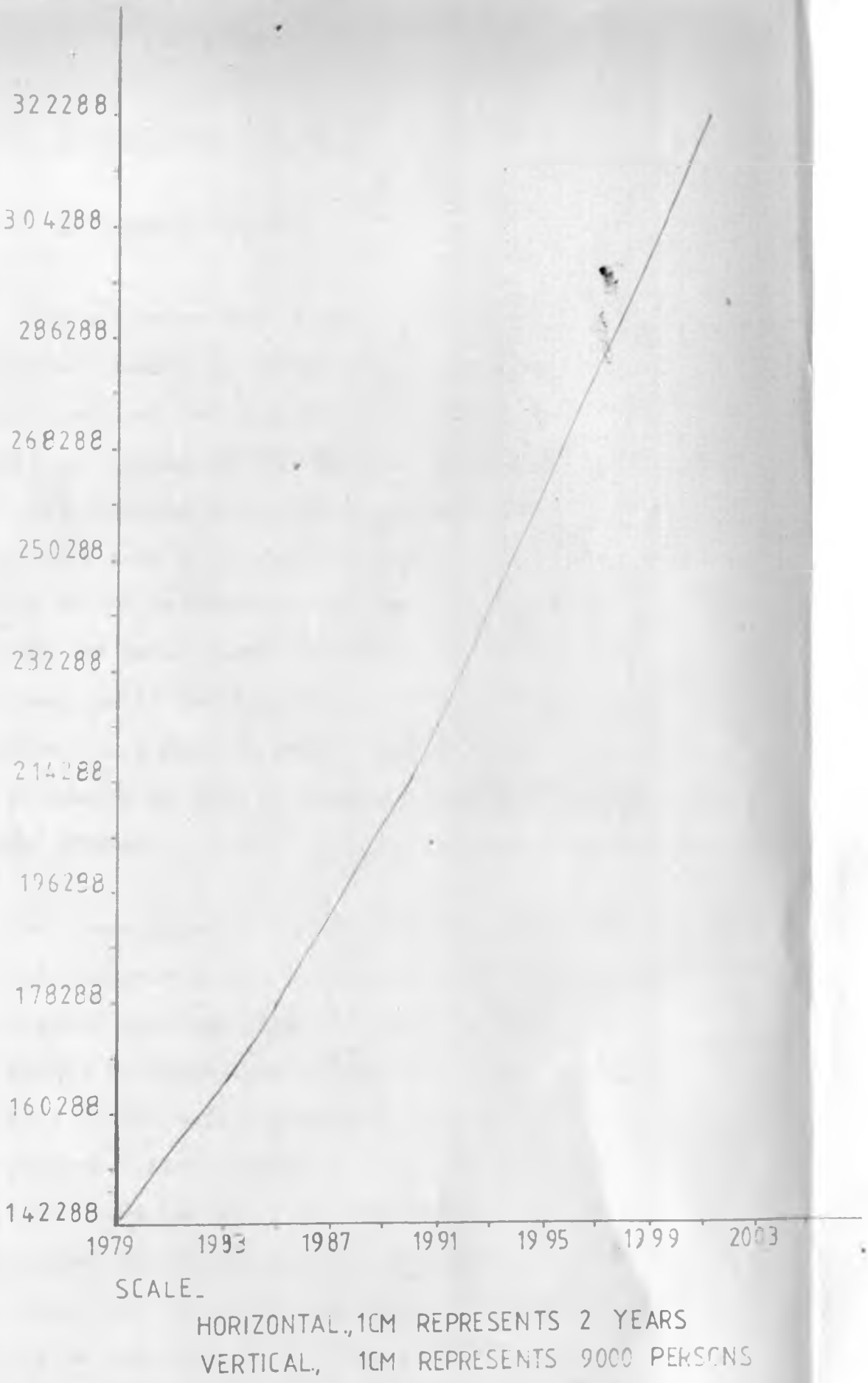


FIGURE 4.1: NITHI POPULATION PROJECTION TO YEAR 2000

4:3:0 ECONOMIC-RESOURCE BASE

4:3:1 Settlement Pattern

The evolution and pattern of settlements is determined mainly by physical (climatic and ecological) pattern, and economic (particularly agricultural) activities of the various parts of the Division. This has resulted in intensive occupation of the upper zone where some parts have population densities in excess of 400 persons per Sq. Km. The difference between 794 persons per Km^2 (1979) in Mariani Sub-location and 62 for Kithangani, both in Karingani Location. is a case in point. Upper Mwimbi (Chogoria) had a density of 390, as compared to 177 for Lower Mwimbi (Kiera).

An observation of the distribution of homesteads further illustrates the point. In Muiru Sub-location (Karingani) falling within the high potential zone, had (1979) 84 households per Sq. Km. The figure for Kajuki - in the medium potential zone and bordering low potential zone (Tharaka) - was 12. Chogoria had 61 while Kiera had 32 households per Sq. Km. This illustrates the relationship between the pattern of settlement and the economic activities, the more productive areas are more thickly settled.

The scatteredness of settlements makes it difficult to efficiently provide the essential services - hence the Government's policy of growth/service centres, to concentrate services and guide human settlements. In Nithi it will be noticed that the service centres are more concentrated in the more thickly settled areas, and so is the distribution of the road network. Map 8 gives the distribution of service centres and the pattern of road network. It can be noted that Nithi is served by 2 urban centres, one rural centre, 6 market centres, and 13 local centres. The provision of services at these (different level) centres is intended to improve the quality of life of people within their respective catchment areas.

The settlement pattern of Nithi has also been influenced by land consolidation. As was noted above, (4:1:5:2), there is currently rapid movement of people from the upper densely populated areas to the lower sparsely settled areas. This is likely to introduce a more changed pattern of settlements in future, thereby calling for more intensive provision of services in these (lower) parts than has been the case hitherto. This is chiefly because service centres come up as a result of people's needs and progress. We may therefore anticipate a more equitable distribution of service centres in Nithi in not very distant future, which will depict a different (less imbalanced) pattern of

NITHI DIVISION:) NETWORK

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ENTRE

ENTRE

ENTRE

ENTRE

RUNK ROAD

ROAD

ROAD

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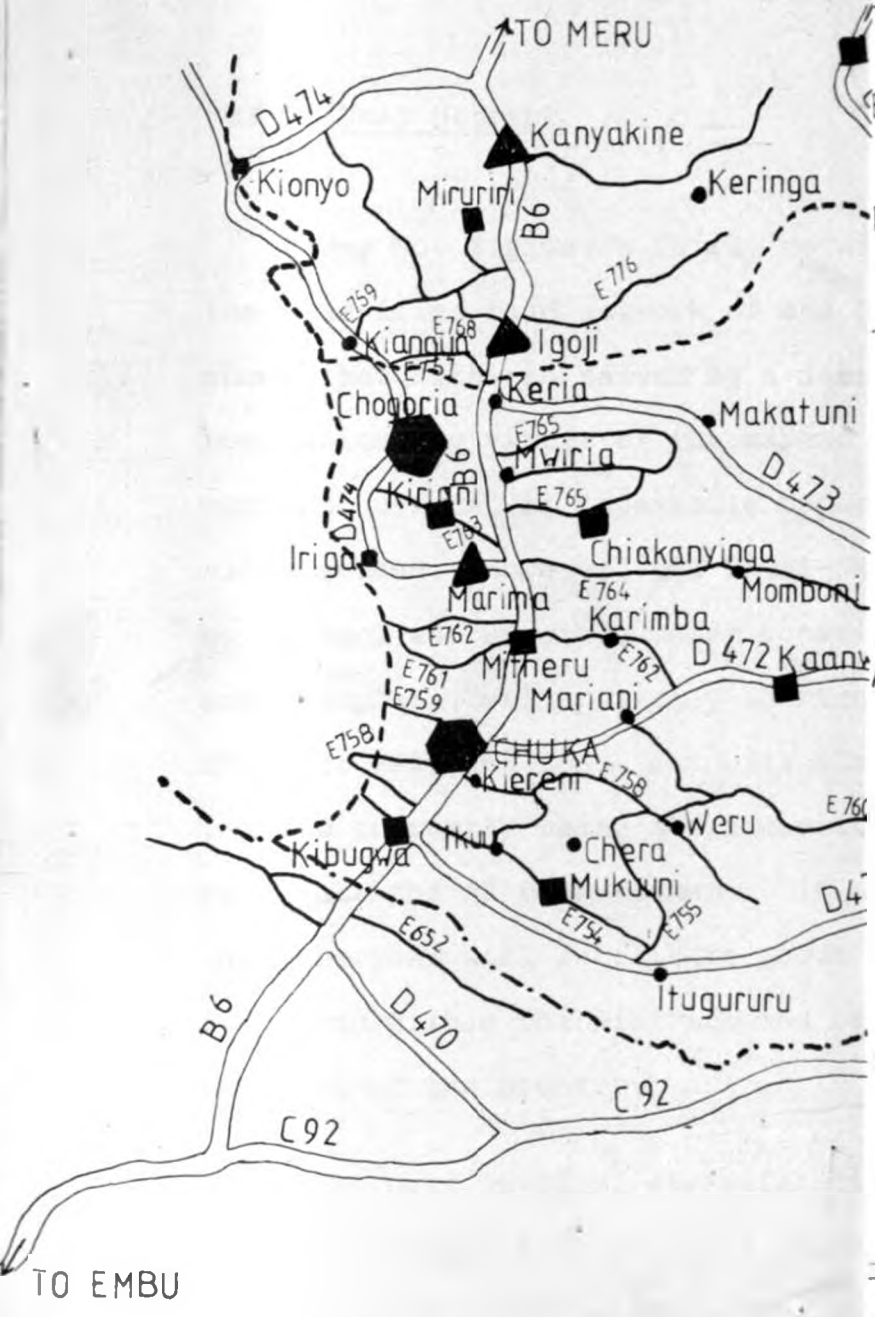

TRES

10 15 20 25

MAP NO. 8

settlements from the existing one. The establishment of more centres will entail provision of facilities like electricity, postal and telephone services, thus increasing urban amenities that are likely to encourage rural industrialization and reduce rural/urban migration in search of job opportunities in (distant) urban centres.

4:3:2 Road Network

Map No. 8 gives a fairly detailed account of the classified road network of the Division. It shows that Nithi is served by a national trunk (B6) road which, by virtue of the marked curves and earthen surface, is impassable especially during the rainy season. However, the Thuci-Nkubu section (with no tarmac) is currently under construction. This, once complete, will not only shorten distances from Chuka to Meru and Embu, but will also attract the traffic currently using the lower (C92) Embu/Meru road, and the A2 road to Meru. It may be expected that the road will facilitate goods and service flow both within the District and between Nithi and the rest of the country.

The next level of classification is the secondary roads of which Nithi is served by D471 from Kibugua to Ishiara via Itugururu, D472 from Chuka via

Kaanwa to Kajuki, and D473 from Keria via Magutuni, all connecting to the C92 Embu/Meru road. These are important for tapping resources to the east of the B6 road, while D474 branches off the main road from Marima, passing through Chogoria and joins the main road again at Kanyakine. It taps the resources in the upper parts of Muthambe and Chogoria locations.

There are a good number of minor (Class E) roads connecting various parts of the Division. None of these and the D class roads has tarmac. Moreover, only D472 road has murram and is therefore all-weather. It forms (with C92) the main connection between Chuka and Meru during the rainy season since the Chuka-Nkubu section of the B6 road is completely impassable during wet periods.

Although the Rural Access Roads Programme has been introduced in Nithi, most of the access roads are not developed. For this reason it has been difficult to transport both agricultural inputs and produce and extension services because most interior areas are inaccessible. The tea industry is worst hit because of this, coupled with the fact that there is no tea factory in Nithi. The leaves have to be transported all the way to Kianjokoma in Embu, but during the wet season it is common to have leaves weighed and left uncollected due to lack of transportation, a result of bad road conditions. This loss is

suffered by both the Kenya Tea Development Authority and also farmers since their tea is rarely bought if it is not going to reach the factory. Improvement of the roads, especially the main one, is sure to promote the tea industry along with other produce (e.g. tobacco) whose marketing has been impeded by the poor road connection to outside markets.

The inaccessibility of Chuka due to the delay of construction of the road was cited as the most crucial problem of the town's residents. 39 per cent of the people in town felt that its bad condition makes life in Chuka unbearable. This was connected to the transportation of fuels viz. petrol, kerosene and gas, and food - thereby making them very expensive, or having their shortages altogether. The open market sellers, 53 per cent of who obtained their goods outside the Division, cited transportation cost as their major constraint which was chiefly due to the unimproved condition of the road.

The transportation of the industries' products and raw materials was also attributed to the bad condition of the B6 road. Thus the improvement of the road is going to have a positive impact on virtually all sectors of Chuka's and its hinterland's economy. This suggests that its delay could be cited as the most severe constraint to the town's development.

The field survey revealed that only 19 per cent of the rural residents indicated that means of road communication were plentiful. 48 per cent and 32 per cent were of the view that the means were/are moderate and insufficient, respectively. This is a result of underdevelopment of the main, and internal road network in Nithi. Such poor network has contributed to the poor economic base of the hinterland because the sale of local produce has been greatly impeded.

4:3:3 Resources

Agriculture is the mainstay of Nithi's economy. A response of 61 per cent having farming as the major occupation bears this evidence. Forestry, tourism and probable occurence of mineral resources play a secondary role.

4:3:3:1 Agro-based Resources

It has been mentioned elsewhere that the geo-ecological conditions of the Division have rendered it favourable to a variety of cash and subsistence crops (Map No. 7). Of the cash crops found in the upper zone coffee and tea are notable. Macadamia nuts and wattle trees are less important, covering 37 hectares (1980) and 3.7 ha, respectively.

There are also horticultural crops like vegetables and tomatoes, but their marketing is not organised to give them full recognition as cash crops.

Coffee is the most extensively grown cash crop. By 1980, 9,068 hectares were under coffee, though this excluded that grown below the gazetted coffee zone. The crop is processed in factories scattered over the various coffee-growing areas, an activity that supports some form of rural industrialisation. After 1976/77, the coffee boom period, much land has come under coffee cultivation. This indicates that there is much potential for coffee production and hence the related industrial activity. However, with the current recession in the world coffee market, the future seems bleak for the coffee growers - this is a threat to both the industry and people's incomes since the majority of people depend on coffee as a major source of income. 48 per cent of the respondents depended solely on cash crops as a source of income. Another 35 per cent depended on it to supplement their salaries. It is apparent therefore that the continued low prices of coffee deal Nithi residents (as much as it does others in the country) a death blow. It is much more absurd by virtue of the fact that no domestic/local policy measures could be employed to rectify the situation since the coffee prices are determined at the international level.

. Tea is grown only in the upper zone, mainly those at altitudes in excess of 1,200m. above sea level. In Nithi the B6 marks the tea growing area the western part being suited for the crop. It has been grown in the Division for the last 10 years. By 1979 only 729 ha. were under tea, but it is expected to have raisen since then. The rise is expected since more farmers may have found it valuable, while others may be substituting it for coffee whose price is going down. However, most farmers in the upper zone grow tea along with coffee.

So far there is no tea factory in Nithi. This is because in the past volume of production has not been large enough to warrant a factory. With the increasing production proposals are under way to construct one at Chogoria. This should be able to process the produce from Nithi and nearby areas of South Imenti Division. Such a move would guarantee regular purchase of the farmers' produce, thereby stabilizing their incomes from the crop.

The lower (medium potential) zone supports coffee, tobacco and cotton as the major cash crops. Sunflower, castor oil seeds and cashewnuts are less important. However all these can be developed since they have proved to do well in the lower areas. Cotton from Nithi and Tharaka is enough to attract

a ginnery within the area. In 1981 alone 3,320 ha. of land were planted with cotton. With improved husbandry the crop may be expected to yield substantial quantities which would have to be processed at a closer proximity.

Much of the tobacco is sold outside the Division. Recently the B.A.T. Company opened sheds in the tobacco areas where drying is done by individual farmers. It is also being grown in higher quantities. In 1979, 839 ha. were under tobacco. The hecterage of 1,100 in 1980 showed a marked increase. With more credit facilities the farmers who currently apply traditional methods of tobacco growing and processing--for direct consumption - may be encouraged to adopt the new techniques, which could boost their incomes. The increased yield may in the long-run create a need for a cigarette manufacturing factory in Chuka, which would be a great innovation for the town.

A wide variety of subsistence crops are grown in the upper zone, including maize, beans, bananas, potatoes and sugarcane. The lower part has maize, beans, millet, sorghum, peas and other drought resistant crops. These crops could be promoted to meet the food requirements of Nithi people as well as for sale to neighbouring dry parts of Tharaka and distant Districts of Kitui and Machakos. Promotion of irri-

gation schemes in the lower (drier) areas could help cultivation of more crops and guarantee higher output, and so boosting the hinterland's economy.

Crop production has faced a number of problems, including lack of farm machinery[5] - hence delaying preparation, planting and harvesting, insufficient extension services,[6] delay in supply of inputs like chemicals and fertilizers - the delay causing poor or low yields. Shortage of storage facilities and delay in payments from co-operatives - hence lowering farmers' morale, and shortage of qualified personnel, are also significant. Poor road network hinders delivery of inputs and extension services to farmers, thereby delaying rapid delivery of produce to markets (4:3:2 above). Credit facilities are also not adequate. Loan processing is usually slow and a lot of delay in releasing loan funds by the Co-Operative Bank is experienced. Many farmers do not have land titles because some, especially lower parts haven't had land adjudication. As such they have no access to credit facilities and can therefore not effectively improve their farms' productivity. The field response revealed that 6 workers (on average) were needed to work on each of the farm holdings. However only 3 (2 family, 1 hired) were available. The inadequacy was attributed to poverty - 82 per cent of those with insufficient

labour had lack of money to pay for labour as the major reason. The rest (18%) cited general scarcity of labour.

Nithi has a wide variety of livestock. These include cattle, sheep, goats, pigs and poultry. The high altitude areas have grade cattle which can support dairy industry, while the lower parts have potential for beef cattle. In 1980 the following were the population figures for the Division's livestock.

Table 4.1: Nithi Cattle Population Size, 1980

Breed	Mature Cattle	Heifers over 1 year	Heifers Under 1 year	Bulls	Calves Under 1 year	Steers
Grade	9,295	3,115	2,199	884	567	564
Zebu	36,281	10,025	7,167	8,049	3,557	1,505

Others were as follows:

Oxen	-	1,190
Sheep	-	15,302
Goats	-	13,310
Pigs	-	1,998
Poultry	-	135,169
Rabbits	-	2,345

Ranching is being organised in the Eastern (dry) side for goats and cattle.

Livestock development is however hampered by such problems as overstocking (especially in the drier areas) high-animal (particularly calf) mortality rates - 35 per cent of AI bred calves die before 1 year, insufficient and poorly maintained dips. They are established on harambee basis and therefore lack essential skills. Due to lack of (local) milling facilities, animal feeds are very expensive. This inhibits development of poultry, pig and dairy production. The latter is also adversely affected by lack of modern milk processing facilities. The Ciangoi/Cabugi Dairy Farmers' Co-Operative Society (taking milk from Karingani and Magumoni locations) collects fresh milk from farmers and sells it later to consumers. Some fermentation is done and the sour milk is sold to direct consumers. It lacks facilities and equipment to treat milk for longer keeping before use. However, there is enough milk supply from the Division if only such a plant can be put up to take in the products from local farmers.

Other problems are:- poor AI services, which is connected to poor access roads and shortage of personnel, lack of organised marketing facilities to promote animal and their products' sales, and lack of fodder

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Other problems are:- poor AI services, which is connected to poor access roads and shortage of personnel, lack of organised marketing facilities to promote animal and their products' sales, and lack of fodder

crops and grazing areas, especially with the increase in population which requires more land for crop (food) production. If these problems are overcome there would be substantial potential for livestock development which could promote people's incomes and support related industries.

4:3:3:2 Forestry

It was noted in Chapter III that all the industries in Chuka use forest products for their raw materials. Mt. Kenya is the main forest area with (mainly) indigenous tree species, and is the main source of wood for the aforementioned industries. Together, Chuka and Chogoria Forest Stations, plus the Rural Afforestation Scheme have a total of 36,564 ha. of plantation with tree nurseries at each station.

There are so far very few industries to utilize tree plantation thinnings currently wasted. Although there is potential for development of a plywood factory in Chuka,[7] lack of expertise and capital have slowed down the development of such a venture. The administration of the forests is so far inadequate due to shortage of manpower and limited powers of forest staff to prosecute offenders to the forest estate. Thus there has been a lot of encroachment to the forest areas. It has also hampered Rural

Afforestation Programme, especially the establishment of tree nurseries and propagation of seedlings. Promotion of forestry could have multiple advantages of protecting the environment (soil and water), preserving scenic beauty, and also serving productive purposes like provision of woodfuel and building materials. In all ways they would be contributing to the development of the area under review.

4:3:3:3. Tourism, Fisheries and Minerals

These are highly underdeveloped in Nithi. The only move towards tourism development is opening of a 9 km. tourist road (truck) from Chogoria to Mt. Kenya. Fish ponds have been constructed and stocked at Chuka and Chogoria, but fish harvesting has not been started as yet.

There are known mica deposits at Kiera Ridge, but no mining is being undertaken. The deposits were discovered in 1911. Prospection and mining started in 1914, but was stopped after the mine collupsed on people. By the end of the same year it was completely abandoned because of the WWI and has not been resumed ever since. Only ½ ton of mica had been extracted.

4:4:0 ECONOMIC STANDARDS

The economic standards of Nithi's residents are relatively low. The 1979-83 Meru District Development Plan held that the average size of a family land holding is 5 ha. and a net (average) income of Shs.5,000 per annum. This was low compared to 7,000 and 6,000 for North and South Imenti, respectively. This was supported by the field survey which showed an average land holding of 11 acres (5 ha.), with almost half (45%) of households having a monthly income of less than Shs.800/=. 23 per cent and 32 per cent had incomes between 800 - 1499 and 1500, respectively.

The expenditure pattern of the rural people also points at the level of economic standards. 52 per cent spent less than Shs.800 per month; 32 per cent between 800 and 1499, while 16 per cent spent over Shs.1,500/= per month. Although this may show some significant savings rate, the impression is corrected by looking at the items on which incomes are spent. Almost all the families spent their incomes on basic necessities like food, clothing, medical care and school fees. It is hard to expect that the incomes saved go to investment projects. It seems then that most people would save for precautionary purposes - for school fees, medical care etc.

. The standards may also be indicated by the nature of housing structures found in these areas. 42 per cent of the main dwelling units of the homesteads visited were temporary. Semi-permanent and permanent each took 29 per cent. The dominance of sub-standard structures may be attributed to the poverty of the majority of the rural residents.

In all cases the lower parts have lower economic standards, just as they are less endowed with infrastructure services. This is mainly a result of settlement pattern and economic potential, since these areas are scarcely settled with fewer economic activities. Besides, they have a historical disadvantage: they had been largely forgotten by the colonial Government due to their harsh climatic conditions. Within the current plan period, more is intended for the disadvantaged areas, especially with respect to economic infrastructure. These areas have gained the attention and priority of the District Development Committee. As the standards of living improve we may expect a higher rise in the marginal areas, as a deliberate action to make life in them more comfortable - thereby achieving equity in the Division's over all development.

4:5:0 CONCLUSIONS

Chuka's location and appraisal for growth centre status must be considered with respect to the hinterland's mainstream of productivity and potential to support its (town's) growth. In this regard the following conclusions may be drawn from the foregoing descriptive analysis.

1. Nithi Division falls within the Eastern Lowlands of Kenya, on the slopes of Mt. Kenya. It is characterised by soil types and climatic conditions that favour intensive agricultural production. It all falls within high and medium potential zones.

   Coffee and tea, and dairying do particularly well in the high potential areas. There is still considerable scope for more intensified cultivation of the crops, and keeping of dairy animals since fodder also does very well in these areas. The climate is also suitable for cultivation of horticultural crops, wattle trees, and a wide variety of food crops.

   Cotton and tobacco do well in the medium potential areas. In addition there is potential for drought-resistant crops such as sorghum, millet and peas, and keeping of beef cattle and goats.

   On the whole the Division has nigh agricultural

potential, which may favour Chuka's designation as a growth centre. However, to exploit Nithi's agricultural potential fully certain constraints will have to be overcome. These include lack of farm machinery and inputs, insufficiency of extension services and storage facilities, poor marketing and credit facilities, and inadequate road network. Livestock development is also hampered by overstocking, persistent lethal animal diseases, lack of dips and animal feeds, and inavailability of processing of some products e.g. milk.

2. Nithi has close to 160,000 people, with an estimated (high) density of 270 persons per sq. km. The population is expected to exceed 300,000 by the turn of the century, with a density of more than 470 persons per sq. km. Thus, by the hinterland's demographic considerations, Chuka could be a viable growth centre.

3. The transportation network is fairly inadequate. Most of the roads are impassable, particularly during wet periods. This has hindered goods and service flow to, from and within the Division. The delay in tarmacking of the Thuci-Nkubu section of the B6 road has been the major constraint. Its opening up and improvement of

the internal road network is bound to promote the town's and its hinterland's economy.

4. Nithi is well endowed with forest resources owing to the nearness of Mt. Kenya Forest. There is thus scope for wood-based industrial development in Chuka and other parts of Nithi. This could create employment and promote incomes and hence living standards of the people in Chuka and its hinterland. Other potential (natural) resources are not well developed to significantly contribute to Nithi's economy.

5. Owing to the predominantly subsistence nature of Nithi people's livelihood, economic standards are fairly low. This may be attributed to the low monetary activity of most of the rural people, whose little savings are rarely directed to meaningful investment projects. In consequence, most people in the Divison barely live above the poverty margin. Improvement of the people's standard of living would support urban activities, especially in Chuka, as the demand for goods and services, therein produced, would promote their production in the centre. This implies mutual reinforcement between the centre's and the hinterland's development.

Footnotes

1. This location was later divided into Upper Mwimbi (Chogoria) and Lower Mwimbi (Kiera).

2. The decrease may be attributed to the family planning campaign through various media, including newspapers and magazines, leaders' public barazas, and church organisations. It could also be due to poor coverage or out-migration.

3. It is assumed that the discerned decrease in rate of growth between the 1962-69 and 1969-79 periods will persist for the reasons given in Footnote 2.

4. The area was reduced from 728 Sq. Km (in 1969) to 638 (in 1979) as a result of some parts of Nithi being transfered to South Imenti and Tharaka Divisions. The study however assumes that no more changes will take place, at least within the foreseeable future.

5. There are hardly any modern (efficient) farm machinery like tractors or power tillers. 100 per cent of the farmers visited during the field research used simple instruments viz. hoes and pangas.

6. Although 97 per cent of the respondents reported receiving extention services (mainly coffee instructors), 60 per cent of them indicated being visited at least once per month; 17 per cent at least once in every 6 months, and 23 per cent at least once a year. This is evidence that extension services are significantly insufficient in the Division.

7. This has been started by Meru South Union - Nithi Timber Plywood Factory, Saw mill factory and Veneer at a cost of KShs.10 million.

CHAPTER V

FINDINGS: ANALYSIS AND EVALUATION

5:0 INTRODUCTION

This chapter is concerned with the findings of the entire research. It incorporates all the information obtained about the town, its hinterland, and the linkage between the two. It thus constitutes the major observations of the research.

It presents in summary form all the information and findings pertaining to Chuka - its physical and socio-economic bases, infrastructural facilities, and also brings out the residents' perception of the centre. The second major part summarises the state of the hinterland, paying attention to physical and ecological characteristics, socio-economuc and resource bases, that could influence Chuka's growth centre function. The section that follows analyses the linkage between the centre and its hinterland, which establishes the functional relationship (and strength of the relationship) between them.

The accessibility of the town from other parts of Kenya is examined. The last section looks at the administrative potential of the town. Throughout the analysis, Chuka's viability is weighed against the

growth centre criteria,[1] which every town has to meet to be thus designated.

Thus, the chapter synthesises the findings of the research, allowing an evaluation of the relative effectiveness of Chuka as a growth centre i.e. provides basis on which to appraise Chuka's viability as a growth centre.

5:1:0 DESCRIPTION OF CHUKA TOWN

5:1:1 Physical Base

It was mentioned (chapter III 3.2.1) that the town is characterised by varied topography. The steep and undulated nature of Chuka's landscape is unconducive to construction of buildings and installation of road, water and sewerage networks. Hence, it inhibits the town's rapid physical development. The water retention areas also pose as development thresholds for the town. In the presence of these features the growth of the town will have to proceed at exorbitant construction costs.

5:1:2 Socio-Economic Base

5:1:2:1 Urban Residence

So far the population of the town is fairly small, which is barely above that required for an urban centre.

Furthermore, the town does not experience a very rapid rate of population growth inspite of the high proportion (45%) of immigrants from outside the District.[2] This rate has been low chiefly due to lack of industrial development, and habit of most workers to live outside the town, some of who operate from their out-of-town homes. With the current trend of growth it is expected that the town will reach a population of 5,000 - typical of an urban (service) centre - by early next century.

The majority of Chuka's residents are relatively new in the town. This is evidenced by the results of the field survey which showed that 61 per cent of the respondents had been in the town for less than 3 years. 13 per cent and 6 per cent had been in the town for between 4 and 6 years, and 7 to 10 years, respectively. However, 19 per cent of them had been in Chuka for over 10 years. Of the people who were born outside the town 87 per cent came to work; the rest reported to have come either in marriage or to run business. The high proportion of 87 per cent indicates that Chuka has few activities that could attract people to live in it.

5:1:2:2 Potential Labourforce

In terms of quantity Chuka has an ample supply. Of the total urban population (1979) 59 per cent were between 15 and 49 years of age. The productive population of the hinterland comprised 42 per cent. It is acknowledged however that some of these are still in school, hence reference to 'potential' labourforce.

In terms of quality, the urban residents had 48 per cent having attained some secondary education, and 19 per cent having reached University level. 19 per cent had some primary education, while 13 per cent had no education at all. A proportion of 67 per cent with either secondary or University education suggests that qualitywise, Chuka is well off in terms of labour supply. Furthermore, from the rural household survey 23 per cent of the sampled households had at least one member with University education. 68 per cent had secondary education as the highest level. 10 per cent reported their most learned members to have had primary education. Combined, 91 per cent of the households had some members having attained either university or secondary education. Unfortunately however, none of the members with university education lived within Nithi. 75 per cent of them were reported living in Nairobi; 25 per cent were elsewhere in the

country. The figures for secondary education were 76 per cent living within Nithi and the rest elsewhere in Kenya. The average age of the members with the two categories of education was 25 years. It seems logical to argue from the foregoing that given job opportunities in Chuka, there is ample labour-force that could be tapped both from the town and its hinterland. The fact that some of the learned members of the sampled households lived outside the Division could be explained by the limited employment opportunities both in Chuka and Nithi as a whole.

5:1:2:3 Economic Viability

This could be established by examining the function of the town as a market for local produce and also the effective demand for goods and services therein offered. The survey of the open market revealed that only 23 per cent of the business operators obtained their commodities locally. 63 per cent fetched theirs from distant sources such as Karatina, Meru, Embu and Nairobi. Bearing in mind that 75 per cent of the items sold are farm products, it seems the proportion of 63 per cent of items from far away would suggest that no such activities as horticulture are practised around the town. Since the climatic conditions of all the upper parts of

Nithi favour horticulture, this could be explained by the fact that few people in Nithi grow horticultural (and other food) crops for commercial purposes.[3] It could also be attributed to the poor access roads, especially given that 75 per cent of the sellers used public (vehicle) means to transport their stocks - the rest move them on foot or bicycles.

Although most (63%) of the businesses were progressing - 12 per cent constant and 25 per cent declining - they faced serious problems. 63 per cent of them cited finance as a major constraint while 25 per cent had lack of market i.e. few customers, as a binding constraint. The rest had problems such as shelter preventing the progress of their businesses. In terms of demand, 50 per cent of the business operators reported to have chosen Chuka because it offered ready market. (37.5 per cent and 12.5 per cent came in because Chuka was near home and lack of alternative income-earning opportunities, respectively). The shop operators were also attracted by Chuka's ready market (67%). 7 per cent of them thought Chuka offered cheap business premises, while 27 per cent did not have better alternatives.

Such evidence may be weighed against the 'effective demand' of the town's residents. It was noted (in Chapter III 3:6:4) that the public sector is the

main sector of employment. It took 42 per cent of the workforce; industry and commerce had 3 per cent and 16 per cent respectively. The fact that 81 per cent of the people did not have any other source of income apart from the principal source - 10 per cent had agriculture; 3 per cent commerce, coupled with the high cost of living, implies that the 'moderate' incomes[4] cannot support heavy economic activity.

The town has therefore a weak economic base. Such low base has been a result of lack of diversified industrial and commercial activities. The level of industrial activity is significantly low while the commercial sector is growing rather slowly. Thus, although business operators were/are attracted by ready market and most seem to be progressing, it may be concluded from the rest of the evidence that Chuka's economic viability is impeded by the poor economic base.

5:1:2:4 Industrial Development and Potential

It has been mentioned above that the town's industrial development is very low. The industries are few and badly located (in the commercial area). They have a monotony of activity, since all of them are wood-based. They are also limited in their scope of operation. Thus they are small-scale, and are

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ineffective in generating employment. By the present standards therefore, these do not grant the town the needed growth-centre merits.

There is potential for heavy forest based industries due to the proximity and expanse of Mt. Kenya Forest. The starting of the KShs.10 million worth plywood factory at Chuka is a step toward heavy industrialization. The location of Chuka in a potentially highly productive agricultural area provides great potential for agro-based industries. There is for instance scope for vegetable and fruit processing industries. Others could include grain milling,[5] and dairy production since the upper parts of the Division favour rearing of dairy animals.

The rise in the town's population creates market for cottage small-scale industries such as motor car garages, making of cooking stoves, carpentry workshops, shoe making and other ventures that make and services items that people, especially low-income earners, need. The construction of the B6 road, presence of plenty of water and electricity, are additional factors in favour of industrial development in the town.

However, none except the plywood factory of the potential for industrial development has been tapped to date. The activities at the existing level cannot

generate self sustaining growth. In this regard therefore, Chuka is not a viable growth centre.

5:1:2:5 Commercial Functions

Although most (65%) of Chuka's residents do their major shopping in the town (29 per cent outside and 6 per cent both within and elsewhere), in relative terms Chuka has a low commercial function. The business/trade survey showed that of the open market sellers only 37.5 per cent did not feel that Chuka was effectively in competition with any other centre. Another 37.5 per cent held that Chuka market was in competition with other (smaller) centres like Kaanwa, Marima and Kibugua, which take away some of Chuka's potential customers. 25 per cent noted distant markets like Nkubu and Nairobi. The shop businesses had 60 per cent reporting to be competing with Runyenje's and Embu; 27 per cent with Marima, and only 13 per cent experiencing no competition. This implies that Chuka is not a strong commercial centre in the face of surrounding and distant centres.

From the survey conducted in the neighbouring centres i.e. Kabece (Chogoria), Marima and Kibugua, 33 per cent, 67 per cent, and 50 per cent held that Chuka was a strong competitor. However, none of them depended entirely on Chuka for the (shop) articles.

In fact, none of the businessmen interviewed at Kabece and Kibugwa obtained goods from Chuka. Instead they went to Meru, Nairobi, Runyenje's and Embu. 33 per cent of those interviewed at Marima fetched some of their goods from Chuka, though they also got them from elsewhere. Even in Chuka itself only 7 per cent of the businessmen depended on Chuka wholesalers. 87 per cent got their items from distant towns, Nairobi alone constituting 40 per cent. The rest went to Meru, Embu and even to Mombasa to purchase commodities for sale. This, in addition to the fact that 29 per cent of Chuka's residents travel to distant towns for shopping implies that the town does not offer enough commodities to satisfy people's and retailers' immediate needs. The above is clear evidence that Chuka's commercial activity is significantly low inspite of noticeable sufficient demand for commercial items. This is mainly a result of lack of whoelsalers (20% - 80 per cent purely retail business), and low level of specialization. Only 40 per cent of the businesses (sample) carried out specialized functions, the rest engaged in general trade. The low commercial function may be explained firstly by lack of financial capital,[6] and secondly, by lack of business acumen on the part of the local entrepreneurs.

An increased supply of retail commodities and diversified items to meet people's general needs and

tastes should be able to ensure concentrated commercial activities in Chuka. The present set-up is wasteful. Businessmen waste a lot of money and valuable time searching for items from distant markets - this erodes their profit margins, which further cripples the businesses. The same may be said of individuals who cannot obtain their favourite items from Chuka and have to travel to Meru, Embu, Nairobi etc. In the process they waste precious time and money, thereby spending income that could either be saved or directed to more productive use. Improved commercial activities could therefore greatly ameliorate the economic base of the town, thereby making it a more viable growth centre.

5:1:3 INFRASTRUCTURE AND SOCIAL AMENITIES

5:1:3:1 Physical Infrastructure

Chuka is adequately served with some, but experiences severe insufficiency in others. Water and electricity are available at sufficient amounts for current needs. However, lack of a public sewerage system, absence of an organised method of garbage collection and non-existence of storm-water drains indicate an obvious inadequacy of infrastructure provision. The town is also poorly served with communication facilities viz. postal, telephone, and

internal road networks. Such inadequacy renders Chuka's attractiveness to industrial and other forms of development minimal, which undermines its viability as a growth centre.

5:1:3:2 Social Amenities

The town seems to have sufficient provision of medical and educational (except nursery schools) facilities. There are enough houses to cater for the present demand, but hardly for a slightly higher population. 71 per cent of the housing structures (visited) were permanent, 16 per cent semi-permanent, only 13 per cent were temporary. 48 per cent had 3 or more habitable rooms, and only 23 per cent were single rooms. This supports the contention that Chuka has adequate housing provision. However, the ownership is sharply uneven. Only 13 per cent occupied their own houses, 55 per cent lived in rental houses, the rest were accommodated in staff quarters. Thus most people's continued occupancy is uncertain, a situation that requires immediate rectification.

The town has an acute shortage of recreational facilities. Even the few that are there i.e. sports field and social hall, are poorly maintained. It should be noted that absence of social amenities discourages many potential investors, which therefore

places a barrier on rapid development of the town. To make the town more attractive to industrialists and other investors - hence Chuka's rapid development - it is necessary to ensure adequate provision of all forms of infrastructural facilities, which are presently far from enough.

5:1:4 People's Perception of the Centre

Opinions of the residents of the town were sought to give the author supportive information about the viability of the town as a growth centre.

5:1:4:1 Source of Employment

On the question of whether, in their opinion, Chuka was a source of employment, only 19 per cent answered in the affirmative. 81 per cent did not view Chuka as offering job opportunities. As such it is hard to expect that by its present status the town could attract an immigrant population who would be seeking employment.

5:1:4:2 Source of Innovation

61 per cent of the people interviewed reported having learnt something 'new' by virtue of being in the town. Thus the majority found value in the

presence of 'change agents' like nutritionists, family planning advisors, and ocassional agricultural films introducing new methods of crop and animal husbandry, to mention just a few. Such 'new ideas' could benefit the people of Nithi when they visit the centre, thereby helping to transform their rural life - an important element of development.

5:1:4:3 Problems Experienced

Of the most severe the following were cited, in order of intensity.[7] At least 39 per cent of the respondents felt that insufficiency of means of transport was/is one of the crucial problems facing Chuka's residents. The others are financial (26%), lack of social amenities, fuel, and high cost of living - each identified by 23 per cent of the respondents, food shortage (19%), and unemployment (13%). Some of these problems were/are related to transportation. For instance, due to poor road communication there is very poor provision of fuel. It also makes it difficult to transport essential goods (including food), thus rendering them expensive and experience shortages. There are many other problems all of which cannot be listed. For the ones noted, respondents suggested possible solutions.

Road improvement, particularly the main road, could greatly improve the situation. Creation of job opportunities was recommended for solving financial and employment problems. Provision of social amenities by the Government or Urban Council would alleviate the problems related to lack of recreational facilities. Shortage of fuel and food were connected to the improvement of the roads to ensure their intensive distribution. This measure would also lower prices of commodities since they would reach the town in greater quantities. The resulting competition would thus regulate the prices. Intensification of commercial and industrial activities could solve unemployment and financial problems.

5:2:0 HINTERLAND BACKGROUND

5:2:1 Physical Base

Nithi Division falls within the lowlands of the eastern slopes of Mt. Kenya. The upper part, mainly over 1200 metres above sea level, is characterised by volcanic rocks and well-drained deep laterite soils. The lower parts have basement system rocks, and sandy and stony relatively shallow soils. The upper zone receives rainfall in excess of 1200 mm. per annum. The rest receive between 500 and 1200 mm. per annum.

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The combined effects of geology and soils, and rainfall have resulted in the two ecological zones: the high potential zone, corresponding with the volcanic rocks, laterite soils and heavy rainfall. The lower part constitutes the medium potential zone.

5:2:2 Social Characteristics

5:2:2:1 Population-Distribution and Density

Nithi has a high support population. This is estimated to be close to 160,000, with a density of around 270 persons per Sq. Km. Thus, it is thickly populated, and bound to increase in numbers and density. By the year 2000 the Division is expected to be having over 300,000 people with over 470 in every Sq. Km.

The population concentration is higher in the higher potential (richer) areas. The lower parts are more sparcely populated, but due to shifting of people from the upper to lower areas (with available land for purchase) the pattern is bound to change in the near future. The population of Nithi is adequate to support the centre in terms of market for local products. It is thus sufficient to grant Chuka growth centre status.

5:2:3 · Economic Potential

Although Nithi has substantial economic (especially agricultural) potential to support Chuka's growth, very little of this has been exploited. The rural areas are still largely characterised by subsistence economy with very little monetary activity. As a result, people's incomes are fairly low, most of which are spent on basic necessities. Very little is directed to investment projects. The majority of rural people are therefore very poor.

Nithi is however endowed with substantial agricultural potential. The climatic and soil conditions are suitable for a variety of cash and food crops. The high potential zone is particularly good for coffee, tea and dairy production. The zone could also support fodder and horticultural crops. Food crops such as maize, beans, yams, sugar cane, bananas and potatoes also do extremely well in the high potential zone.

The medium potential zone is suited to coffee, cotton, tobacco and sunflower, which are important cash crops. Others which are known to do well include castor oil seeds and cashewnuts, but these are so far not widely cultivated. The zone is also suited to beef cattle and goat rearing which can support the meat industry. Food crops that do well here include maize,

beans, sorghum, millet and peas. The present level of production only meets domestic subsistence needs. However, these (food) crops' production could be promoted to widen the scope of income-generating activities. With the above consideration it appears quite clear that by the agricultural potential criterion Chuka deserves growth centre status.

There is also potential for a variety of other resources. Forest resource potential was mentioned (5:1:2:4 above). Very little fishery activities take place in Nithi, with Chuka and Chogoria as the only places with stocked fish ponds. The many streams running across the Division could support fish production. At present the people's way of life does not involve fishing. With encouragement and guidance their attitudes could change. Adoption of fishing practices could promote protein-rich diets as well as increasing people's incomes if commercial fishing is practised.

The varied landscape, forests, river falls and other features of scenic beauty are found in various parts of the Division. The nearby Mt. Kenya Forest is an obvious example of potential tourist attraction. This sector has been highly underdeveloped, first, because of the poor road network and secondly, due to lack of hotel accommodation. Chuka Urban Council has

plans to construct a tourist hotel at Chuka. There is already a well-equipped and modern mortel at Karaa (near Chogoria) which offers good accommodation. With the completion of the road construction it is expected that tourist traffic through this section of the country will increase. The Mt. Kenya view is also good from its eastern side, which could also be counted upon as a good tourist attraction.

The local people have a traditional culture that is rich with folk dances and other activities which could attract a large number of tourists. The famous Chuka Drummers are a case in point. They could be organised to perform shows for tourists and other interested spectators, which could be an important income-generating activity. This potential is so far least exploited. On this consideration therefore, Chuka has a long way to go in attaining the status in question. The fore-going details do however provide logical grounds to conclude that Nithi has substantial economic potential that, if adequately promoted and exploited, could support Chuka as a growth centre.

5:3:0 CENTRE/HINTERLAND LINKAGE

In theory and policy,[8] growth centres are expected to be linked to their hinterlands through

provision of services among which are health, education, recreational, communication, and personal services like retail distribution. They are also expected to offer employment opportunities to curb outmigration in the (rural) hinterlands. It is against these roles that Chuka's relationship with its hinterland is examined.

5:3:1 Source of Employment and Essential Services

Few people seem to be frequenting the town for the purpose of working. From the rural survey it was found that 19 per cent of the heads of the sampled households went to Chuka to work. This together with the fact that only 39 per cent of the urban residents hailed from Nithi is an indication that the town does not offer a strong 'pull' in terms of employment opportunities. However, the people of working age within Nithi are many, enough to warrant creation of job opportunities in Chuka to avoid outmigration from the hinterland.

Chuka seems to be the main source of essential services for Nithi residents. 58 per cent of the farmers obtained farm inputs from Chuka - 42 per cent got them from nearby (smaller) centres. 55 per cent had Chuka as their main source of postal services. For medical services, only 26 per cent relied on Chuka.

68 per cent were/are served by local health centres or dispensaries while 6 per cent went elsewhere, particularly to Chogoria which offers a larger and longer established hospital. So far this is the largest in Nithi, with 233 hospital beds and an attendance of about 250 in-patients and 150 out-patients on average daily basis. It should be recalled that Chuka Hospital, though smaller at present, had 170 (average daily) out-patients. It is expected to draw more patients from the Division since its services are/will be free of charge. Chogoria will be left mainly for the well-to-do persons, who come from not only Nithi but also other parts of Meru and Embu Districts. It is anticipated that Chuka will, when completed, be the main source of medical services for the people living in Nithi Division.

Although it may appear that Chuka is not a very prominent source of essential services, the fact that people do not go to out-of-Nithi centres, suggests that the services are widely decentralized, Chuka being the main source. This is a healthy situation since growth centres are supposed to decentralize services to smaller (service) centres for more effective provision to the rural population. Chuka is however a poor source of recreational services. The fact that only 3 per cent of the rural people go to Chuka for recreation purposes supports an earlier contention that the town

is poorly endowed with recreational facilities (Chapter III 3:7:2:3; and 5:1:3:2 above). In this regard the town has a very weak linkage with its hinterland.

5:3:2 Market Attraction

This is also relatively weak. Only 3 per cent of the rural people interviewed went to Chuka for some form of commercial business. Most (52%) went on official purposes, particularly to the Co-Operative (Member's Transaction) Bank unit at Chuka. Only 23 per cent went there for shopping. Of the open market buyers, 40 per cent indicated to have gone there with shopping as the sole purpose. 20 per cent had shopping as the primary purpose, while another 40 per cent went shopping as a secondary purpose. These facts render it logical to conclude that Chuka does not offer a strong market attraction to the rural people, which implies a weak linkage between the centre and the hinterland.

5:3:3 Industrial and Commercial Goods Flow

The industrial goods flow is substantial. Such an assertion is supported by the fact that 3 of the 4 industrial firms in the town sell all their products locally.[9] However, as was noted above (5:3:2) the

commercial goods flow is poor. It thus does not have close links with other (smaller) centres. In fact, Marima appears to be growing faster than Chuka.[10] Such weak linkage could be attributed to the lack of business acumen on the part of Chuka's entrepreneurs, which renders the range of goods available in Chuka rather limited. It is for this reason that many people and retail traders go to far away centres to purchase goods. However, the poor flow of commercial and industrial goods could be a result of poor road network within Chuka's hinterland. In general terms it can be concluded that there is a weak centre/hinterland linkage as far as the observations of this study are concerned.

5:4:0 ACCESSIBILITY

A growth centre must be well-knit to the overall fabric of the national communications network. Although Chuka has had a poor road connection to the other parts of the country, this has been due to the bad condition of the roads. With the completion of the National Trunk Road (B6)[11] the town is bound to be accessible from all parts of the country. Furthermore, the D472 (all-weather) road, leading to the C92 primary road, connecting Embu and Meru on the lower (eastern) side, adds to the town's accessibility by road.

Like all other parts of Eastern Province, Chuka is not connected to the rest of the country by rail. This is due to the varied nature of topography of the entire region surrounding Mt. Kenya which would make it extremely costly to lay railway lines. However, the presence of an airstrip is an added advantage in terms of the town's accessibility. This (airstrip) is at present not in use, but can be improved to provide a landing base for light aircrafts. All in all the accessibility consideration is now in favour of Chuka as a growth centre.

5:5:0 ADMINISTRATIVE POTENTIAL

Since its inception Chuka has been an administrative centre. It is for this purpose that it was first established, and indications are that it will ever continue to perform the function. Being the Divisional headquarters for Nithi Division, Chuka already accommodates over 20 sectoral Government Departmental Offices. There is a possibility of splitting the vast Meru District into two. If this were to happen, Chuka would definitely be the headquarters for the (would-be) Southern District. Its many offices and the current expansion renders it the most ripe centre in Nithi that could support heavier administrative functions.

In the light of its present and speculated future administrative status, Chuka has substantial administrative potential. However, the town is so far not independent (especially financially) from the County Council of Meru. It is expected though that after the preparation of the Development Plan (Chapter II 3:3:2) the intended Urban Council investments will make Chuka self-reliant. To undertake such ventures land has to be acquired for public use. Since most of it is under private ownership the acquisition will have to be expensive due to compensation costs. So, in the short-run 'preparing' Chuka for growth centre status is bound to be met with much financial strain. This is an inevitable first step though. Given the administrative potential and the expected self-reliance, Chuka is therefore eligible for (future) growth centre status.

5:6:0 CONCLUSION

It has been observed that Chuka is favoured by some but not all requirements (criteria) for a growth centre. Among those that qualify Chuka for the status are its administrative potential, high agricultural potential of the hinterland, accessibility, particularly by road, and proximity to population concentration.

On the other hand, by certain criteria Chuka does not deserve growth centre status. For instance, it has a weak economic base, chiefly due to lack of diversified economy and employment. The industrial and commercial activities are particularly low. The town is also poorly served with infrastructural facilities. Their insufficiency makes Chuka not only short of growth centre status, but are also inadequate to meet the requirements for an urban service centre.[12]

Although its hinterland is well endowed with agricultural potential, it is poor in some other important resource potentialities. These include, and as most important, tourist potential. Finally the town has a weak linkage with its hinterland. As such it does not serve as an interceptor for potential migrant population from the hinterland, an important function of any growth centre.

Footnotes

1. These are criteria which were used to designate the first 9 growth centres (Chapter II 2:3:3). They include administrative potential, industrial and commercial activities, level of existing infrastructure, agricultural potential (of hinterland), tourist potential, proximity to population concentration, and accessibility.

2. From the field survey it was found that only 6 per cent of the respondents were born in the town. 39 per cent were born outside the town but within Nithi Division, and 10 per cent elsewhere in Meru District.

3. The latter observation was made by the author and does not bear statistical evidence.

4. The field survey (urban household) revealed that 61 per cent earned monthly incomes in excess of Shs. 1,500/=; 13 per cent between Shs.800 and 1,499, 26 per cent with less than Shs.800/=.

5. Maize, sunflower, millet and sorghum are known to be doing very well within the hinterland.

6. 67 per cent of the businessmen interviewed cited experiencing financial constraints. 40 per cent held that there was low customer turnout, hence low profits.

7. Order of intensity is determined by the proportion of respondents who cited the relevant problems as binding.

8. The theoretical roles of growth centres are outlined in Chapter II (2:2:1) while Kenya's growth centre policy is explained in Section 2:3:0

9. Only Nithi Timber reported selling some of its timber to Nairobi.

10. At present more investments are being directed to Marima (a rural centre) than to Chuka. This could be due to the uncertainty of Chuka's administrative status, and hence the direction of development.

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11. . Construction of this road is expected to be completed by.the year 1984.

12. Among the services required of an urban (service) centre are a treated piped water supply, piped sewerage system and disposal plant, recreational and social services. These are not present in Chuka. There is enough water supply but most of it reaches consumers untreated due to the limited capacity of the treatment plant.

CHAPTER VI

CONCLUSIONS AND RECOMMENDATIONS

6:0 MAJOR CONCLUSIONS

The conclusions that follow arise from the statement of the problem, literature review, background information of centre and hinterland, and data analysis. They are made in respect of the extent to which Chuka performs the growth centre functions.[1]

1. There is a relatively weak linkage between Chuka Town and its hinterland. It thus does not perform the role of strengthening the regional urban hierarchy to improve service delivery to the catchment population.

2. It does not offer job opportunities. In this case it fails to curb outmigration from the hinterland by providing an alternative urban destination for local migrants.

3. It has a weak economic base, characterised by low commercial and industrial activities. It does neither accommodate large-scale agricultural and (other) resource-based industries, nor does it serve as an incubator of small-scale (cottage) industries that could later be dispersed into the hinterland.

4. Finally, and in consequence of the above observations, it is clear that Chuka is not a viable growth centre. It does not possess the merits (qualities) of a growth centre. It is not designated as such, and does not warrant the status since it does not meet the requirements (prerequisites) for a growth centre. It will therefore remain an urban service centre until it 'matures' to a town with growth centre attributes.

6:1:0 CONSTRAINTS TO CHUKA'S DEVELOPMENT

The failure to have achieved a level of development sufficient for self-sustaining growth has been a result of a number of factors. These (factors) have served to inhibit Chuka's growth both as an urban and a growth centre. The most crucial of these, and which constitute development constraints, include the following:

1. The topography, which is characterised by steep slopes and undulated surface terrain, has placed difficulties in putting up physical developments in the town. Construction of houses on the steep slopes and laying infrastructural (water and sewerage) mains across the rugged terrain is, and could be done at exorbitant costs. Thus the

topographic features present development thresholds indeed.

2. The poor economic base - low commercial and industrial activities, hence limited employment opportunities - has hindered attraction of a large resident population that could provide market for local products. As a result the town has failed to provide incentives to potential investors, and thus sustains the low economic activities of the town.

3. Absence of adequate infrastructure, physical and social, implies a failure to attract industrial and other forms of development. The lack of public system of sewage disposal is the most critical of all.

4. Lack of adequate development planning, system of land tenure, and extension of town boundaries without corresponding control of land use have brought forth haphazard development in the town. This in turn has resulted in inefficient use of urban land. Such sprawl of development places a severe barrier to further growth, and especially to (future) development planning of the town.

5. The economic base of the hinterland is too low to support the centre. This has been a result of underexploitation of the resources of the hinterland. As such there is a low linkage between the centre and the hinterland, each failing to adequately serve the other. The poor linkage, and the low exploitation of the hinterland's resources[2] owe partly to the poor road network, shortage of skilled personnel particularly extension workers, and insufficiency or delay of (especially) farm inputs. The rural people are therefore poor - being poor they cannot support the activities of the centre. There is therefore a resultant cyclical reasoning for the centre's inability to support the hinterland, and vice versa.

All these constraints, if overcome or minimized could allow development in Chuka which would make the town attain self-sustaining growth, and a viable regional growth centre therefore.

6:2:0 RECOMMENDATIONS

6:2:1 Solutions to General Problems

In order to overcome the constraints that inhibit Chuka's development, a number of measures must

be instituted, some of which have to be tackled within a national policy framework. However, others could be rectified at the local level.

There is very little that can be done to change the physical layout of the town. In order to avoid high construction costs, however, future development should be concentrated on more flat land. The steep and marshy areas could be deferred until such time when the financial situation of potential investors (including the Urban Council) improves to allow more expensive investment ventures.

Installation of a public sewerage system requires immediate attention. A gravity system should be provided with a treatment plant situated towards the (lower) eastern end of the town, from where sewage effluent can be disposed by dilution i.e. discharged into a natural water course.

The Urban Council should also provide a tipper or tractor to facilitate garbage collection. Open drains should be constructed immediately to take care of the surface run-off. This could be later substituted by closed drains which would be connected to the sewage treatment plant. However, this cannot be done in the short-run because it is an expensive exercise - hence the proposal to cut open drains for

the storm water, which should lead to the natural water courses.

To boost the volume of treated water in the town, the present treatment plant should be expanded. Since it is presently located very close to the centre of the town it should be moved to the edge of the forest so that even people above the present plant can have a share of treated water. Moreover, the town is expected to grow farther to the west. The proposed integration of Chuka Water Supply is commendable. However, the Urban Council should take over provision and maintenance of the water installations within the town to ensure efficiency in supply. Meter charges hence would go to the Council.

To improve the internal road network, it is recommended that all Class D and Class E roads, particularly the sections falling within the Urban Council's jurisdiction, be tarmacked. The rest should be gravelled for the time being, they could be upgraded later when the Council will be in a better financial position.

The present post office needs expansion to accommodate more private boxes and a large hall in which to serve the increasing number of customers.

With the expansion of the town's institutions, there is need for an automatic telephone exchange. More public telephone booths should also be provided at regular intervals to cater for the town's growing population.

Street lighting is already overdue. Electricity should also be extended to all residential (and other) areas of the town.

Provision of social amenities deserves immediate attention. To promote recreation activities, Ndagani Sports ground should be promoted to stadium status, to the level that it can be used for A.S.K. shows. Besides there should be a few other fields for games like football, volleyball and netball, close to residential areas to enable smaller groups to entertain themselves on weekends and evenings. Other forms of recreational facilities should include indoor games - preferably in the social hall. The Council should also build a fully equipped cinema theatre. Provision of television sets in public places for free viewing could also promote entertainment facilities for the town residents. A mobile library unit should be introduced, to serve the present and near-future needs. Later when the town assumes more functions and a sufficiently large population a public library could be established.

A site-and-service Scheme should be introduced in the town to ensure ownership of houses by a larger proportion of the town's residents. For the same purpose, individuals should be encouraged to put up their own houses. This could be achieved by making available short-term loans which should be provided with less stiff security requirements. Thus, services of the Housing Finance Company of Kenya (HFCK) are needed in Chuka. At the national level the building standards should be relaxed to enable more people afford constructing acceptable houses. However, to avoid sprouting of sub-standard housing units in future, control measures should be instituted within the immediate newly annexed areas of the Urban Council area of jurisdiction. Alternatively poorer structures could be allowed with special conditions such as demolition at the descretion of the local authority.

The present educational facilities should be maintained in good condition, and decentralization of primary and nursery schools ensured to serve the town's population at closer proximity. The Urban Council should take up the responsibility of nursery school provision and maintenance.

Although the hospital is believed to be sufficient to serve the town once completed, private clinics should be encouraged through easy licensing to avoid any future congestion in the hospital.

To strengthen the town's economic base, industrial and commercial activities must be promoted and diversified. Such a move could provice a wider range of goods and generate employment. The diversification could be made possible by offering financial and technical aid to the up-coming entrepreneurs. In that case promoting the Rural Industrial Development Programme under the Kenya Industrial Estates should be able to help potential industrialists. To help (commercial) businessmen there should be opened an I.C.D.C. branch in Chuka to serve businessmen in Chuka and other centres within Nithi. Relaxing security requirements should be able to tap a wider range of credit-worthy businessmen. Other assets than land (titles) should be accepted, including the businesses themselves and movable household property.

Encouragement of cottage industries and the informal sector by providing them with essential services like water and electricity, and also credit facilities should further help to strengthen the town's industrial base. For the same purpose agro- and resource-based industries should be started,

to precede manufacturing of simple farm implements. These should be able to take in local products, thereby boosting the economy of the hinterland besides creating employment opportunities in the town. In order to encourage the industrial activities an industrial area should be set aside, and be provided with all the necessary infrastructure like water and sewerage connections, electricity lines and telephone facilities.

Opening up of a tourist hotel could serve multiple purposes. It could include folk dance performances, to tap the local people's rich cultural heritage. This, besides boosting the recreation services would offer employment to the actors and actresses, and also help to promote the income generating activities within the town. Such a venture could be set up by the Council or by organised groups or associations of the local population.

In order to enable more efficient exploitation of the hinterland's resources, solutions have to be offered to certain problems facing the rural economic activities. To promote crop production the Government should ensure adequate and timely provision of farm machinery and inputs like chemicals and fertilizers. A K.F.A. store is in this case necessary at Chuka.

There should be storage facilities in each of the five locations of the Division. The Co-Operative movement should be streamlined to hasten payments to farmers. This would boost the morale of the farmers, and hence higher productivity. Provision of more extension and other qualified staff, coupled with opening up and ensuring good maintenance of feeder roads should facilitate delivery of the (extension) services, as much as it would help transportation of farm inputs and produce. Farmers should also be provided with sufficient credit facilities (e.g. seasonal credits) at reasonable terms. Requirement of land titles deprives some farmers of the opportunities - some do not have land of their own while others haven't had land adjudication. The farm produce and other types of property should suffice to guarantee security to cover the loans. Irrigation could also be introduced in the drier areas to help the hinterland's economy.

For livestock development, destocking and emphasis on quality and not quantity should be embarked on. Thus the field staff should launch campaigns to that effect. Animal mortality rates should be reduced by recruiting more veterinary staff and increasing and maintaining the existing cattle dips. It is also proposed here that the Government take over the dips that are currently run on

harambee basis. The Ministry of Industry and/or Ministry of Livestock Development should start milling of animal feeds to make them cheaper - presently they are too expensive, and given that grazing areas are no longer available, the farmers find it very difficult to keep animals like grade cattle, pigs and poultry. Milk processing facilities should also be considered and be installed - preferably on Co-Operative basis. Encouragement and (financial) assistance to the already set up Ciangoi/Cabugi Dairy Co-Operative should be a desirable move toward this direction.

Streamlining of marketing system should enable farmers to dispose of their produce conveniently and cheaply. This could be done through introducing well-supervised co-operative societies, and also by extending the services of Cereals and Produce Board to the area in question.

The forestry resource base could be promoted through recruitment and posting of qualified forest staff to the area, establishment of tree nurseries at the upper and lower parts of the Division and strict control of tree felling. This together with encouragement of industries that utilise the forest products should promote the centre's and hinterland's economy.

Construction and stocking of fish ponds could promote the industry, thus improving the dietary standards and the economy of the hinterland. Encouragement of co-operatives, groups and individuals by provision of technical advice and credits, should allow for more intensive exploitation of the water-based resources.

Besides opening up of a tourist hotel, tourist potential could be exploited by opening and gravelling of tourist trucks to Mt. Kenya and other areas of scenic value such as river falls and caves. This, along with all the above suggestions could help promote the economy of the hinterland, which in turn would support and promote the economic activities of the centre to ultimately attain growth-centre merits.

6:2:2 Plan Policy Guidelines

Future growth of the town should be guided to ensure efficient performance of its expected functions. It is acknowledged that the Urban area is too vast for the Council to develop within the foreseable future. It is recommended therefore that the planning of the town be sequential, but within a long-term perspective. Thus, it should be planned in short-term phases the first of which should cover the already earmarked area of approximately 8.4 Sq. Km (840 hectares).[3] The

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author is in agreement with the proposed 'urban' area (for development) which covers all the developed areas - extending Northwards to Ndagani, Kibumbu Primary School to the West, Naka River to the South and Iriani (Kiamuge) Primary School to the East. Given the current rate of growth of the town's activities, it is expected that the 'urban' activities can be accommodated within that area for the next 20 years, after which more land can be acquired for urban extension.

Of the developments that are to be included in the plan, the following should be given priority.[4] A closed market with shelters (already under construction), a fenced open market, sewage treatment plant (site), and Urban Council offices. Others include an industrial area (for light industries), residential houses, an abattoir, central government administrative headquarters, recreational areas, primary and nursery schools, airstrip (already at Ndagani), bus/matatu terminus, cemetery (so far not in town) and a tourist hotel.[5]

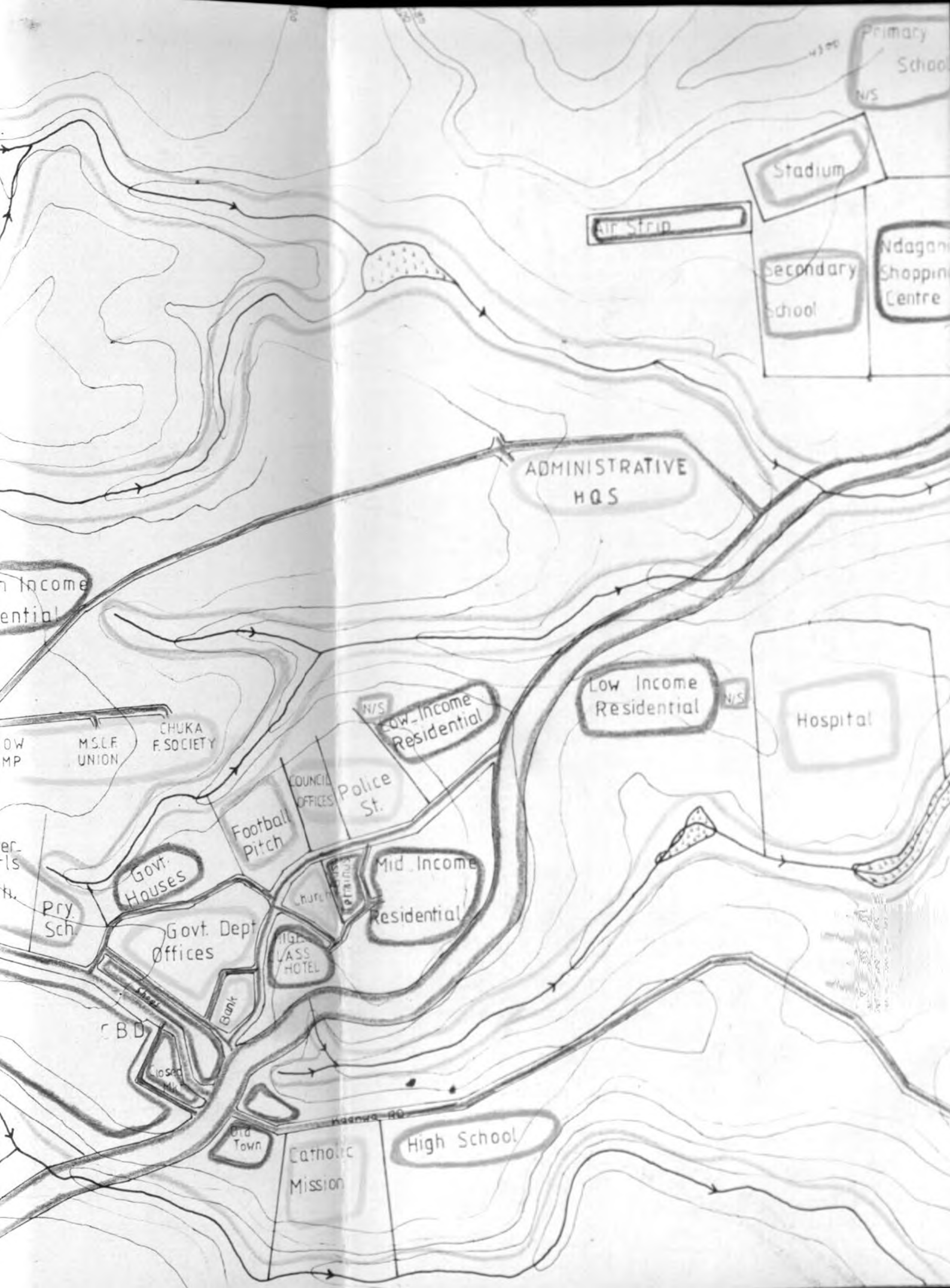
In making the plan for the town an effort must be made to retain as much of the existing land uses as possible. This is because it would be very expensive both to compensate the owners whose premises have to be demolished, and to reinstall infrastructural

investments like water and electric power lines. However, where it is inevitable, for the sake of harmony and amenity, the Council should compensate the owners fully before taking up any land already developed by individuals.

To ensure more balanced growth of the town more commercial establishments should be directed to Ndagani,[6] while the main business centre should remain at the present trading area. The industrial area should be located towards Ndagani where more flat land is available - Map 9 shows the direction of growth and major land uses i.e. proposed areas.

The Central Government administration headquarters should also move towards Ndagani, and located midway between Ndagani and the present town. However, the civic (Council) offices should remain at the old town since that is where most of the town's functions are/ will be concentrated. The residential areas should remain as they are, but the high income housing area be located at Kaigoro, where many people have already put up permanent personal houses.

The sewage treatment plant should be located farther to the east at the edge of the proposed 'urban' area. This side is lower, and considering the direction of the wind, there would be little smell


Primary School
N/S
Stadium
Air Strip
Secondary School
Ndagani Shopping Centre
ADMINISTRATIVE HQS
Low Income Residential
N/S
Hospital
N/S
Low-Income Residential
COUNCIL OFFICES
Police St.
Football Pitch
Govt. Houses
Pry. Sch.
Govt. Dept Offices
Mid. Income Residential
VASS HOTEL
Bank
CBD
Old Town
Catholic Mission
High School
CHUKA F. SOCIETY
M.S.C.F. UNION

nuisance caused to the town's residents. The treated effluent could then be discharged to Chiku stream. The airstrip and the stadium should remain where they are, while the cemetery goes close to the hospital. The other major land uses may be discerned from Map 9.

It should be recalled that this study does not specifically deal with the physical development of the town. It is recommended therefore that more research be launched to establish requirements for various land uses. Such study would lay groundwork for a more detailed plan for the town. It is the hope and expectation of the author that adoption of the above recommendations and proposals will place the town in a better position to provide the required services of a growth centre.

Footnotes

1. As outlined in Chapter I, 1:2; and Chapter II, 2:3:3.

2. There is substantial potential for agricultural, forestry and other resources, that is so far not fully exploited to support the hinterland's economy.

3. This is the area in which the Urban Council intends to concentrate development activities, and for which the plan (refer Chapter III, 3:3:2) is being prepared. Most of it has had some form of Urban development.

4. These are some of the factors the Clerk to Council mentioned as having been identified by the Council to be most crucial and needing immediate attention.

5. The Meru South Farmers' Co-operative Union is already set to construct a hotel complex in the town.

6. This is where the market situation has already expressed itself.

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APPENDIX 1: SCHEDULE OF SERVICE CENTRES IN NITHI DIVISION

Urban	Rural	Market	Local
Chuka	Marima	Kibugua	Itugururu
Chogoria (Kabece)		Mukuuni	Ikuu
		Kaanwa	Kiereni
		Mitheru	Chera
		Kiriani	Weru
		Chakanyinga	Mariani
			Kajuki
			Iriga
			Karimba
			Momboni
			Mwiria
			Magutuni
			Keria.

APPENDIX 2: QUESTIONNAIRES USED IN THE FIELD RESEARCH

A. Urban Household Survey Questionnaire

1. Age of head of household ----------

2. Standard of education

(i) None (ii) Primary (iii) Secondary (iv) University.

3. Place of birth

(i) Chuka (ii) Within Nithi (iii) Within Meru (iv) Outside district (specify)

4. Period of stay in Chuka

(i) Less than 3 years (ii) 4 - 6 years (iii) 7 - 10 years (iv) Over 10 years.

5. Reason for coming to town (i) Work (ii) Birth (iii) Marriage (iv) Other (specify)

6. Members of family living away ----------

Places ----------

Standard of education ----------

Age(s) ----------

7. Occupation of household head

Sector of employment: (i) Agriculture, (ii) Commerce (iii) Industry (iv) Other (specify)

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6. Members of family living away ----------

Places ----------

Standard of education ----------

Age(s) ----------

7. Occupation of household head

Sector of employment: (i) Agriculture, (ii) Commerce (iii) Industry (iv) Other (specify)

8. Income levels (i) Below KShs.800/= per mont
(ii) 800 - 1,499/= (iii) Over 1,500/=.

9. Other sources of income (i) Agriculture
(ii) Commerce (iii) Industry (iv) Informal
(v) None.

10. Expenditure estimates/month
(i) Below Shs.800/=
(ii) 800 - 1499
(iii) Over 1,500/=

11. Mode of transport to work (i) Foot
(ii) Bicycle (iii) Public vehicle (matatu, bus) (iv) Company car (v) Private car.

12. Problems in commuting (i) Time (ii) Money (fare) (iii) Other (specify) (iv) None

13. Distance from residence to work
(i) Less than 1 km.
(ii) 1 - 4 km.
(iii) Over 4 km.

RESIDENTIAL

14. Nature of housing unit (i) Temporary
(ii) Semi-permanent (iii) Permanent.

15. Ownership (i) Owner-occupied (ii) Rented
(iii) Staff (iv) Other (specify).

16. Number of habitable rooms (i) 1 (ii) 2
(iii) 3 and above.

17. Rent in shillings per month (i) 400/=
(ii) 400-800 (iii) 800/= and above.

FACILITIES

18. Bathroom and toilet (i) Private (ii) Shared,
(iii) None.

19. Separate Kitchen (i) Present (ii) Shared
(iii) None.

20. Water available in the plot (i) Yes (ii) No.

21. Source of water (i) Piped private
(ii) Piped community (iii) Stream/river.

22. Refuse disposal (i) Dumping (ii) Compost pit
(iii) Vehicle (tipper, trailer) (iv) None.

23. Sewerage System (i) Public sewers

(ii) Septic tank/aqua privies

(iii) Pit latrine.

24. Cooking/heating media (i) Open hearth

(ii) Charcoal brazier (iii) Electric/gas stove

(iv) Kerosine stove.

PERCEPTION

25. Whether town source of employment (opinion)

(i) Yes (ii) No

26. Whether town source of innovation (i) Yes (ii) No.

27. Where major shopping is done (i) Here

(ii) Elsewhere (specify) (iii) Both (i & ii).

28. List problems faced in order of intensity -------

29. List possible solution for each ----------

B. Business/Trade Questionnaire

1. Type of business (i) Wholesale (ii) Retail.

2. Business premises (where applicable) (i) Self-owned (ii) Rented.

3. Type of items sold (list) ----------

---

4. Other sources of income (i) Agriculture
(ii) Industry (iii) Formal employment
(iv) Other (specify)

5. Number of people working in shop/business
(a) Family ---------- (b. Employed ----------

6. Costs involved (i) Rent ----------
(ii) Transport ----------
(iii) Storage ----------

7. Business condition (i) Progressing
(ii) Constant (iii) Declining

8. If declining, why (reasons) ----------

---

9. List of constraints (i) Financial
(ii) Labour (iii) Market (custom)
(iv) Other (specify)

10. Effective competition with (i) Far-away centres (ii) Local centres (within Nithi)
(iii) None.

11. Reasons for selecting centre (i) Fair (low) rent
(ii) Ready market (iii) Other (specify)

12. Sources of inputs (stock) (i) Within Centre (ii) Elsewhere (specify) (iii) Both (i) & (ii).

Open Market Only

13. Distance of market from home (i) less than 1 km. (ii) Less than 3 km. (iii) Over 3 km.

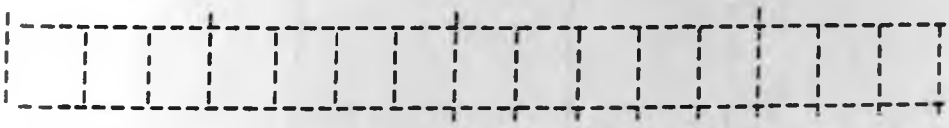
14. Sources of stocks (i) Farm (ii) Other (duka's).

15. Mode of transport to market (i) Foot (ii) Bicycle (iii) Public vehicle.

16. Buyer Purposes

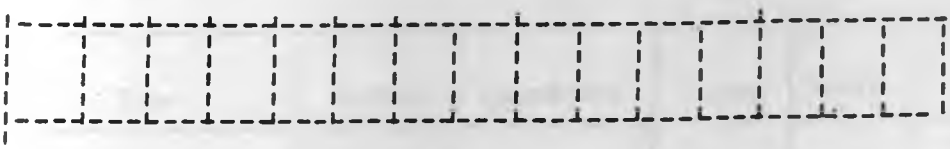
A

Shopping as sole purpose



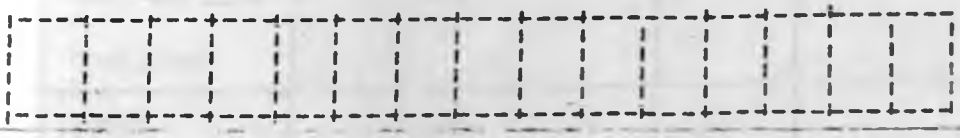
B

Shopping as primary purpose



C

Shopping as secondary purpose



C. Industrial Establishments Questionnaire

1. Name of firm ----------

2. Date of Establishment ----------

3. Nature of ownership (i) Private (ii) Public.

4. Inputs

Inputs	Quantity per year	Source	Cost/Unit
1.			
2.			
3.			

5. Products

Product	Quantity/year	Market	Price/Unit
1.			
2.			
3.			

6. Employment

Type	Number	Permanent	Casual	Total
Managerial				
Skilled				
Semi-skilled				
Unskilled				
Total				

7. Salaries (Shs./month)

Category.	Skilled	Semi-skilled	Unskilled
Below 500			
500-999			
1000-1499			
1500-1999			
Over 2000			

8. Training (i) None (ii) On job (iii) Institution (name)

9. Employees from (i) Within town (ii) Within division
(iii) Within district (iv) Outside Meru.

10. Factors of location (importance)

	High	Moderate	Low
1. Transport			
2. Raw materials			
3. Fuel, power and water			
4. Labour			
5. Market			
6. Land			
7. Other			

11. Land requirements (ha.) (i) Present site
(ii) Needed for expansion

12. Plans for expansion (i) On present site
(ii) Elsewhere in town (iii) Outside town (where)

13. Effluents (list) ----------

14. Measures of control/elimination ----------

15. Major constraints to development/expansion
(in order of importance)
(1) Transport (2) Labour (3) Land (4) Infra-structure (5) Market (6) Raw materials
(7) Security (8) Capital (9) Other

D Rural Household Survey Questionnaire

1. Age of head of household ----------
2. Occupation ----------
3. Household size ----------
4(a). Highest level of education of any member of household ----------
4(b) Where he/she lives ----------
4(c) Age ----------

5. Nature of main dwelling unit (i) Temporary
(ii) Semi-permanent (iii) Permanent

6. Estimated monthly income (KShs. (i) Below 800/=
(ii) 800 - 1499/= (iii) Over 1500/=.

7. Major sources of income (i) Employment
(ii) Cash crop growing (iii) Trade

8. Expenditure/month (KShs.) (i) Below 800/=
(ii) 800-1499/= (iii) Over 1,500/=.

9. Expenditure mainly on ----------

10. Size of land holding (ha.) ----------

11(a) Land under cash crops (ha.) ----------

11(b) " " food crops ----------

12. Main cash crop(s) ----------

13. Agricultural implements (i) Tractor
(ii) Power tiller (iii) Oxen plough
(iv) Hoe and panga.

14. Sources of farm inputs (i) From Chuka Town.
(ii) Local (lower level) market (iii) Major town other than Chuka.

15. Number of workers needed ----------

16. Workers available (i) Family
(ii) Hired

17. If not enough, why (i) No money to pay
(ii) General scarcity

18. Size of livestock (number) (i) Cattle (ii) Goats/sheep (iii) Pigs (iv) Poultry (v) Other

19(a) Any extension service workers (i) Yes
(ii) No

19(b) Workers' visit to farmer (i) Once/month and less (ii) Up to one in 6 months
(iii) Once in over 6 months

20. Source (place) of medical services
(i) Chuka (ii) Local health centre/dispensary
(iii) Elsewhere (specify)

21. Nearest postal/telephone services (i) Chuka
(ii) Locally available.

22. How often do you visit Chuka ----------

23. Purpose (i) Work
(ii) Shopping (iii) Official (other than work) (iv) Recreation (v) Other (specify)

24. Means of (road) communication reliance
(i) Plentiful (ii) Moderate
(iii) Insufficient.

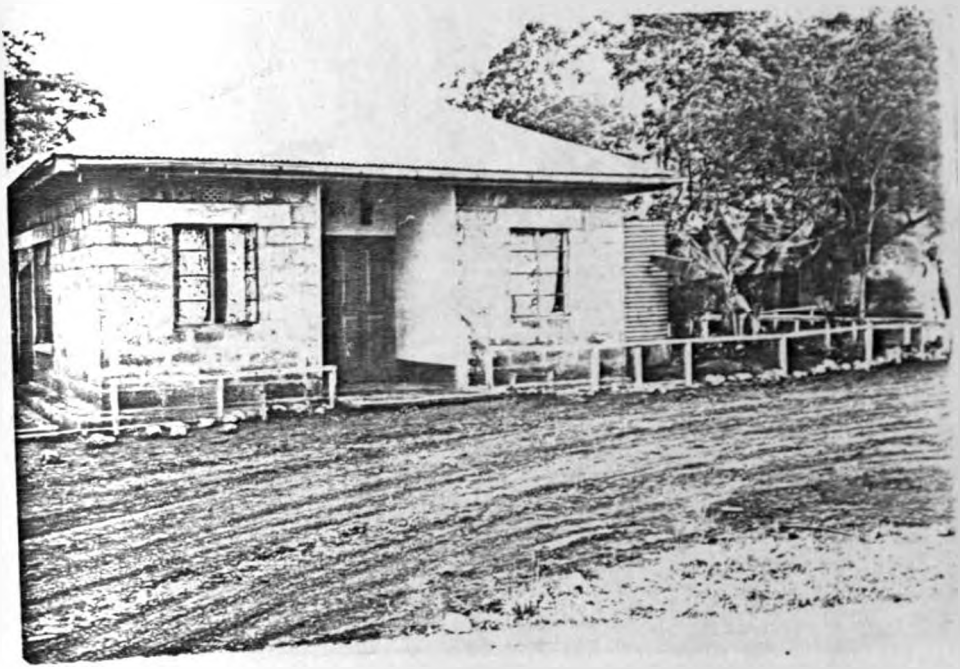


Plate 1: County Council Hall, currently accommodates Chuka Urban Council Offices.

Plate 2: Chuka Court of Law caters for Nithi and also Igoji Location (South Imenti Division).

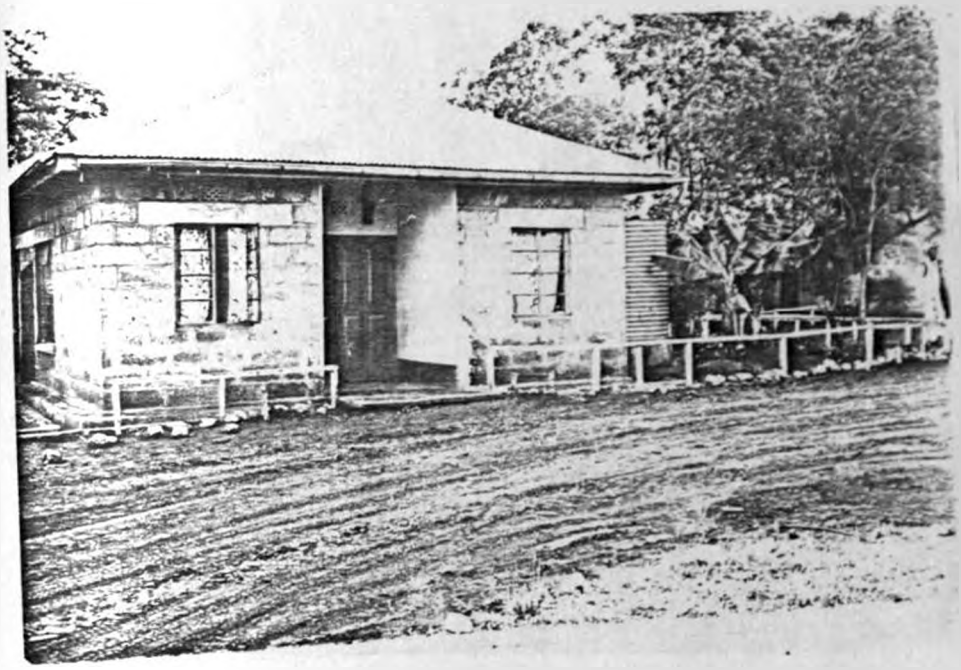


Plate 1: County Council Hall, currently accommodates Chuka Urban Council Offices.

Plate 2: Chuka Court of Law caters for Nithi and also Igoji Location (South Imenti Division).

Plate 3: 'Urban' activities are intermixed with agriculture.

Plate 4: National Housing Corporation Houses constitute the largest single residential area.

Plate 5: Open market. Few sellers operate in these (temporary) sheds, otherwise wares are displayed in open air

Plate 6: Open Market. Lack of enclosed sheds renders goods vulnerable to scorching sun and rainfall.

Plate 7: Animals are a common feature in Chuka's dusty/muddy streets.

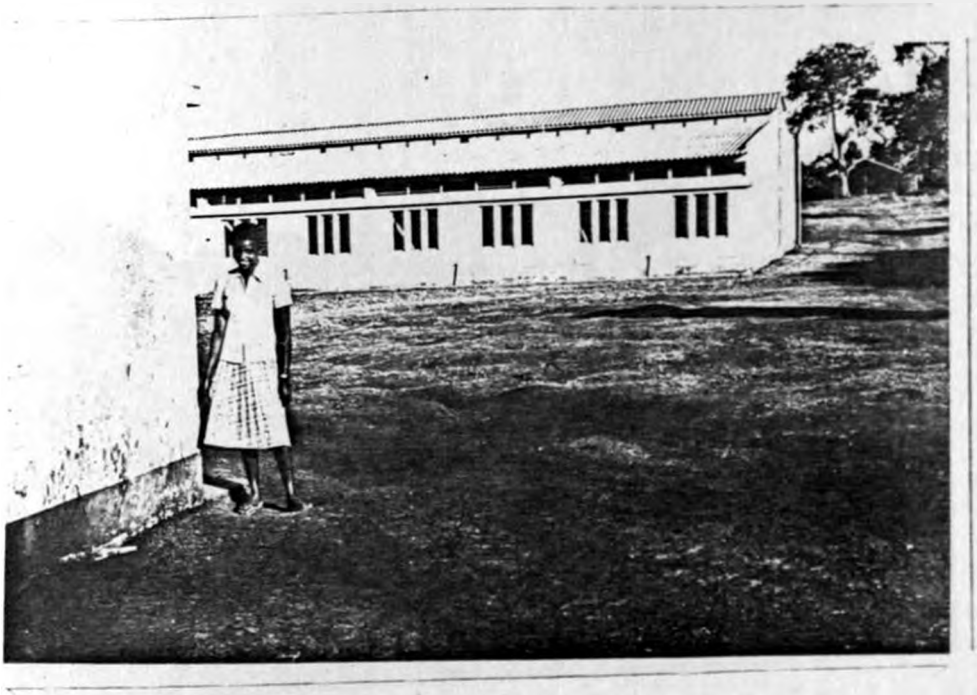


Plate 8: Chuka Sub-District Hospital. Phase I is already complete and in use.

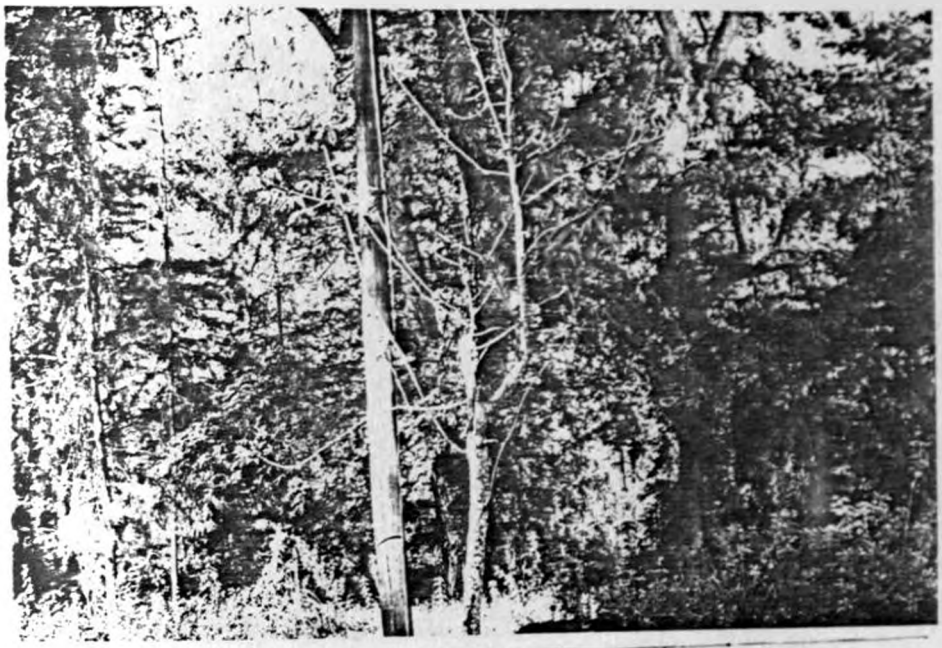


Plate 9: Nithi is well endowed with forest resources - for protective and productive purposes.

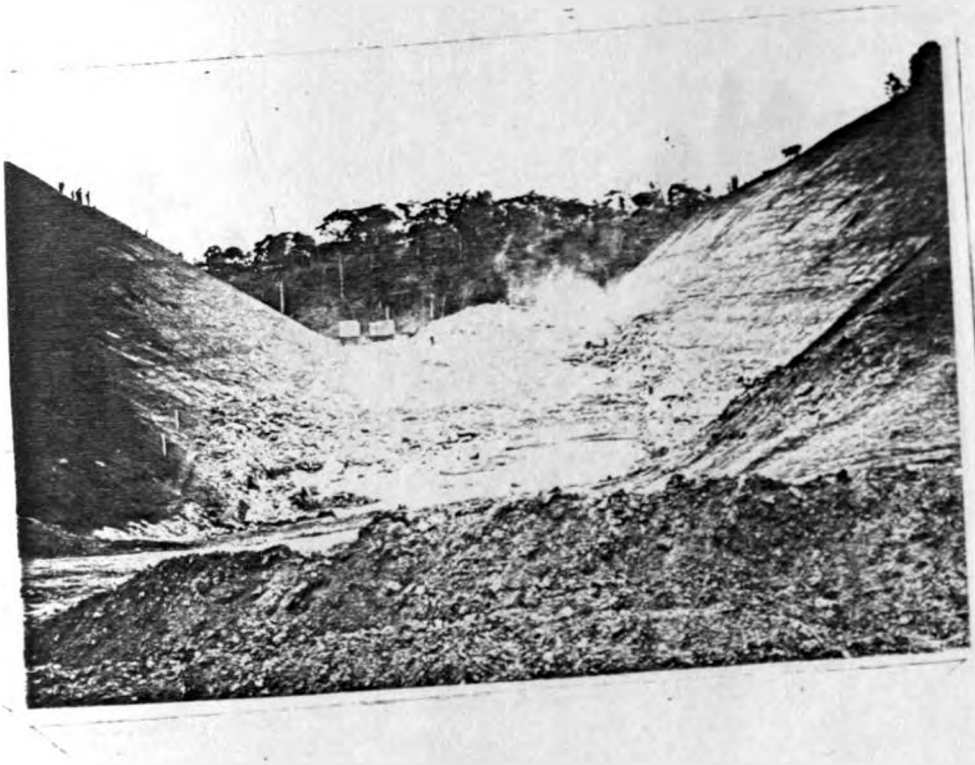


Plate 10: Thuci/Nkubu section of the B6 (Embu-Meru) Road is currently under construction.

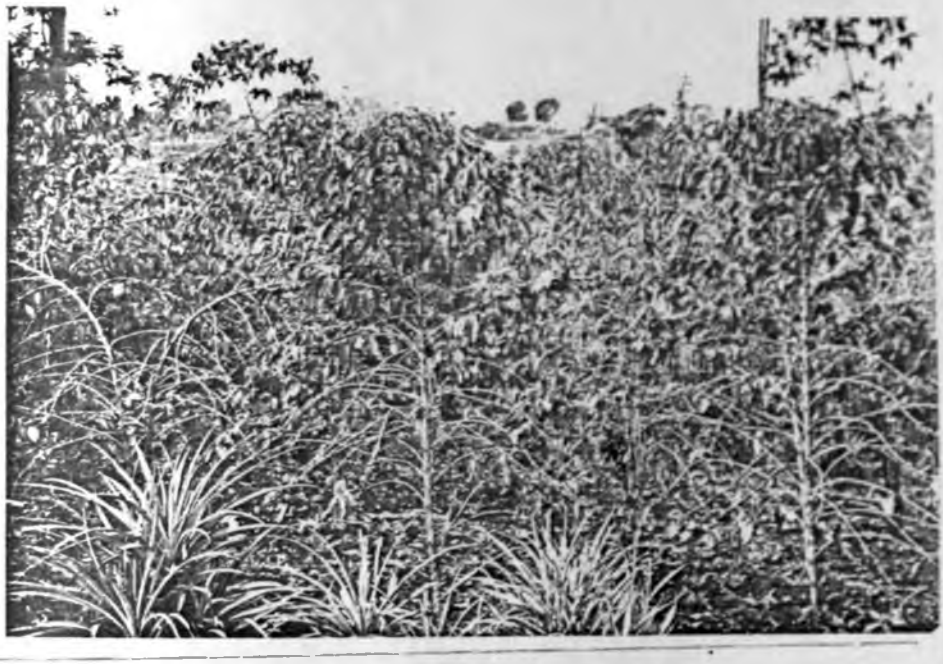


Plate 11: Coffee is the most extensively grown cash crop in Nithi Division.

Plate 12: Tea does particularly well in high altitude areas.