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VIENNA AND ESTERHÁZS PROVINCE SE THAR KERICHÓ

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FOREWORD

The publication of the proceedings of the first of four planning seminars marks an important stage in meeting one of the objectives of the Institute within the framework of the bilateral agreement. The seminar was held in Kericho from Wednesday August 16 to Saturday August 19, 1978. The seminar organized at the request of the Planning Section of the Ministry of Finance and Planning was specifically convened to demonstrate the uses and limitations of demographic data for planning at the district level. Participants included the Provincial Commissioner Nyanza, Deputy Provincial Commissioner Western, Province Planning Officers and Advisors from the Ministry of Finance and Planning and Provincial heads selected by the respective Provincial Commissioners.

The programming of the seminar included opening remarks by the Provincial Commissioner Nyanza, keynote addresses by staff of the Population Studies and Research Institute and comments on the papers from the officials and advisors of the Ministry of Finance and Planning. The basic aim of this technical seminar was to demonstrate through practical examples how demographic data could be more effectively utilized to sharpen the planning process at the local level.

Due to the innovative nature of the task, the approach was exploratory and gave room for critical evaluation of the three day seminar. From the experience and criticisms incorporated in the proceedings it is hoped that the remaining seminars will be greatly enriched and that the field task of strengthening the demographic base of planning at the district level will thus have been achieved.

It is hoped that the circulation of the proceedings will help other countries that are similarly engaged in making planning at the local level more relevant to problems that affect rural development.

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ACKNOWLEDGEMENT

We would like to convey our special thanks for the help and co-operation in producing the conference. A large vote of thanks goes especially to Prof. Henin whose captivating presentations, both prepared and ad hoc, provided the abundance of factual and interpretive material that invited maximum participation. The Provincial Commissioner Nyanza, Mr. Cheluget, by his presence, interest and participation underlined the importance of the subject and of the need for Kenya's top administrative cadre to concern itself seriously with these issues. We thank him for his official opening address, the deputy Provincial Commissioner Western Province for closing remarks, and both for their valuable moral support.

Dr. Eric Krystal provided much useful practical guidance in the preparatory meetings, in formulating questions for the discussion groups, and in liaising with speakers to ensure that their remarks were directed toward the main organising ideas and purposes of the conference. A. Mani of CBS contributed time in presenting some of the conceptual tools used by CBS in producing Kenyan demographic data. Dr. Peter Delp of the RPS contributed much time and administrative assistance in organising the meeting schedule, devising exercise questions, and chairing plenary discussions. David Mshila

and Judith Geist, also of RPS, contributed to the preparatory meetings, to the formulation of exercise questions and to the recording of the proceedings. To all of these we express our sincere thanks for their efforts, which contributed to the clear success of the conference.

Most important of all were our participants, who felt that we had something to say to them and who were prepared not only to listen but to give their own ideas, questions, and practical knowledge from the field. So to the Provincial department heads from Western and Nyanza, the District Commissioners, and the District Development Officers, a most heart-felt "Thank you!" for their enthusiastic response.

Introduction

Background

Population data is of basic importance to economic and social planners. Planners should have sufficient knowledge of the uses and limitations of demographic data and concepts so that they can be effectively utilized in the planning process. Economic and social planners should be able to define clearly what they need and to understand what is potentially obtainable. Only then can they make the greatest use of the demographic data at their disposal and receive the maximum assistance from professional demographic institutions.

The incorporation of population data in economic and social planning is a relatively recent phenomenon. Regional economic planning has been assuming increasing importance by planners. As a result there has been a growing demand for population data for sub-units of a country.

In one way or another, nearly all aspects of rural development are related to population size, composition and spatial distribution. At the district level, planners are concerned with such matters as demand for education (school age population), health services, food, nutritional needs (total population and its composition by age and sex), agricultural production, demand and supply of labour (working population and participation rates), maternal and

child health care (women in reproductive ages, expected number of births, children under 5 years), etc. In addition to helping planners determine the quantity of amenities needed such as these, demographic data can also be useful to help planners make locational decisions, determine the levels of inputs needed to achieve given qualitative standards and in situations of tight resources they may even be useful in helping to determine the relative costs and benefits of initiating one programme over another.

Equally important is a clear understanding of the interrelationship between demographic, economic and social factors. How does population size and/or structure affect development, i.e. consumption, production and capital formation? In turn, how does development affect the demographic components of change, i.e. fertility, mortality and migration?

In Kenya, the government's declared policy is that planning should be carried out at the district level. With this policy in mind meetings were held with the Population Studies and Research Institute at the University of Nairobi, the Rural Planning Section of the Ministry of Finance and Planning and the National Family Welfare Centre of the Ministry of Health. The purpose of the meetings was to discuss the importance of incorporating population data in economic and social planning at the district, provincial

and national levels. It was decided that seminars at the provincial planners level would be held to discuss this. If these seminars were successful there would eventually be other seminars for district planners to discuss with them a detailed manual (prepared by the Population Studies and Research Institute) on how population data as well as projections are used in district development plans. The Population Studies and Research Institute was given the responsibility of supplying the material for the seminars while the Ministries had the responsibility of making the arrangements for the seminars.

Objectives

1. To discuss the role that population size, structure and growth play in economic development.
2. To have specific discussions of population dynamics in Kenya and their implications to Kenya's programme for economic and social development.
3. To have a general discussion of how to use population projections at the district level for the current plan period and how to use the projections in planning social services (health, education, housing, etc), land use, agricultural production and employment by economic sector, etc.

4. To discuss the need to initiate population policies as tools for development.
5. To provide a general overview of rural development and the provision of services to rural families.

During the discussion periods it became clear that the seminar was fulfilling a previously unsatisfied need of planners. All the participants (Provincial Planning Officers, District Development Officers, District Commissioners and others) had faced problems in planning because of the lack of data at the district level. With the new insight provided by the seminar on the relationship between population, development and planning as well as incorporating population data in economic and social development plans it became possible for provincial level planning personnel to better understand these interrelationships. Problems these people had been facing everyday in their work could now be worked out because of the specific techniques that were introduced to incorporate a population component in their planning processes.

With the successful attainment of all the objectives during the first planner's seminar it was decided that:

1. there should be similar seminars for all the provinces.

2. after the provincial seminars there should be a national seminar with participants from all the sectoral ministries involved and from the provincial planners who had attended the earlier seminars. The purpose of the national seminar would be to discuss the recommendations from the various provinces.

3. from the results of the national seminar a manual on the techniques of using population data for social and economic planning be completed and used in planning seminars at the district level.

THE OPENING SPEECH BY MR. ISAIAH CHELUGET, THE PROVINCIAL
COMMISSIONER, NYANZA PROVINCE AT THE PROVINCIAL SEMINAR
ON THE USE OF DEMOGRAPHIC DATA FOR ECONOMIC & SOCIAL
PLANNING HELD AT KERICHO TEA HOTEL ON THE 17TH OF AUGUST
1978

Mr. Chairman, etc.....

The Government of Kenya is entrusted with a basic task - that of understanding the needs of its people and providing services to meet those needs. As was emphasised in the recent conference on "The Kenya We Want" we must continually strive to improve the quality of community and family life. We are all concerned with development, at the national, provincial, district and lower levels.

Too often in the past and still today planning has been for the people and not with the people. We are pleased that the Ministry of Finance & Planning is now asking for our involvement in the planning. For we are not only administrators of Programmes but also planners. More and more we are passing these plans to the national Ministries.

Though we can be proud of the progress we have made in development efforts, some of us who are now called upon to be administrators and planners have not been given the tools to do the job as effectively as we would wish. By demonstrating our competence in our specialities of agriculture, health,

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community development, education and so on, we have risen to become Provincial Heads of Department. We welcome opportunities such as this to upgrade our planning skills and broaden our understanding (of the many factors which are involved in the development process).

For the next few days we will meet together to increase our awareness and understanding of a major set of concepts which underlie every aspect of development. These are the concepts which are concerned with population.

You have all received a set of materials entitled, 'Population Planning and Economic Development', prepared by the Population Studies and Research Institute of the University of Nairobi. These materials will be reviewed with you and you will discuss how you can apply these population concepts in your daily work. I want to stress that what we are dealing with are not merely abstract statistics, but concepts which if fully understood can enable us to utilize the mass of information which should be, but often has not been, incorporated into our thinking and planning for our provincial and district activities.

An immediate application is in an exercise in which we are all engaged at present the preparation of District Development Plans for the next plan period. In this regard, I particularly wish to welcome the participation of the district Commissioners and the District Development Officers in this Seminar. It will

be their task, together with the Rural Services Co-ordination and Training Unit in the Rural Planning Section of the Ministry of Finance and Planning and The Population Studies and Research Institute to carry on the work started here at the district and lower levels. At the end of this exercise we expect every officer in the field who has responsibility for providing services to the people to be familiar with how he can utilize population data to improve his understanding and planning of programmes to fit the needs of people in the area of his responsibility.

Thus in preparing the District Development Plans and to ensure that they are based on these needs we must know more about the people we serve.

Questions we must be able to answer include:

- How many people are there?
- How are they distributed over the district?
- What is the proportion of men to women?
- How many are there in the different age groups that will need schools, health facilities, social services and jobs?
- Are people coming into or leaving the district and where are they coming from and going to?
- How fast is the population growing and how many will we have to provide services for in 1979, 1980, 1981, 1982 and 1983?

When we know these answers we can turn to more complex

issues and problems such as:

- The effects of population pressure on the land where land fragmentation, cultivation of steep hillsides and lowered productivity result from too many people trying to earn a living from a limited supply of land.
- The increasing demand for employment opportunities stemming from a growing working age population and a limited capacity of the agriculture sector to absorb school leavers and others.
- The effects of migration, whereby families have to endure indefinite absences of members who leave their shambas to migrate to the cities seeking employment.
- The economic and welfare aspects of food production and food consumption as it relates to the producer-consumer population.
- The rising demand for social services such as health, education, and welfare and infrastructural needs such as water, sewage, housing, electricity and roads in proportion to the net growth of different segments of the population.

But finding the answers to these questions is not easy. We have to know where to look for the information and what to do with it when we find it. We have to be able to tell how reliable the information is - whether it comes from well kept

records or is it someone's guess. We have to know what to do when the information does not exist, how it can be derived and what sources there are to help us find it.

Unless we know how to do these things, we cannot prepare adequate plans. We will not know how much food will have to be produced, whether the land we have is enough and how long it will be before it gets overcrowded; how many schools we need and where they should be situated; where the health services and clinics should be; how many jobs will be needed; what will be the demands for roads, water, electricity and so on.

This is essence of planning - acquiring a solid base of facts about the people we are planning with and what their needs are; being able to project their future needs and using our limited resources as effectively as possible to meet those needs.

This is the first seminar of its kind. We are fortunate that the University of Nairobi in its concern for development has recently established the Population Studies & Research Institute. They are already proving that they will not be solely concerned with academic pursuits but will join us in our task. Much information about our Country is already available and they will help us to learn how to use it.

We are all familiar with the Central Bureau of Statistics. They have conducted several censuses and are now preparing for

another next year. They have an ongoing programme of household surveys and are continually collecting, processing, analysing and reporting data on the characteristics of our population. We should however be in a position to tell them what additional information we want them to provide for us and must be able to use the existing information and any that we request.

We must remember that there are 40 districts in Kenya. The officers sitting in the national ministries have to put together the needs of all the districts in preparing their estimates and projects. They can only plan the distribution and use of the resources available to them if we send them adequate plans. We must be able to demonstrate that the requests and plans that we sent to Nairobi have been carefully prepared using all the data that are available. When, as so often happens, the national resources are not enough and we do not get all we requested, we have to be able to replan to efficiently utilize the funds and other inputs that are provided.

Now let me turn to another reason why we must understand population concepts. As I said earlier our main concern is with the use of our resources for development. We all know that these resources are limited so that we cannot provide all that we want. You will see in the population profiles which have been prepared for Uyanza and Western Provinces, that the number of children under 15 that are dependent and

for whom services such as health and education must be provided is expanding each year. This means that we have to use our funds to create additional schools, hospitals and train more teachers, doctors and other personnel just to keep up with where we are now rather than trying to improve the quality of what we have.

The same is true of our use of the fixed amount of land we have. It has to provide food and income for more and more people.

There have been many seminars about population and family planning in our provinces and districts run by the Ministry of Health, the Family Planning Association of Kenya and other organizations. They have given us much information and much to think about.

However the subject matter of this seminar is different in that it is concerned with all aspects of planning in relation to development. We are here to build on our understanding of development issues and improve our skills so that we become better planners.

In this context we must look at the impact of the present high rate of growth of our population. In part, we are responsible because we have done well. We have improved the health of our people. They are better fed; increasingly immunized against various diseases so that fewer babies and

and children die; healthier mothers suffer less from infertility and sub-fertility and are able to bear more children. But both as planners and as citizens we have a responsibility to make sure that every child born in this country will be educated, clothed, housed and will eventually have employment. This is what we mean when we say we want to improve the quality of life and ensure that children born today will have the opportunity to become productive citizens who can contribute to the well-being of our nation.

In conclusion, I want to stress that I expect you to fully participate in this seminar. Please give full attention and ask many questions. It is vital that you understand the issues. But you must also help the organizers of the seminar to evaluate the process and content of the seminar so that as they carry on their work in other provinces and in our districts, we can all become partners in development and reflect the fruits of these seminars in our work.

I now declare this seminar open.

Keynote Address by Professor S. Ominde to First Provincial Planners Seminar

In this last quarter of the 20th century it is important for the economically poorer countries of the world to try to improve their economic status. If those countries do not succeed they will be condemned to a very long period of poverty in a world of highly developed technology and high standards of living. National efforts must therefore centre on intensifying the momentum of development and the goal of development must be to meet the basic needs of the population and in so doing to eliminate the poverty among people. Once the task is understood it becomes clear that precise information about population resources and development requirements is necessary to plan for the future.

In this address Professor Ominde first looked at the world-wide setting of population change in developing countries. Since these changes are being experienced in Kenya, particularly in Nyanza and Western Provinces, these areas are used as examples of approaches to development plans.

Population Change in the World, Developing Countries and in Kenya

The world growth rate was estimated to be 1.8 percent in 1975. If that rate remained constant the world population would be expected to double every 39 years. The vital aspect of this

growth rate is the effect on it of growth rates of developing countries. Using Kenya as an example, it's growth rate increased from 2 percent to 3.5 percent between 1950 and 1970. Kenya, then, and other developing countries have a greater influence on the increase in the world growth rate than do developing countries. Continuing with the Kenya example, the potential is great for continued high population growth because of the high percentage of youthful population and because of the high number of women in the child-bearing ages who continue to bear children well into the reproductive period. It is presently estimated that Kenya's population may increase from about 15.4 million in 1979 to 21.9 million in 1989.

Population Factor in Planning

The problems of population growth have been recognized in Kenya but recently there has been a realization of the importance of population as a factor in problems of development. Some of the more important areas that concern the planners and where population data or input is essential include

- (1) population growth rate and economic growth,
- (2) high rate of population growth,
- (3) population unemployment and level of poverty,
- (4) increasing school-age population.

- (5) high dependency ratio,
- (6) health planning,
- (7) population pressure on housing,
- (8) population pressure on agriculture
- (9) decrease in individual standard of living and
- (10) population density and land availability.

Basic Needs Frameworks

Basic needs in development terms includes certain minimum requirements of a family for private consumption such as food, shelter and clothing, as well as certain household goods. In the second place, they include essential services provided at the community level such as safe drinking water, sanitation, public transport and health, educational and cultural activities.

A pre-requisite of a basic needs programme is the compilation of basic population data at the district planning level and the use of this data in analysing the development needs of the population over a period of time. For example, Western and Nyanza provinces in Kenya encompass a very high percentage of the total available medium and high potential land in the entire country. Because these provinces also have high growth rates the availability of the land at a district level is a crucial factor in the programme of meeting basic needs. Therefore, future land availability must be estimated and plans can then be made in accordance with the estimates.

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With the expected growth of population the average density in Kisii District in Nyanza Province will rise to 422 persons per square kilometre in 1979 and 629 persons per square kilometre in 1989. The increasing pressure on available land in Nyanza will affect all districts by the end of 1989. But this growing pressure will not only affect agricultural land. Land will become scarce for all aspects of development at the district level and this must be taken into account in advance planning. Western Province can expect similar problems.

Analysis of the relationship between land availability and the population is only part of the problem of development planning. The implications of trends must then be translated into terms of policy goals and action programmes. A wide range of issues could be mentioned which are related to the land problems including the need for adequate conservation measures.

Conclusion

It is necessary to underline the fact that the change to a population base for future planning is an essential factor in integrated planning at the district level, as could be seen from the examples of districts in Western Kenya.

Population Development and Economic Planning

The booklet was prepared for the purpose of giving planners at the province level an introduction to the dynamics of population change, the interrelation between demographic, economic and social factors as well as the application of demographic data to economic and social planning.

Recently it has been recognized that because population and development are interactive, population considerations must act on development planning. Efforts are now being made in many countries to put more emphasis on integrated regional planning and nearly all aspects of district rural development are related to population size, composition and spatial distribution. Therefore, to help planners determine quantities needed, for instance for education, health services, food, or supply of labour, a background in demographic methods is most useful. The manual introduces necessary demographic tools and techniques, discusses the dynamics of population change and also illustrates the importance of incorporation population data in social and economic planning.

The Field of Demography

Demography is the science of population and, like other sciences, it may be defined narrowly or broadly. When viewed from the narrow perspective one talks about formal demography, which is the study of populations as closed systems. Formal

demography is primarily concerned with the mathematical relations between structures and processes and, as such, all changes can be explained strictly by the elements within the system. Structural elements in this case are (1) its size, (2) its distribution and (3) its biological composition. The processes in a population are fertility, mortality and migration. Within a population system the structural elements always set limits on the processes, but the processes and their interrelations are what cause change in the structural elements of the population systems.

In a broader sense demography includes additional characteristics of the population such as marital and family status, place of birth, literacy, educational attainment, economic activity, employment status, occupation, industry and income among others. More important, however, is that from the broader perspective populations are treated as open systems and interest is focused on how demographic structures and processes affect factors external to the population system, and how these, in turn, affect demographic structures and processes.

Once the concept of demography has been grasped the next step is the gathering of demographic data. Different methods for collecting the data are discussed in some detail in Chapter II. Various measurements of population change, such as net migration, various death rates, expectation of life,

various birth rates and population growth rates are defined. All these measurements especially age structure, fertility and mortality are closely interrelated and the interrelations have implications for economic development and economic planning.

Interrelations Between Modernization, Economic Development and Demographic Factors

In formal demography birth and death rates affect each other, whereas in the study of demography in open systems these rates are affected by a large number of natural, social, economic, political and psychological factors. Unfortunately, there are no precise theories for open population systems to describe the effect of the factors as there are for closed population systems.

The usual method of estimating the effects of modernization on population growth, in the absence of precise theories, is to draw on the historical experience of places which have modernized and see how this has affected their demographic processes and rate of growth. The term modernization is used to emphasize that a broad view of change is needed because, as with demographic change, economic development never occurs in a vacuum. Changes in the structure of an economy are interrelated with changes in the structure of the family, the organization of daily life, communications, politics and even how people think and make decisions as well as host of other factors.

The Effects of Modernization on Population Growth

In the classical economic theory of population growth it was held that any rise in incomes tended to increase birth rates and decrease death rates. However, this theory has evolved to the present day theory of "demographic transition". According to the latter theory an agrarian peasant society (characterized by a high degree of self-sufficiency within each community and even each family) typically has high average death rates. Moreover, these death rates usually fluctuate as a consequence of variations in crops, the varying incidence of epidemics, etc. In such societies birth rates are nearly stable at a high level. Death rates are high as a consequence of poor diets, primitive sanitation, and the absence of effective preventive and curative medical practices. High birth rates result from social beliefs and customs that necessarily grow up in a high death rate community in order to continue in existence. These beliefs and customs are reinforced by the economic advantages to a peasant family of larger number of births. The burden of child care rests primarily on women in a peasant society and the place of women is typically subordinate. Children contribute at an early age to agrarian production and are the traditional source of security in the old age of parents. The prevalent high death rates, especially in infancy, imply that such security can be attained only when children are born.

Modernization, according to the theory of demographic transition, has the effect of bringing about a reduction in death rates. The reduction may be ascribed partly to greater regularity in food supplies, to the establishment of greater law and order, and to other fairly direct consequences of social and economic change. Although the theory is not sufficiently quantitative and specific to tell how far and how fast the vital rates generally decline it does show that the decline in birth rate typically occurs after a substantial time lag, in comparison with the decline in mortality.

The Effect of Demographic Change on Economic Growth

Three major demographic aspects which affect economic growth are population size, growth rate and age distribution. The density of population does not indicate the economic prosperity of a country. Neither the present nor the future size of population constitutes a major economic problem. The real problem is the excessive growth rate which impedes the process of modernization. The availability of goods and services per person in a country cannot increase unless the gross national product (GNP) is increasing faster than the population.

The third major demographic aspect affecting economic growth is the age distribution of a population. The widening spread between mortality and fertility is referred to as the demographic gap. The emergence and closure of the demographic

gap brings about a change in the age distribution of a population. This change in the age distribution affects the dependency ratio which, in turn, affects economic change.

Other Demographic Factors which Influence Economic Growth

Aside from factors already mentioned there are many others which influence economic growth. Such factors include population and family size and structure, nuptiality and fertility, morbidity and mortality, migration patterns and population and foreign exchange. All these factors are dealt with in more detail at the end of Chapter III.

Population and Development Planning

Demographic variables have direct relevance to planning for economic and social development. Population size, sex and age structure, composition by marital status family size and household size, spatial distribution and extent of urbanization, and both internal and international migration need to be considered together with non-demographic variables in development planning.

Rates of and changes in fertility and mortality are of major interest in planning as joint determinants of natural population increase, and as separate factors in certain fields such as health and education. The structure, composition and distribution of population in a given planning area determine its roles as consumers and producers of goods and services and

are of great importance in all programmes involving sections of the population, such as children, youth, working adults, and the retired and elderly. Population movements are important as determinants with natural rates of population change, of population size in planning areas, and for the rate of migrants in changes of the potential labour force. Planning cannot take adequate account of demographic variables without reasonably accurate demographic data, which has been the difficulty in many instances recently in which planners wished to make use of demographic data in their planning programmes but the data was not available at district levels.

National development plans cover various sectors of the economy. The overall target, however, is normally a single figure of annual percentage growth in gross national product. The effect of growth in gross national product on levels of living can be judged only in relation to changes in population numbers. For an understanding of levels of living, and changes in such levels, it is necessary to use per capita indices, the most general being per capita income. The growth of population and the growth of national product are linked inevitably as fundamental determinants of changes in individual and family levels of living. On this basic relationship, population numbers appear as consumers of goods and services. For progress, the rate of economic advance must exceed the rate of population growth, and, if reasonable

levels of living in developing countries are to be attained in a reasonable time, the rate of economic development must surpass that of population growth by a considerable margin. Examples of how to plan for national development are given using education, health services and housing as model topics to demonstrate the steps necessary in the planning process.

Nyanza Province

1. Total Population

Although the population increases by about 20 percent every five years, the absolute growth rises from 422,000 for the period 1969-1974 to 532,000 for 1974-1979 and 619,000 for the current plan period and 742,000 for the last period.

2. School Population

While the school population aged 6-12 increases by about 200,000 between 1969 and 1979, it will increase by about 300,000 between 1979 and 1989 reaching one million by the end of the period.

Similarly while the school population aged 13-16 increases by 70,000 between 1969 and 1979, it will increase by about double this number, that is, 137,000 between 1979 and 1989.

3. Labour Force

Again while the period 1969-1979 adds about $\frac{1}{2}$ million persons to the labour force, the period 1979-1989 will add about 638,000. While the labour force was less than one million in 1969 it will exceed two million in 1989.

Western Province

1. Total Population

The population of the province grows by between 20 and 22 percent every 5 years. However, the absolute growth rises from 272,000 between 1969 and 1974, to 346,000 between 1974 and 1979 to 427,000 for the current plan period and to over ½ million for the last period. Over the whole period the population grows by 118 percent reaching about 2.9 million by 1989.

2. School Population

The 6-12 years primary school population rises from 289,000 in 1969 to 403,000 in 1979 and reaches 606,000 in 1989. In other words while the 1969-1979 period adds 119,000 children to the 6-12 years school population, the latter period that is, 1979-1989 adds 198,000. Over the entire period (1969-1989) this age group more than doubles (around 110%).

3. Labour Force

During the current plan period (1979-1989) 197,000 persons will be added to the labour force. Further, over the 1979-1989 period 438,000 persons will be added. The higher rate of growth in the labour force in Western as

compared with Nyanza Province is on account of the higher rate of population growth in the former province. In fact the size of the labour force in Western will almost reach the 1979 Nyanza labour force by 1989.

Fertility, Population Under 15, and Dependency Ratio in Nyanza and Western Provinces Compared

Nyanza with lower fertility than Western has a lower proportion of the population under 15 years (49.1 as compared with 51.7). This means that while 100 members of the labour force support 128 dependents in Western, they support only 113 in Nyanza.

Discussion and Questions Raised during Plenary Sessions,
Wednesday, Thursday morning.*

The plenary sessions featured several speakers, including opening remarks by the Provincial Commissioner Nyanza, Isaiah Chelugot, an address on current Kenyan population trends by Prof. Simon Ominde, a discussion of some of the conceptual tools that CBS works with in projecting demographic trends by A. Mani of CBS; and a series of lectures on the broad issues of population concepts and projections, planning, and economic development by Prof. Roushdi Henin. Many questions were raised during these sessions, directed especially at Professors Ominde and Henin. The Provincial Commissioner, Mr. Chelugot, contributed significantly to the questioning, and the nature, variety and intensity of the questions posed indicated the strength of interest and concern with these issues felt by the conference participants. We infer that these issues are of major concern to Kenya's senior civil servants as a group, so much so that their attention and level of participation at this seminar far exceeded the expectations of even the most optimistic of the conference organisers. The questions and discussion will aid us in improving the presentations for future seminars. A summary of some of the salient questions discussed during the plenary sessions follows.

* Prepared by Judy Geist Rural Planning Section
Ministry of Planning.

The questions posed fell into two general, interrelated areas: the concepts and methods involved in estimating demographic trends; and the implications of such trends, when projected, for human behavior, especially for questions of national development and individual living standards. To simplify this summary the major issues will be treated under these two separate headings but it should be kept in mind that the discussion itself did not follow these artificial divisions, tending rather to jump back and forth.

Conceptual Issues

Initially, the questions turned around the concepts being presented. Most important was the idea of the population pyramid as a representation of the national age-structure, and the significance of different shaped pyramids --i.e., different age structures, with Kenya's being among the "broad-based" ones typical of the third world, indicating a high proportion of young people. Many questions were directed at the implications of the narrower base implied in efforts to curb population growth. It was asked whether this would not mean eventually a smaller cohort in the working-age groups, which would lead back to the same problem of high dependency ratio -- a "top-heavy" pyramid, just the inverse of the current and increasingly broad-based one. Prof. Henin explained that the pyramid concept is a

dynamic one, and that a lower population growth rate would manifest itself throughout the pyramid. Many other substantive questions of development spun off from this topic, as discussed below. The interpretation of the age-structure pyramid as a proportional rather than an absolute representation, and its tricky relationship to absolute numbers, caused the most difficulty of any concept discussed during the seminar. This will need to be a central concern in planning future seminars, since most of the rest of the planning-related topics follow from the implications of the trends in age structure.

The topic of fertility itself, and the variables that influence it, provoked much discussion. In addition to explaining the different common measures of fertility, Prof. Henin indicated some of the normal social indicators associated with various levels of fertility, which have import for policy areas. A discussion of some possible alternative policies for dealing with increasing fertility followed.

One suggestion involved increasing the marriage age, and thus eliminating a part of the peak point of the female reproductive cycle. Some cases of this offered as examples included Ireland, during periods of great social deprivation; China, after its revolution; and spontaneously, the U.S. and

Western Europe, in the post-industrial era. The latter examples were considered as completely irrelevant for Kenya currently, while, with the others, it was pointed out that this type of policy is most relevant where strong social sanctions on premarital conception exist, which is not the case at present for many Kenyas whose traditional customs are also extremely variable on this issue.

Closely related, the suggestion was made of enforcing family limitation through direct and indirect sanctions (presumably legal) on early marriage or on child-bearing itself. China and India were given as examples of this, with varying success and failure, and again the relevance to Kenya was seriously questioned, especially in terms of any viable enforcement mechanism.

Abortion as a solution was also proposed, in view of the current debate on legalisation. Japan and the East European countries were offered as examples, and some senior Kenyan medical opinion supported this as a necessary part of the long-run solution, though by no means sufficient. It was argued strongly that even as a partial solution, however, legalisation of abortions would be fairly meaningless in the light of the lack of technical capacity to carry it out -- not enough doctors or any of the other infrastructural needs.

A suggestion from the participants was to increase the

female participation rate in the labor force, basing the idea on the fact that this has been accompanied by lowered birth rates in the US, Europe and Japan. While recognising the indirect nature of such a suggestion and all of the economic variables involved in it, it was felt that this was a more relevant idea for Kenya, especially in that the increased out-of-home employment levels would also represent contributions to the growth of national production. It was also pointed out, however, that no cause and effect relationship could be assumed, and that policies of granting liberal maternity leaves -- which are becoming established already in Kenya -- would tend to work in the opposite direction.

The final policy area discussed in conjunction with fertility involved the increasing levels of education of females, which seem in Kenya to be associated with smaller families and thus a lower birth rate. Even here, Prof. Henin indicated that the educational component in fertility trends is tricky. Primary education tends to increase a woman's fertility, in that her better understanding and ability to communicate and learn, which is naturally applied to her care of herself before and after pregnancy, results in better health, hygiene and nutrition and therefore lower incidence of miscarriage and childlessness. She may have healthier children, but she will also probably have more of them (other things being held constant), since

fewer children born to women in the primary school-educated cohort will die. It is only with secondary education that the Kenyan birth rate appears to decline, increasingly so the higher the Form reached. Women bear fewer children, whether through choice, delayed marriage, alternative employment opportunities, or other factors. While these relationships should never be taken as direct cause/effect ones, nor as unchanging, they do indicate something about the probable trends in the birth rate that will accompany this particular social change: as the female rate of participation in primary education increases the birth rate (i.e., fertility rates) may well go even higher, and may then decline only much later, when the majority of Kenyan girls are actually involved in post-primary education, unlike the situation for the present or foreseeable future. Many of the seminar participants felt that this was one of the more realistic areas of policy in which the Kenyan Government might involve itself in the attempt to deal with population pressure, because of the many other benefits and developmental issues which are also tied up in this same issue of increased levels of female education: the benefits for child welfare, for productivity on farms and especially in the subsistence food sector. Many of the other alternatives discussed seemed more difficult, either technically or politically, although the seminar participants evinced a great deal of interest in the consideration of these "hard" alternatives as well.

DEVELOPMENT ISSUES

The discussion of fertility and its influencing factors led naturally to the underlying questions, including the expression of some doubts, about the need for regulating it. The central question is in what way fertility rates, whether high or low, are related to economic development. A wide range of belief was manifest among seminar participants. While many did not necessarily accept Pr Henin's thesis-- that lowered fertility rates were necessary for increased saving and investment (either private or social) and thus for increasing the productivity of labor and correspondingly increasing national income-- their questions emphasized the importance they place on the whole issue. Several aspects of the relationship between population growth and development were explored.

There was some discussion of the concept of zero or negative population growth rates, or very low ones, as is occurring, in some European countries, and their implications for development. While it was pointed out that this is very far removed from Kenya's situation and rather far-fetched to consider, there did seem to still be a feeling that this would have a negative effect on the working force and on dependency ratios, with the "smaller" resultant working force in future having to support the "larger" elderly population (again, this underlines the common confusions on fertility rates, the age structure in its dynamic aspects, and absolute numbers in the population, which it seemed

difficult to clear up satisfactorily for some participants).

Another question posed in this discussion of fertility and economic development related to technology as an intervening variable, this being posed as an alternative for Kenya: to develop via technological improvements without necessarily experiencing a declining birth rate.

Prof. Henin argued that his own view of development included this "technological solution", at least partly. He was assuming that, with the changing population pyramid giving a proportionally larger work force and smaller dependent population, technological improvements would be concurrently introduced resulting in higher productivity per worker. This is most likely to happen, he felt, if fertility rates declined, since the larger work force/smaller dependent group combination would allow higher savings rates, either individually or socially, and thus the higher investment rates in relatively expensive technology needed to raise the productivity of the labor force.

In the same area the discussion turned to the question of unemployment, and the fact that analyzing the age pyramid alone is deceptive. In prescribing a smaller base and broader labor force, we need also to discuss the rate of participation in the labor force, the factors that influence it, and the present and projected employment situations. In proposing the technological solution, it was pointed out that there is the potential for worsening the employment situation

rather than improving it, if it takes the form of highly capital intensive technology: the syndrome of machines replacing people. So the structure of technological advance is important in terms of the employment generated. Prof. Henin argued that the productive employment of people nonetheless depended on providing them with some tools, and this required increased savings and investment levels, which again was more feasible if the family size and hence dependency ratios were smaller. He explained, in response to a question on the experience of Egypt, that Egypt had chosen a labor intensive strategy, having had to deal with a problem much greater than that currently faced by Kenya (but with possibly great relevance for the future, given Kenyan trends). Egypt's farm areas are, with very few exceptions, not highly mechanised. They rely on small-holdings, on intensive cultivation along the Nile involving the use of much human labor, labor intensive irrigation works, and draught animals, and hence on high yields per hectare being distributed among a very high proportion of the population remaining in the agricultural sector.

Another suggestion for economic development of Kenya without having to deal with the problem of increasing fertility rates centered around the possibility of reclaiming Kenya's reputed 83% non-arable land area, in somewhat the same way as the Israelis have reclaimed the desert. Leaving aside the question of whether this was at all possible and on what percentage, Prof. Henin immediately pointed to the

expense involved and indicated that it was precisely this sort of expensive undertaking which most strongly emphasized the need for high savings investment rates, which were a puzzle in view of the increasing dependency ratios in Kenya which would direct more and more of productive resources toward final consumption rather than such investment.

In making reference to the broad patterns of development experienced in the industrialised countries, it was pointed out that lowered fertility has been an accompaniment or a consequence of improved standards of living, rather than a preceding condition. This highlights both the fact that the causal relationships are relatively unclear as yet, and that Kenya's path of development may or may not resemble that of the currently industrialised world.

Statistical Issues

There was some discussion as well on the use of statistics per se in the Kenyan context -- where they come from, how we can get better ones, what the concept of population projections means in district planning and why planners need to familiarize themselves with the use of more than one set of projections.

Touching first on where they come from, the various methods currently used in getting population counts in Kenya were discussed, together with their strengths and weaknesses: population censuses every ten years, sample surveys, and registration of vital statistics. The typical and inevitable

errors in each method were discussed in detail, with seminar participants providing graphic first-hand evidence of some of the problems with all three methods which they had themselves experienced, especially the official censuses and registration of vital statistics. Prof. Ilanin used this familiarity with problems to underline the importance of having several such sources of statistics to compare in making a judgement on the most reasonable estimates, which is the demographer's normal procedure. At the same time, it was stressed that it was equally important for a planner to work with two or more sets of projections after reconciling the various sources: at least a high set and a low one, taking into account in this manner the possibility of either error in the base figures from which he works, or changes upward (or downward) in the fertility rate itself, or both. Then, as the plan period unfolds, he can check his projections -- for example, those for school-age population with actual enrollment rates, or migration into towns with projections of town population -- and can get a better estimate of which set of projections seems more accurate, for use in practical planning, annual forward budgeting for social services, and the like.

This idea of alternative sources and sets of projections, provoked discussions of possible problems in the form of manipulation for political or other purposes, which many seminar participants felt was a real threat, pointing to the

Nigerian case as an example of what could happen in the extreme. It was felt that, quite contrary to the idea of alternative projections, the Government must "speak with one voice". This issue was explored, the speakers explaining that in the Kenyan case all statistics used officially must be cleared through CBS, and that the argument was not for the use of unofficial sources open to manipulation, but rather to the use of alternative projections produced and sanctioned by CBS, using whatever local input they felt was reliable and keeping fully in mind the dangers of political manipulation.

Conference participants seemed quite keen to get to the practical applications of the concepts they had been discussing, as they did in the work groups discussed below. To give them an example, Prof. Henin chose the exercise of estimating food production and food needs for Kakamega district based on CBS best estimates of district population together with Ministry of Agriculture calculations of production potential. The many other bits of related information that would be needed along with population data were pointed out by various seminar participants. In the discussion of planning implications the Provincial Commissioner Nyanza emphasized repeatedly the need for practicality. His concern was as much with the responsiveness of people to planning decisions, asking us to go a step further than the simple projection of needs based on demographic trends. Some discussion of the problems faced by planners on the ground followed, with field

officers including the PC indicating the problems of resistance to programs and policies being promoted. They raised a challenge to seminar leaders to demonstrate precisely how demographic data presented related to problems on the ground.

Discussion Sessions

The conference was planned to include as a major portion some discussion/work groups dealing with examples of the specific application of demographic data to planning problems. Although this particular seminar included very high level district and provincial officers and was designed to acquaint them with some of the demographic analyses relevant to the formulation of policies for the national development plan, it was also felt that this seminar should deal with practical applications of the concepts to district-level planning. This will be even more the case with the district level demographic seminars held in the future specifically for district level staff, and the occasion of this first conference gave us the opportunity to devise a series of exercises demonstrating population projections in the context of real planning problems.

To do this we designed a series of questions in specific planning areas for the discussion groups to deal with, demonstrating both the application of demographic data to the specific area (health, education, etc.) and the interrelationship of the planning areas as well. The topics covered by the "question" papers, which included the basic demographic data to work from, were:

- population pressure on the land (Kisii District)
- food production and food needs in the context of population growth (Kakamega District)
- labour force projections in a district (Kakamega District).

- population migration and its implication (Western and Nyanza districts compared with Rift Valley).
- urban planning (Bungoma and Kisumu)
- health planning and population projections (Bisia District)
- educational planning with population projections (Siaya District).

Population Pressure on the Land
POPULATION ESTIMATES (from CBS Projections-Series A)

('000 persons)	Kisii Dist.	Nyanza Prov.	Kericho Dist.	Narok Dist.	Rift Valley Prov.	KENYA
1969 Census	675	2122	479	125	2210	10943
1978 Projection	927	2958	719	148	2933	14058
1983 Projection	1125	3614	906	164	3494	10879
Area (sq. Km.)	2217	12,628	4948	18,033	177,631	581,858
Density in 1978 (persons/sqkm)	418	234	145	8	17	25

LAND POTENTIAL AND CROPPING (from District Data Sheet Exercise, MOA, 1978)

Total Area ('000 Has.)	219.6	1260.5	489.0	1851.3	16882.9	44168
High Potential Land	195.6	961.3	179.4	678.9	2174.3	8070
Medium Potential Land	1.9	163.9	85.2	314.6	1013.3	(above)
Low Potential Land	-	9.2	175.2	672.8	12097.4	31489
Other	22.0	126.0	48.9	185.1	1688.2	4611
Cropped Areas	76.4	267.7	57.8	45.0	503.0	2182
Cropped Areas % of High & Med.	39%	24%	22%	5%	16%	27%

SMALL HOLDINGS (From District Data Sheets)

Number	98549*	310867*	54889	1687	139583	1693228
Size Range (Ha)	0.1-40	0.1-40	1-40	1-40	1-50	0.1-500
Average Size (Ha)	1.9	3.6	4.6	9.3	4.6	3.3
- Total Area (Ha 8'000)	189.1	1119.7	250.4	15.7	639.1	5659.3

* Underestimated

GUIDELINES FOR DISCUSSION (Continued)

Population Pressure on the Land

DISCUSSION QUESTIONS

1. A term such as "overpopulation" implies that a given area has more people than the available resources can support. In the rural areas of Kenya, the primary physical resource is high or medium potential land. As can be seen from the above statistics Kisii District is blessed with a large percentage of high potential land. It also has a high concentration of people. What factors do planners need to consider to address the question: Is Kisii District overpopulated?
2. A number of statistics can be used to reveal population pressure on the land resources. For example, What does the average farm size tell us? What further information is necessary to judge the "pressure" brought about by the existing population and its likely growth?
3. A recent study of Kisii District indicated a number of signs of population pressure. These included fragmentation of small holdings, cultivation of steep hillsides and river banks, out-migration, etc. If this is true, what are the implications for the preservation of the land-water resources and the stability of the population.
4. The statistics above enable a rough comparison to be made between Kisii and adjacent districts and provinces. Does this comparison suggest where the overflow of population may go as population pressure increases? What are the implications for development? Would one foresee increasing ethnic group tensions?

Population in Development Planning
Guidelines for Group Discussion

Supply and Demand for Maize
(Kakamega District)

Supply of Maize

	Total area of district	(Ha)
less	Area of unproductive land	(Ha)
	Area of productive land	(Ha)
less	Area of non cultivable land	(Ha)
	Area of cultivable land	(Ha)
less	proportion follow	(Ha)
	Annual cultivable land	(Ha)
Divide into categories as follows:		
Category	I - Good cultivable land	(Ha)
Category	II - Moderate to good cultivable land	(Ha)
Category	III - Moderate cultivable land	(Ha)
Category	IV - Poor cultivable land	(Ha)

Estimate of average maize yield for

Category I
Category II
Category III
Category IV

Total annual yield (bag/year)

(Give estimate of number of Kgs per bag)

Demand for Maize

- Given that one kilogram of maize has a calorific value of 3,500.
 - Given daily requirement of maize per adult to be equal to 2,500, therefore one adult requires 0.715 Kilograms of maize flour per day $(2,500/3,500)$.
 - This equals 260 Kilograms of maize per male adult per year.
 - Add percentage for losses due to storage (say 50 to be increased to 338).
 - Add 4% for seed requirement, therefore adult male requirement equals to 346 Kilograms per annum.
 - Multiply total number of adult male equivalent for the district by 346 Kilograms to get the District maize requirement per year.
-

We need to calculate equivalent adult consumers as follows:

Number of adult males over	10 x 1.0
Number of adult females over	10 x 0.9
Number of children under	10 x 0.5

Population in Development Planning
Guidelines for Group Discussion

Labour Force
(Kakamega District)

Kakamega District

Labour Force

Total Labour Force in Kakamega = for every year of the plan period percentage of labour force in rural area.

1. Estimate percentage of persons employed in the non agricultural formal sector.
2. Arrive at number of labour force in agriculture for every year of the plan.
3. Do this exercise for every year of the plan period. Comment on your results (unemployment, disguised employment, migration to towns, seasonal supply and demand for Labour, participation rates by age and sex etc).

- 1.
- 2.
- 3.

Population and Development Planning

Guidelines for Group Discussions.

Migration

Migration is an aspect of population dynamics requiring the most interpretive use of demographic data, both in assessing the trends and projecting their impact on policy. It is also frequently the most difficult aspect to get current statistical data on, forcing the planner to rely on estimates, informal guesses, and other impressionistic evidence. Population density may be one useful clue, with very dense areas being those from which migration is to be expected; relatively sparsely populated areas will be likely "receiving areas" for migrants. Sex ratios are another important clue. Areas that have a significantly higher number of females than males are likely areas from which migrants are currently leaving wives and children behind on the home shambas. Of course, areas with significantly more men than women are most probably receiving areas for these migrants, either indicating recent migration or seasonal migration in the rural areas (in which many families have not or will not participate), or temporary work migration to towns, also leaving families behind. Historically, the gaps between the male and female population decrease as the migrants settle more permanently bringing their families to the new area, either urban or rural. So the greater the discrepancy between sexes, the more recent and dynamic migration trends are likely to be that underlies it. Taking density figures and sex ratios together gives an even better perspective on migration potential and trends.

Migration thus always involves population and policy planning in more than one area, may occur inside a district or across provincial boundaries, but usually has quite different policy implications for two areas. Typical recent migration patterns in Western Kenya have been the movements of men from these areas to Nairobi temporarily, for jobs, and the expansion of people from Western Province into the Rift Valley in search of land.

Population and Development Planning (1969 Census)

Guidelines for Group Discussions - Migration.

Kisumu Town: male adults - 11,632)
 female adults - 7,261) 18,893
 children - 13,538

Kisumu District: male - 203,370
 female - 196,773

Kanyawegi Sub-location,
 (Kisumu District) male adults - 1,324
 female adults - 1,019
 male children - 1,386)
 female children - 1,362) 2,768

Density: 192/Km²

Siaya District: male adults 79,228
 151/Km² female adults 113,535

Mahola-Blawe Sub-location, male adults - 309
 West Alego, Siaya: female adults - 522
 children - 317

Density 436/Km²

Kakamega District: male adults - 153,213
 female adults - 192,201

Density: 220/Km²

Kakamega Town: male adults - 2,162
 female adults - 1,416

Lyaduywa Sub-location,
 Vihiga, Kakamega: male adults - 992
 female adults - 1,277

Density: 371/Km²

Trans-Nzoia District: male adults - 32,236
 female adults - 27,075

Density: 50/Km²

Kitale Town: male adults - 3,393
 female adults - 2,424
 children - 5,256

Chepchoina Sub-location,
 Trans-Nzoia: male adults - 1,425
 female adults - 1,194

Density: 45/Km²

Questions

- 1) What do the sex ratios and densities suggest about probable (or possible) migration trends involving these areas?
- 2) How might the differences in sex ratio affect the choice of strategies for the extension staff in giving agricultural advice in rural Siaya (Lahola-Ullevi) as compared with rural Trans-Uzoia (Cherchoina)?
- 3) How might the differences in numbers of children present (due to migration trends) affect
 - a) the demand for schools?
 - b) the ability to finance schools?

Here, we might compare both urban/rural figures and rural out-migrant (Kisumu rural, e.g. Kanyawadi) rural in-migrants (Cherchoina, Trans-Uzoia) areas.

- 4) What differences in types of demand for health services might we expect from these areas of different population profile?
- 5) What differences in demands for services will result if the migrations are permanent instead of seasonal or temporary? How can we begin to get information on this?
- 6) What difference will the motivation for migration make in policy planning? For example, some migrants come in search of temporary work and send good portions of their wages back home. Others come to acquire some land, having been squeezed off their traditional land, and they acquire more or better land sometimes for commercial purposes.
 - a) What differences should this make in the financing of service provision?
 - b) What differences should appear in the agricultural services demanded and provided?
 - c) What initial problems are the migrants likely to face in these different cases compared with those faced by the people already in the area (or those left behind)?

POPULATION AND DEVELOPMENT PLANNING

Guidelines for Group Discussion - Urban Development

The Projected Population Growth of three towns (1000 persons)

	1969	1973	1978	1983	2000	Growth Rate	Area(Ha)
Kisumu	57.9	73.1	114.8	168.3	624.8	5.7%	26000 (land only)
Bungoma	4.4	6.1	9.2	13.8	53.2	8.5%	250
Mebuye	-	3.0	3.0	11.6	26.5	13.7 (for '69-'83) 5.0 (for '80-2000)	6900

Daily Water Consumption and Sewerage production per capita
(from W.H.O. Report No. 9 - "Selection and Design Criteria for Sewerage")

<u>Source</u>	<u>Water</u> (Litres)	<u>Sewerage</u> (Litres)
Housing - Low Density	75	65
Medium Density	150	120
High Density	300	220
Day Schools	25	21
Hospital (medium class)	200	160
Dispensary	50	40

Discussion Questions:

1. What are the major implications for planners of the rapidly increasing town populations?
2. While it is true that concentrated populations make for more efficient provision of services, what possible costs (economic environmental social) correspond to increasing urbanization of the population?

3. The design parameters for provision of essential municipal services, such as the requirements for water or sewage treatment as indicated above, are available, but what other information is necessary to properly plan for urban development?

4. It has been argued that increasing the attractiveness of urban areas relative to the rural areas will only lead to increased migration and a corresponding increased demand for such services. Discuss this point in light of various government policies (e.g. wage scales, housing, health care, and the designated service centre policy). What demographic data is necessary to clarify these issues?

POPULATION AND DEVELOPMENT PLANNING

Guidelines for Group Discussion:- Health Services

BUSIA DISTRICT

Projected Population in 1979 is 259,000 growing to 306,000 in 1983.

Area is 1629 sq. km. (excluding water).

HEALTH SERVICES IN BUSIA DISTRICT HOSPITALS:

2 Government Hospitals providing 243 beds
 3 Mission Hospitals providing 172 beds
 (One is for leprosy only which has 80 beds)

RURAL HEALTH SERVICES:

4 Health Centres
 1 Health Sub-Centre
 7 Dispensaries

HARAMBEE INSTITUTIONS (Under construction)

5 Health Centres
 2 Dispensaries

STAFF

3 Medical Officers
 21 Clinical Officers
 120 Registered/Enrolled Nurses
 44 Paramedical

PUBLIC HEALTH:

4 Public Health Officers
 17 Public Health Technicians
 16 Public Health Nurses
 7 Nutritionists

Patients Treated in Health Centres/Dispensaries: 200 per day
 (approximately)

" Hospitals - 500 per day (approximately)

Ministry of Health Statistics

In 1973 there are 101 rural health centres countrywide, 34 sub-centres and 536 dispensaries.

The health centre-population ratio averages 1 to 72000 with the lowest ratio being 1/150,000 for Turkana and highest 1/11,000 for Lamu (based on CBS projections of Population)

There are 61 Government hospitals countrywide with 14,200 beds and 40 church hospitals with 5,120 beds in 1978. The average bed-population ratio country-wide is 1.20/1000 population with Siaya District having the lowest (0.4 per 1000) and Nairobi having the highest (4.9 per 1000 population).

Discussion Questions for Health Services

1. How would you characterize the health services available to the residents of Busia District?
2. What comparisons to national or provincial indices are useful?
3. Does the number of facilities tell a planner much about the level of services provided, or is other information necessary?
4. Accessibility to health services has been identified as a problem for the people of Busia district (1978 Draft District Development Plan). What data is needed for proper spatial planning?
5. Busia District hospital is near to the border with Uganda. It is designed to serve 135 in-patients and 300 out-patients per day but presently serves approximately 200 in-patients and 700 out-patients per day, 50% of whom are estimated to be Ugandans. How should planners and government policy makers take into account the demands on health services arising from outside a particular district (and even outside the country)?
6. What are the relationships between age structure, fertility, and mortality to health planning and administration?

POPULATION IN DEVELOPMENT PLANNING
GUIDE LINES FOR GROUP DISCUSSIONS

EDUCATION

1. The following is the available data for Siaya District:
 - i) In 1977 there were --
 - a. Number of Primary Schools----- 287
 - b. Number of Secondary Schools ----- 38
 - c. Number of Primary School Teachers ---- 3,061
 - d. Number of Secondary School Teachers--- 267
 - ii) In 1977 the projected population for Siaya aged
 - a. 0-4 years is 98,000
 - b. 5 years is 17,000
 - c. 6-12 years is 105,000
2. How would you use this data in planning for the educational needs in Siaya District for the next plan period?
3. What additional data do you need?
4. What are the long-term implications for development in Siaya District? e.g.
 - a. What will be the demands for other services?
 - b. What will be the pressures on the land?
 - c. What will be the impact on agricultural production?
 - d. What will be the trends of migration in and out of the District?
 - e. What will be the effect on employment?

DISCUSSION GROUPS

The time for discussion was curtailed rather severely by the continuation of plenary sessions past the allotted time. A good deal more information and discussion was found useful in plenary sessions than had originally been expected. The time constraint for group work made it impossible for each discussion group to cover each of the topics devised. In general, three or four questions were adequately covered in the group sessions in the total time finally available for them, of two hours on Friday afternoon and an hour and a half on Saturday morning. Many participants expressed the feeling that more time should have been available, such that all of the question areas could have been dealt with adequately by each group.

Group assignment was done randomly, with the intention of getting some of each level and type of expertise represented in each group. Such groups thus had two DD0s, a PPO, a Provincial Head of Department or two, a DC or two, and some member of the RPS. Discussion was quite free and uninhibited. Some difficulty was noted in the normal method of choosing chairman, in that generally the senior member present was chosen, according to custom (usually a DC), but the chairman had therefore had no preliminary briefing on the questions to be dealt with, the useful directions and timing of discussion, the complex assumptions and interrelationships among the data

provided for each question (including possible errors), or the nature of the final output the group was aiming for. This was perhaps an area in which further thinking is needed in preparing for future seminars, as some of the very short time was lost in sorting such problems out. A possible remedy, without much re-arrangement of protocol, would be to distribute the question/discussion materials near the beginning of the seminar, discuss them briefly and ask participants to familiarize themselves with the format before the sessions actually begin, so as to cut to a minimum group orientation problems.

One other difficulty involved the interpretation of some of the data presented as background information for the questions. There was in some cases doubt about the accuracy, scope, or time period to which the information related. There were also some gaps -- missing pieces of information necessary for utilising the given data properly -- which were not available. In both cases, conference organisers felt this was a normal part of the planning process, and that one of the aims of the practical application sessions was to sharpen up skills in recognising errors in the data, the necessary assumptions involved, and the need to hunt for alternative and complementary "missing" information. A useful addition to this exercise in the future might be the provision of documents from which such complementary missing data could be drawn: Statistical Abstracts, IRS I summaries, Social

Perspectives summaries of CBS research, Census volumes, the the Large Farm survey reports, annual recurrent and development expenditures projections, and the like. As there were only three discussion groups, three sets of five or six basic documents would have been required.

The group sessions stimulated much discussion, some of it along the same lines as the plenary sessions but with more specific local reference. Certainly the availability of expertise in the form of Provincial heads, who indicated the sorts of data they were used to working with and what they could do with it, was beneficial. The discussions of the groups on specifically demographic analysis was somewhat disappointing. While the general problems facing a district in a problem area were discussed at length, the specific import of the demographic data for projecting specific needs and formulating plans was in many cases very sketchy. Some additional work on simplifying the problems and asking for specific population-related calculations first may be called for.

To complete this description of discussion groups, the efforts of one of the groups in dealing with Question 1, "Population Pressure on the Land", using Kisii as an example, will be summarised.

Part 1

The factors that planners need to consider in addressing the question: "Is Kisii district over-populated?". Here, the

issues raised included first and foremost the question of land potential and climatic conditions, which are necessary to project the human potential of the area -- its "carrying capacity" in terms of population. Also necessary, the members felt, would be an indication of current productivity of typical farms: the yields typically received currently by Kisii farmers, in relation to their subsistence needs and their own expectations. This would lead further to a consideration of the state of the technology now being used and how far it could be improved, as well as the level of provision of social and economic infrastructure -- credit, marketing facilities, access roads -- to see to what extent these represented bottlenecks to more intensive utilisation of the land. Closely related, it was felt that it was necessary to know the current level of utilisation of the land, and something about population densities and their variation from one part of the district to another. (The PDA Nyanza, a member of the group, supplied information here indicating a surprisingly low level of current utilisation of the land). Finally, it was suggested that the current living standards of the people of Kisii could be a clue to the question of over-population. If living standards were very low, that might indicate over-population for the current level of technology, while relatively high living standards might be taken as an indication that the district was not over-populated for its potential no matter what the density might currently be.

On part 2, dealing with land fragmentation, the discussion took some interesting turns. In discussing the relevance of data on average farm size, the general consensus was that this small size indicated the economic inviability of the unit already, and the likelihood that the situation would get worse. The argument about taking living standards as an index of "pressure" rather than some pre-conceived notion of viable farm size, seemed not to carry weight here. Further, that population pressure might be itself be a positive force for change -- pushing people off the land into industrial/commercial sectors, or pushing them into acceptance of more productive farm technology -- also was not suggested in this particular group. It was felt simply that farms were too small to be economically viable, without really considering the evidence, which was not at any rate available, despite the PDA's insistence on underutilisation of land. It was also felt that the plots were probably even smaller than the data suggested, since many Kisii plots had been unofficially divided further to accommodate what was referred to as "family squatters"; and that government action dealing with minimum land sizes was a necessary remedial measure.

On part 3, the implications for erosion, the group had the advantage of the DDO Kisii as a participant, who was able to outline the degree to which population pressure in Kisii was in fact tending to increase problems of erosion control.

On the final part, treating out-migration from Kisii, again the local expertise in the group was useful in posing and then countering some of the surface implications of the data. Thus, while the data pointed toward outmigration of Kisii people from their district into the Rift Valley, and especially Narok, the DDO and others with experience of Kisii indicated that this was not in fact significant. Migration from Kisii is very minor despite population pressures, which has implications for future trends and the planning areas we need to consider. Further, migration into Narok was out of the question, the ethnic tensions involved being too intense. Even migration into Kericho, with more congenial ecological conditions, was fraught with ethnic tensions. Thus the hints on possible migration patterns suggested by the data presented turned out to be false ones -- which in itself would be useful to central and national planners working without such awareness of local context. Despite the unexpected conclusions, the RPS participants felt this analysis was a good example of precisely the sort of valuable demographic projections supplied to and from the local (district) level that Kenyan planning needs to incorporate.

The concluding discussion in the group centered on ways of dealing with these aspects of population pressure. Subdivision of plots was felt to be the central and most negative aspect of Kisii population growth.

Suggestions for policy involved:

- education as a way out -- getting the young generation off the land.
- enforcing common holdings by families and preventing the unofficial subdivisions
- calling for a national land policy
- concentrating on rural industrial development, to complement the first suggestion on education

The pros and cons of each policy framework were discussed. What would have been a useful contribution, in the eyes of the PRS participant, would be to have had a member of the group specifically from the leaders panel, who could take each policy suggestion and indicate the relevance of demographic data in pursuing the policy on a practical level in the district.

CLOSING SPEECH BY THE DEPUTY PROVINCIAL COMMISSIONER,
WESTERN PROVINCE FOR THE PROVINCIAL POPULATION AND
ECONOMIC DEVELOPMENT SEMINAR.

Mr. Chairman,

We have all been engaged in a stimulating and productive exercise for the past few days, the results of which will be shown in the months and years ahead as we continue our work in administration and development. The partnership of the University of Nairobi and the Ministry of Finance and Planning through the Population Studies and Research Institute and the Rural Planning Section has proved to be very productive in working with Provincial and District Officers to thoroughly review and discuss population concepts-- not as an academic exercise, but to incorporate them into the planning process.

In the opening speech, Mr. Chelugot urged us to fully participate in the seminar and to obtain a firm grasp of the concepts so that we could use them in our daily activities to better understand the people we are working with. This I think we have done. We have explored the dynamics of population change--fertility, mortality, and migration; we have examined the nature of population data and have been cautioned to explore them very carefully; we have understood the usefulness of population projections and the mechanics of their construction; and who among us would dare say that they

are not now familiar with population pyramids, whether broad-based or narrow, Kenya or Egyptian!

At this working seminar we have examined the inter-relationships between modernization, economic development, and demographic factors and saw how our situation in Africa differs from that of Europe and North America in the rates at which change occurred. We looked at population and development planning: How we could apply what we have learned and discussed in improving our own planning and administration, in devising improved District Development Plans, and in general utilizing all population data at our disposal. We have discussed the importance of generating new local data to take into account our knowledge of recent trends and future developments.

We have been fortunate to have had the help of the Population Studies and Research Institute in guiding us during this time. Professor Ominde in his keynote address spelled out the nature of our task as planners for the development of our country and the importance of population concepts in this task. He placed Kenya's problems in the context of the changes which are taking place throughout the world and alerted us to the accelerating rate of growth in Kenya. He illustrated the meaning of this by looking at the land situation in Nyanza and Western Provinces and how change in this situation will affect us as planners, and he has underlined the necessity to take these changes into account as we plan the use of increasingly scarce resources.

Prof. Henin carried on by clearly and patiently leading us through the series of complex concepts that constitute the field of demography. We will remember his explanation of population growth and the part fertility plays in it. He touched on the many factors which have lead to the present situation -- changing cultural patterns, improved health and education, and improved technology have all contributed to development and the problems accompanying development.

Mr. Kidenda, as Head of the Rural Planning Section, reminded us of how this all applies to our work in preparing plans which involved the people we are planning with. The exercises and group discussion which followed were designed to tap our insights into how population figures relate to our specific problems in the Provinces and Districts: Pressure on the Land, Migration, Health, Education, Food Production, and Urban Development.

But a big task remains before us. We must actually use what we have learned and reviewed here. We also have to teach what we have learned to those of our colleagues who were not with us here in Kericho. The development of an adequate base of population data is a task for us all. The Central Bureau of Statistics has already done so much for us. We must utilize what they have done and help them to add what we need to make our work more effective.

This week we have continued a process that started when we first decided to make our careers in the development field.

We have added more tools in order to be able to do a better job. Now we must use these tools and pass them on to others at the District, Division, Location, and Sublocation levels. This will be our task in the weeks and months ahead for it is only when all Wananchi understand what development means and how population growth in the Nation, Province, District, and Community affect their ability to improve the quality of their lives and provide increasing opportunities for their children, only then that we will manage to effectively utilize and expand our limited resources.

To the organizers and those who provided the resources for this seminar, we must demonstrate that we are effectively utilizing what we have learned. Those in the Ministries in Nairobi will look forward to improve plans and projects based on population data.

I hope I am expressing your views when I suggest to the organizers that effort should be made by them to provide resources for us to reach those at the District and lower levels. We will continue to look to the University and the Ministry of Finance and Planning and know they will provide it.

Thank you all for participating in this seminar. I now declare it closed.

TIMETABLE FOR NYANZA/WESTERN PROVINCE SEMINAR ON THE USE
OF DEMOGRAPHIC DATA FOR ECONOMIC AND SOCIAL PLANNING

<u>Time</u>	<u>Activity</u>	
<u>Wednesday August 16</u>		
4:00-6:00 p.m.	Registration	
7:30-9:00 p.m.	Working Dinner	
<u>Thursday August 17</u>		
8:30-9:00 a.m.	Introductory Remarks	Mr. J.H.O. Kidenda
9:00-9:15 a.m.	Official Opening by P.C. Nyanza	Mr. Chelugot
9:15-10:00 a.m.	Keynote Speech	Prof. S.H. Ominde P.S.R.I.
10:00-10:30 a.m.	Coffee Break	
10:30-11:30 a.m.	Dynamics of Population Change	C.B.S.
11:30-12:30 p.m.	Group Discussion	
12:30-2:00 p.m.	Lunch	
2:00-3:00 p.m.	Interrelationships between Modernization, Economic Development, Demo- graphic Factors	Prof. R. Henin P.S.R.I.
3:00-4:00 p.m.	Group Discussion	
4:00-4:30 p.m.	Coffee	
4:30-5:30 p.m.	Population and Development Planning	Prof. R. Henin
5:30-6:30 p.m.	Group Discussion	
<u>Friday August 18</u>		
8:30-10:30 a.m.	Group Reporting	
10:30-11:00 a.m.	Coffee	
11:00-12:30 p.m.	Nyanza Western Province Population Profiles	Mr. J.H.O. Kidenda Min. of Finance & Planning
12:30-2:00 p.m.	Lunch	
2:00-3:30 p.m.	Group Discussion	
3:30-4:00 p.m.	Coffee	
4:00-6:00 p.m.	Group Reporting	
<u>Saturday August 19</u>		
8:30-10:30 a.m.	Discussion of Group Reports and Plans for Follow-up Action	
10:30-11:00 a.m.	Evaluation of Seminar	
11:00-11:30 a.m.	Coffee	
11:30-12:30 p.m.	Official Closing of Seminar	Mr. Mburu P.C. Western

SEMINAR FOR NYANZA AND WESTERN PROVINCES
HELD AT KERICHO TEA HOTEL, FROM 16TH TO
19TH AUGUST, 1978.

LIST OF PARTICIPANTS

<u>NAME</u>	<u>TITLE</u>	<u>MINISTRY/PROVINCE</u>
1. Mr. I. Cheluget	Provincial Commissioner	Nyanza Province.
2. Mr. C. Oketh	Deputy Provincial Commissioner	Western Province.
3. Eric R. Krystal	Advisor	Ministry of Finance and Planning.
4. Hudson W. Misiko	District Commissioner	South Nyanza Box 1 Homa Bay.
5. J. Mani	Economist/Statistician	Ministry of Finance and Planning.
6. M.M. Kabugu	District Commissioner	Kisii.
7. Mrs. M. Ominde	School-Feeds Supervisor	City Council of Nairobi.
8. J.G.O. Desio	Provincial Physical Planning Officer	Nyanza Province.
9. Dr. J.K. Evelia	Provincial Medical Officer	Nyanza Province.
10. D.A. Mulama	District Commissioner	Busia Box 721.
11. E. Jonathan (Mrs)	Provincial Director of Social Services	Nyanza Province.
12. Judith Geist	Advisor, Rural Planning	Ministry of Finance and Planning.
13. David Mshila	Planning Officer	R.P.S. Treasury.
14. P.H. Kinyua	Provincial Physical Planning Officer	Western Province Box 767 Kakamega.

<u>NAME</u>	<u>TITLE</u>	<u>MINISTRY/PROVINCE</u>
15. G.K. Hjage	Provincial Trade Development Officer	Western Province Box, 187, Kakamega
16. F.W. Nabichenje	Provincial Cooperative Officer	Box798 Kisumu.
17. M. Kagosha	District Development Officer	Box 43 Kakamega.
18. H.H. Bigogo	District Development Officer	Box 83 Siaya.
19. Anthony P. Owiti	District Development Officer	Box 1921, Kisumu
20. S. Obondi	Provincial Trade Dev. Officer	Nyanza, Box 131 Kisumu.
21. B.G. Keragori Ogaka	District Development Officer	South Nyanza, Box 1 Homa Bay.
22. Mugenya Mududa J.M.	Aq. Family Planning Association of Kenya, Area Officer	Nyanza, 1109, Kisumu.
23. P. Handa Awino	Area Officer, Family Planning Association of Kenya	Western Province Box 545 Kakamega.
24. Noses M. Kariuki	District Development Officer	Box 590, Kisii.
25. Manjala Wa Muricho	District Development Officer	Bungoma Box 550.
26. B.G. Saka	Provincial Labour Officer	Nyanza Province.
27. Francis B.K Were	Physical Planning Officer, Nyanza	Box 1912, Kisumu
28. S.K. Tororey	District Commissioner	Bungoma, Box 550.
29. J.M. Tiampate	District Commissioner, Kakamega	Box 43, Kakamega.
30. Mathangani C.M.	Provincial Director of Social Services	Western Province.

<u>NAME</u>	<u>TITLE</u>	<u>MINISTRY/PROVINCE</u>
31. Abner H. Ochieng	Provincial Cooperatives	Western Province
32. Stanley Thuo	District Commissioner Siaya	Box 33, Siaya.
33. Jectone A. Omunge	Provincial Planning Officer	Western Province Box 357, Kakamega
34. F.S. Ong'injo Awuor	District Development Officer	Busia District.
35. Dr. P. Delp	Rural Planning Section	Ministry of Finance and Planning
36. Prof. R.A. Hcinin	Visiting Professor	Population Studies and Research Institute.
37. Prof. Ominde	Director	Population Studies and Research Institute, University of Nairobi.
38. F.I. Munyasa	Senior Administrative Assistant	University of Nairobi.
39. G. Walobwa	Deputy Provincial Education Officer	Nyanza Province.
40. Mr. Kidenda	Head of Rural Planning Section	Ministry of Finance and Planning.
41. Mr. Ole Ncharo	District Commissioner	Kisumu District
42. J.J. Gichuki	Provincial Director of Agriculture	Nyanza Province.
43. Mr. P. Wangalwa	Provincial Informa- tion Officer	Nyanza Province.

3. Seminar

and

name/discuss several things you found useful in this seminar. _____

name and discuss several things you did not like about the seminar. _____

5. What suggestions do you have for improving future provincial seminars?

6. What suggestions do you have for follow-up activities to this seminar in your provincial seminars?

by other comments _____

