

# THE ANALYTICAL REPORT

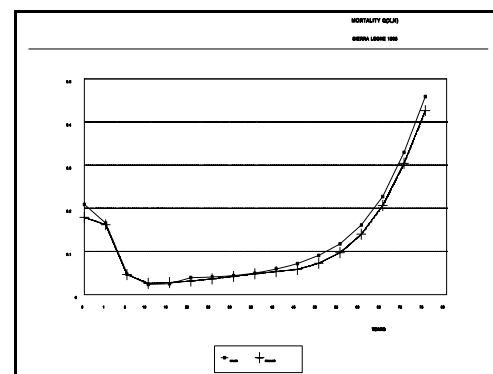
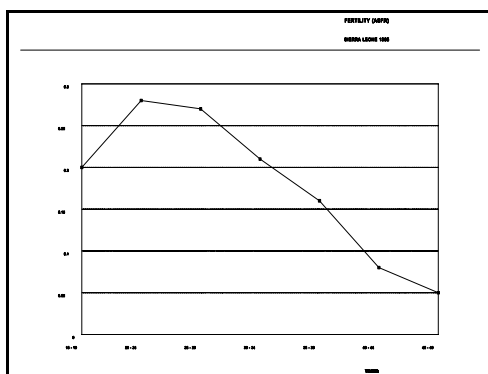
## 1985

### POPULATION AND HOUSING CENSUS

### SIERRA LEONE

EDITED BY

**H.B.S.KANDEH**  
**K.V.RAMACHANDRAN**



CENTRAL STATISTICS OFFICE

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1985 POPULATION CENSUS PROJECT SIL/83/P01  
CENTRAL STATISTICS OFFICE  
TOWER HILL, FREETOWN

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Published by  
Central Statistics Office  
Department of Development and Economic Planning  
Tower Hill, Freetown  
Sierra Leone

Under  
UNFPA PROJECT  
SIL/83/P01

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## PREFACE

This is the final report of the 1985 National Population and Housing Census. It is an analytical report and provides a detailed picture of the demographic, socio-economic and household-housing situation in the country. The entire exercise was carried out by local analysts. Finally whereas the total population counted was 3,515,812, some characteristics like education, economic activity, fertility etc. are tabulated and therefore analysed for a total population of 3,222,901.

A number of volumes have preceded this final report. These volumes have presented data on various aspects of the country's population and the general housing conditions. These include data on the demographic, social and economic characteristics of the population; the analysis of age and sex structure; fertility and mortality; migration and housing. Furthermore, detailed and small-area statistics will be available on request at the Central Statistics Office.

The ultimate objective of the census was to enhance national capacity in planning by providing estimates of total population and its growth rates, fertility, mortality, and other related socio-economic indicators. Data collection was completed within the first two weeks of December 1985 and the provisional results submitted and accepted by Government in January 1986. Thereafter, machine processing of the data was carried out until April 1990 when the final statistical tables were produced. The results were finally endorsed by the Government of Sierra Leone in May, 1992 and a National Seminar for dissemination of the results was held in that same month.

A national undertaking of this magnitude depends for its accomplishment on a great number of factors. Adequate financial resources, technical know-how, national and unflinching public co-operation are among the most important ingredients for success.

In presenting this final report, the Central Statistics Office would again like to take this opportunity to acknowledge the valuable contributions made to the success of the project by various national and international organizations, government agencies and institutions and the general public. Financial assistance, material and human resources for the census project were provided by the Sierra Leone Government, the United Nations Population Fund (UNFPA), the United Nations Development Programme (UNDP), the Federal Republic of Germany and the Economic Commission for Africa (ECA).

Special mention must be made of the authors who worked on areas of speciality and who inspite of all the odds continued to support every stage of the census up to its final conclusion. The final editing of this report was jointly concluded by the Census Analyst, Professor H.B.S. Kande and UNFPA/Country Support Team (CST) Regional Adviser Dr. K. V. Ramachandran of the Economic Commission for Africa, whose dedication is greatly appreciated.

Finally, the resourcefulness and dedication demonstrated by Dr. Peter L. Tucker, Census Commissioner, staff of the National Population Secretariat and the Central Statistics Office have been acknowledged by all.

This publication marks the successful conclusion of the 1985 census and I now look forward to your continued support as the Government prepares for the 1996 National Population and Housing Census.

H.K. MAX-MACARTHY  
DIRECTOR  
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## CHAPTER 1

### THE 1985 CENSUS OPERATIONS

H.K. MAX-MACARTHY

#### 1.1.1 Introduction

The Republic of Sierra Leone is situated on the West Coast of Africa between latitude 7 degrees North - 10 degrees North; longitude 10 degrees West - 14 degrees West and about 1,000 km North of the Equator. The land area covers approximately 71,740 sq km (about 28,000 Square Miles). It is bounded on the North-West and the North-East by the Republic of Guinea; on the South and South-East by the Republic of Liberia and on the West by the Atlantic Ocean Coastline of approximately 340 km (about 211 Miles). The country is divided into four major Administrative Areas:- The Eastern Province; The Northern Province; The Southern Province; and The Western Area.

The Provinces are divided into twelve districts. The Western Area is divided into (Western Urban) Freetown and Western Rural Area. Freetown is divided into wards while the districts are in turn divided into one hundred and forty-nine chiefdoms.

Sierra Leone has five Physical Regions:- 1) The Central Plains; 2) The Northern Woodlands Savannah; 3) The South Western Upland; 4) The Western Coastal swamps; and 5) The Western Peninsula Upland Region.

Half of its area is covered by mountainous terrain including the capital, Freetown. About 80% of the people live under a pattern of shifting cultivation and until very recently rice cultivation was the major crop activity. Sierra Leone has a tropical climate with two distinct seasons - the Dry Season, from November to April and the Rainy Season from May to October with a peak in July and August. There is also another period known as the Festive Season - October to May which comprises the Festivals of Ramadan, Christmas and the Harvesting of Rice Crop. All schools and colleges are closed during the Christmas Season. The Census was taken in December, 1985.

#### 1.1.2 The Background of the 1985 Census of Population and Housing

"In our modern world, no country can afford to do without current credible data on its population. This applies to Sierra Leone no less than to any other country in the world. Comprehensive and up-to-date information on various aspects of our Population is of utmost importance to us in Sierra Leone".

For various specific and practical reasons the Government of Sierra Leone decided to take a De Facto Census of Population and Housing in December 1985. The last Census of Population in Sierra Leone was conducted in December 1974 and its data had now become out-of-date for realistic planning and effective administration.

The 1985 Population Census was the third complete count of the Population conducted in Sierra Leone. The first was in 1963 and the second in 1974.

Prior to 1985 however a number of "Censuses" has been conducted in the country, employing various methods. The earlier of such "Censuses" is believed to have been conducted in 1802 in what is now part of the Western area. In 1901, the whole country was covered for the first time, although the methods used in the provincial areas were different from what had become the standard practice in the Western Area. Similar "Censuses" followed in 1911, 1921, 1931 and in 1948, when the last of these "Censuses" was conducted.

The "Censuses" of 1901 to 1948 combined complete counts in the Western Area with sample estimates of the provincial population to obtain the population of the country. Because of the sampling and estimation procedures used, the estimates of the population of Sierra Leone obtained from these censuses prior to 1963 may not be comparable to the more recent ones. The population figures for the period 1901 to 1985 were as follows:-

1901	-	1024178
1911	-	1400132
1921	-	1540554
1931	-	1768480
1948	-	1858275
1963	-	2180355
1974	-	2735159
1985	-	3515812

The two earlier "Complete Count Censuses" and also de facto censuses which were taken in 1963 and 1974 had been invaluable as major sources of population data, particularly for Government Administration and Development Planning. The last census was taken in December 1985.

#### 1.1.3. The Broad Objective of the 1985 Census of Population and Housing

The Government of Sierra Leone had established a regular programme of National Population Censuses as an integral part of a continuing and comprehensive scheme of statistical data collection to serve various national needs.

For the 1985 Census of Population and Housing the broad objective was the continuation of a programme of periodic population censuses



as an indispensable source of basic population data required on a regular basis to serve a wide range of national needs for data particularly in the areas of Government Administration and Development Planning. Before any efficient planning can be undertaken attempts must be made to assemble reliable and timely Statistical Indicators. Besides by 1985 the data of the 1963 and 1974 Censuses had become obsolete and more up-to-date data were imperative and demanded.

#### 1.1.4. Short-term Objectives of the 1985 Census of Population and Housing

- i To provide up-to-date information on the size, geographic distribution and composition of the population as well as data on its rate of growth and components of growth, that is, its fertility, mortality and migration.
- ii The project also entailed a complete revision of the sampling frame for subsequent surveys in the socio-economic fields.

Prior to the 1985 National Population Census the two censuses conducted in 1963 and 1974 had a weak demographic base apart from the fact that the available data had been rendered inadequate after a lapse of eleven years. The first National Population Census held in 1963 did not investigate topics such as fertility and mortality. The 1974 Census went a step further to investigate topics on fertility and mortality.

In His Presidential Address at the State Opening of Parliament on 8th June 1984, His Excellency the then President the Late Dr. Siaka Stevens had this to say:-

"In view of the importance of integrating population factors into planning, my Government in addition to installing a population cell in the Central Planning Unit, has established a National Population Council. It is hoped that the next population census will be conducted in 1985 and the necessary preparatory work is now in progress"

In another statement outlining Sierra Leone's views on population, for the 1984 International Conference on Population, the Late President Dr Siaka Stevens said, "the main objectives of Government policy are:-

- i to achieve a rate of population growth that contributes to the effectiveness of efforts to reach higher levels of human development consonant with free decisions regarding family size and takes into account parents' duties to their children and society, as well as duties to each other
- ii to achieve a significant reduction in morbidity and mortality especially among mothers and children
- iii to achieve an improved spatial distribution of the population
- iv to provide increased employment to all, particularly women"

The National Development Plan 1974/75 - 1978/79 envisaged the establishment of a National Population Commission which was actually established in 1982, as an advisory body to the Government responsible for :-

- i formulation of population policy recommendations
- ii promoting and fostering an integrated approach to family planning
- iii promoting and encouraging the integration of various aspects of family planning in development
- iv Co-ordinating, promoting and Integrating population activities into planning in Sierra Leone.

The formation of the National Population Commission by the Sierra Leone Government was of major political importance as it provided a link between the Government and the entire community and acted therefore as a national forum for considering the major issues as and when they affect the population of the country. One of the National Population Commission's main terms of reference was to formulate a National Population policy of the Country. After six years of research and background work the National Population Policy was drafted in May, 1988.

In the country's first five-year development plan, 1974-1979, as well as a subsequent response to the Fifth United Nations Population Inquiry among Governments, the Government blamed population problems such as unemployment, increasing school-age population, migration and pressures on available health and housing facilities on the lack of reliable demographic and vital statistics. In consonance with this, it has been stated that one of the objectives of the National Population Policy should include the improvement of the demographic knowledge base, that is, data collection, processing, analysis, projections and research on population and development interaction on a regular basis.

#### 1.1.5. Long-term Objectives of the 1985 Census of Population and Housing

The data provided by this census will contribute greatly to the formulation and implementation of the Country's National Plans for the next ten years. They will also facilitate the growing activities of the Government in the fields of Health, Education and Population generally.

In 1983, the United Nations Fund for Population Activities initiated a project for assistance in the basic data collection and analysis, that is, Sierra Leone National Population and Housing Census (SIL/83/P01) based on the recommendations of the Needs Assessment Mission that visited Sierra Leone in November 1981, that assistance be provided to support various population activities. Among the activities recommended was the assistance to enable the Government to conduct the 1985 census and to process, analyze and disseminate the data collected. Additionally the proposed programme was to assist the Government of Sierra Leone, a priority country for United Nations Fund for Population Activities assistance, in achieving its population and development objectives. The project objectives were to:-

- i provide demographic and related socio-economic base line data for development planning and day-to-day administrative decision making
- ii provide information for the determination of fertility, mortality and population growth rates and migration flows
- iii provide information on housing conditions
- iv provide explanations of the trends in the components of growth through intensive analysis of the census data
- v develop national skills in conducting large scale statistical surveys.

To achieve the above objectives, the United Nations Fund for Population Activities provided assistance to the Government of Sierra Leone with experts in general census methodology, data processing, cartography and demography (Project SIL/83/P01).

The Statistics Division of the Economic Commission for Africa was also available for consultations and advice to the National Population Census Secretariat and the Central Statistics Office. Several visits were made by staff members including one by the chief of the Division who was instrumental in putting the drawing office at the Central Statistics Office on proper footing. The United Nations Statistics Office immensely assisted in back stopping the project.

#### 1.1.6. Preconsultations and Arrangements between the Sierra Leone Government and the UN Systems and Foreign Embassies

As soon as Government took the decision to hold another census, the Director of the Central Statistics Office, relying on the provisions of the Statistics Act of 1963 which had been the legal basis for the previous censuses, assumed full executive responsibility for the census and the task of planning and administering it. The duties of the Chief Census Office were defined as :-

- i the direction of the overall technical and administrative control of the conduct and operation of the Census
- ii the demarcation of Sierra Leone into census district areas
- iii the designing, testing and finalization of the census questionnaires
- iv the procurement of census materials, equipments and supplies and their distribution in the different census district areas
- v the appointment of all temporary census personnel
- vi the training of all census technical staff, including cartographers, cartographic assistants, enumerating staff
- vii the processing, tabulation, analysis and publication of census data
- viii the conduct of the census post-enumeration survey and the analysis thereof
- ix the summoning of meetings of the census committee at such times as may be directed by the Chairman and the keeping of records of all the proceedings of the meetings of the Committee
- x the provision of census office accommodation (to be known as the National Population Census Secretariat) and of equipment for members of the Census Committee
- xi the general administration and direction of the Census Secretariat
- xii such other functions as may be determined by the Chairman

The United Nations Fund for Population Activities also provided funds to acquire land rovers for census preliminary activities; to update the computer facilities at the Central Statistics Office; to purchase cartographic materials and office equipment; International expert missions; six fellowships for a total of sixty man months; travelling funds to enable the Census Commissioner/Chairman and the Chief Census Officer to observe census organization and procedures in Ghana and Ethiopia - countries that had recently taken a population census.

The Government of the Federal Republic of Germany through its Embassy in Freetown provided assistance by printing the Census questionnaires, providing satchels and ball point pens. The Guinean Ambassador to Sierra Leone assisted immensely with census arrangements especially with regard to the enumeration of Guinean citizens and to alleviate some border problems.

#### 1.2.1. The Preparatory Work/Pre-Census Activities

A Census of Population and Housing has generally been described by the United Nations Statistical Office as perhaps the single most extensive, complicated and expensive statistical operation that a country undertakes. The operations involved in such an exercise are generally and broadly classified into :-

- 1 Preparatory Work/Pre-Census Activities
- 2 Enumeration/Data Collection
- 3 Data Processing and Results
- 4 Evaluation of the Results
- 5 Analysis of the Results
- 6 Dissemination of the Results
- 7 Systematic Recording of the Census Experience

The Pre-Census Activities are usually and necessarily long in duration, laborious, painstaking, tedious and involves many quite distinct activities. To ensure that the diverse operations occur in their proper sequence and in a timely manner, the entire census and its various component steps must be planned carefully well in advance. The preparatory work or the pre-census activities for the 1985 Census of Population and Housing can be grouped as follows though not necessarily or entirely chronologically separate or mutually exclusive:-

- A The Legal Basis for the 1985 Census
- B The Establishment of the 1985 Census Administration
- C The Establishment of Census Committees

- D The Cartographic and Field Operations
- E Training for the 1985 Census
- F The 1985 Pilot Census and Evaluation
- G The Final Plans for the Main Census

The legal basis for the 1985 population and Housing census is the Statistics Act of 1963 chapter 55 of the Laws of Sierra Leone as amended by the Census (Amendment) Act 1974. Under this Act the President of the Republic of Sierra Leone is empowered to direct that a National Population Census to be taken in the whole of Sierra Leone; to appoint a Census Commissioner/Chairman for this purpose and a National Population Census Committee(NPCC) to advise the National Population Census Commissioner/Chairman. The decision to hold the Census was made by His Excellency the President in 1984 and an order to the effect was published in the Sierra Leone Gazette as Public Notice No 20 of 1985.

The criteria for the appointment of National Population Census Commissioner/chairman were based on the following considerations:

- a Someone who commands the respect and admiration of all shades of opinion in Sierra Leone
- b A person with strong administrative competence with the necessary drive, the zeal and enthusiasm to put across to all authorities all matters relating to the successful operations and execution of the census
- c The person selected must have built a reputation of neutrality in all circles in Sierra Leone and even in international circles. Merit and ability were considered essential ingredients
- d The appointment was the prerogative of His Excellency the President with the advice and concurrence of his Cabinet.

The duties and functions of the Census Commissioner were defined as:-

- i shall have the general supervision and management of the Census
- ii shall cause to be prepared, printed, and issued for the use of the persons employed in the execution of this Act, such forms and instructions as he may deem necessary, and in particular questionnaires to be filled up with such particulars as the President may consider necessary in order to ensure as far as possible the completeness and accuracy of the Census returns
- iii shall make such arrangements as are necessary for the collection, revision and collation of the information required to be obtained for the purposes of the Census
- iv shall call for, examine, study and make recommendations in respect of any reports which may from time to time be submitted to him by the Chief Census Officer
- v shall appoint, with the approval of the Minister, Census Officers, Supervisors and Enumerators required for the taking of the Census
- vi shall give such directions to the Chief Census Officer or any other person appointed pursuant to any law relating to Census and Statistics
- vii shall submit the results of the Census as soon as may be possible to the President
- viii shall do all such things as may be necessary or expedient for the exercise of the powers or the performance of his functions under any law

The Census Commissioner/Chairman Dr Peter L Tucker was appointed on 1st December 1984 (Sierra Leone Gazette Public Notice No 1 of 1985) and the NPCC on the 19th March 1985 (Sierra Leone Gazette Public Notice No 19 of 1985) comprising of 11 members and 2 Technical Officers in attendance

The National Population Census Commissioner/Chairman was the main link between the Census Secretariat and the Government. He informed the Government of the progress on census activities and brought to the attention of Government as often as was necessary any important or sensitive issues emanating from the census operation. His role in assisting the census secretariat to obtain financial subventions from the Government at the appropriate time and requested level was particularly crucial to the success of the census operations. The Commissioner/Chairman was also the chief image builder for the census with the Government and the public.

As there was no National Population Census Secretariat at the time the Census Commissioner/Chairman was appointed, the Organizational Structure and Administration became his most vital preoccupation for the start of active preparations for the Census. One of his first actions was the supervision of repairing and redecoration of a dilapidated building allocated by Government. This exercise was completed in February, 1985.

A considerable part of the census activities was centred away from the National Population Census Secretariat, although the secretariat served as the nerve centre of the operations. There was an informal census standing committee consisting of the Census Commissioner/Chairman, the Chief Census Officer, the United Nations Census Adviser and latterly the Census Administrative Secretary which met quite frequently and often informally to find solutions to problems as they arose and provided guidelines for the field.

The Census Commissioner/Chairman, the Census Administrative Secretary, the Publicity Division and the Accounts staff were located at the Census Secretariat, while the UN Census Adviser along with the Statistical Planning Staff, Cartographic and Data Processing staff were located at the Central Statistics Office.

In order to ensure that the directives issued by the secretariat reached their destinations and were properly adhered to by the addressees, monthly meetings were held by the secretariat and the District Census Officers at different District Headquarter Towns. The rotation of the venues for the meetings ensured that the secretariat was better informed of the field conditions and problems and difficulties faced by the Census Field Personnel.

The Census Chief Executive was the Chief Census Officer. He, the United Nations Census Adviser and the various Census Advisory Committees advised the Census Commissioner/Chairman on the technical and some administrative aspects of the census.

The Census Administrative Secretary was responsible for the administration at the secretariat, procurement of supplies and negotiation of contracts for services. He, in conjunction with the Census Commissioner/Chairman and the Chief Census Officer managed the financial accounts of the census.

The Statistical Planning Unit worked directly with the Chief Census Officer and the United Nations Census Adviser. This unit was among others responsible for preparing the calendar of census operations, the census questionnaires and other technical documents, the planning and co-ordination of cartographic work and also preparation of census tabulation plan and classifications.

### 1.2.2. The Establishment of Census Committees

When once in office the Census Commissioner/Chairman advised His Excellency the President on the formation and appointment of the Apex Committee - The National Population Census Committee (NPCC). The Census Commissioner/Chairman then appointed members of the following committees:-

- i The Census Technical Advisory Committee (CTAC)
- ii The Census Publicity and Education Committee (CPEC)
- iii The Census Logistics Support Committee (CLSC)

The role of the NPCC was to act as an effective administrative catalyst and political advisory arm to the Census Commissioner/Chairman through participation in the census arrangements and to effect the greatest impact on the day to day progress of census in their various spheres of influence, and comprised representatives from the following organizations and bodies:-

- i Sierra Leone Trade Union
- ii Sierra Leone Teachers' Union
- iii Republic of Sierra Leone Military Forces
- iv Supreme Islamic Council
- v Freetown City Council
- vi United Christian Council
- vii Conference of Catholic Bishops
- viii The All Peoples Congress Party - the only Political party
- ix One Paramount Chief representing each Province
- x A Representative from the Western Area

The collaboration of this committee was essential for the implementation of the census programme. It should be remembered that it comprised of high calibre men and women drawn from all over Sierra Leone and some from abroad with all shades of connections and commitments - all committed to the general development of Sierra Leone. The committee functioned as a non-technical body and was appointed by means of a cabinet conclusion which conferred on it adequate official status commensurate with the role it was designed to perform.

#### 1.2.2.1. The census technical advisory committee (CTAC)

The successful planning and execution of a census require the analysis and treatment of a number of technical issues. For such purposes the CTAC was set up thus enabling the census organization to tap professional expertise available in the country and International Organizations. To emphasize the advisory role of the committee to the NPCC the Chief Census Officer/Director of Statistics was mandated to determine the membership of the committee by recommending for the Census Commissioner/Chairman's endorsement, specific individuals likely to make significant contributions to the census. The nominees, once approved by the Census Commissioner/Chairman were formally invited to become members of the committee in January 1985.

Members of the committee were drawn from representatives of:-

- i Fourah Bay College Demographic Unit (Institute of Population studies) and the Departments of Economics and Sociology
- ii Njala University College - Necessary Departments
- iii Ministry of National Development and Economic Planning
- iv Ministry of Housing and Country Planning
- v Ministry of Health
- vi Ministry of Education
- vii Ministry of Social Welfare and Rural Development
- viii Ministry of Labour
- ix Ministry of Agriculture, Natural Resources and Fisheries
- x Ministry of Internal Affairs (Interior)
- xi Bank of Sierra Leone
- xii Sierra Leone Chamber of Commerce
- xiii Surveys and Lands Department
- xvi Planned Parenthood Association
- xv Meals for Millions Foundation
- xvii National Population Census Secretariat
- xviii Central Statistics Office

The main tasks of the Committee were:-

- i Give general technical guidance to the Chief Census Officer, who was also the chairman of the committee
- ii Advise the Census Organization on all technical issues such as terms and definitions, concepts, census topics, and tabulations
- iii Finally draw up the census questionnaire for approval by Census Commissioner/Chairman and the National Population Census Committee.

#### 1.2.2.2. The census questionnaire

The scope of a census as finally determined is reflected in the questionnaire which contains the topics to be investigated in the census. The selection of topics for the 1985 census was based on a balanced consideration of all the major factors involved, such as the requests for data submitted by the various Government Ministries; Local and International Organizations; the ability of the Enumerators to ask questions correctly and the respondents to furnish reasonably accurate answers; the need to keep the questionnaire of reasonable length and so on.

Because of the wide variety of data sought, the possibility of collecting some of the data by means of sampling methods was considered. The idea was, however, abandoned, because it was feared that this might introduce too many complications into the processing and yield results of doubtful quality. It was decided that the entire population was to be treated uniformly during the enumeration.

The proposed questionnaire for the census was fully tested in the Pilot Census and the results provided the basis for the preparation of the final questionnaire (Appendix 1.1).

The questions on relationship within household, sex, age, nationality and place of birth are standard questions in African Censuses. In view of the great need for information on fertility and mortality, questions on children born and survival of parents were also included; data from which would yield reasonable estimates of these parameters by the use of special well-known techniques, since information on fertility and mortality had been collected in the 1974 Census. The inclusion of questions on housing represented a significant improvement over the 1963 and 1974 censuses. Questions on level of education and school attendance asked in 1963 and 1974 were repeated. No question was included on literacy, as experience had shown that this topic usually poses problems under enumeration conditions as there are other ways of obtaining reasonable estimates of literacy level.

Questions on the economic characteristics of the population are also regarded as basic in any census, although these topics are amongst the most difficult to investigate properly in African censuses. Much consideration was therefore given to the economic questions which were included in the questionnaire. There was a great demand for data on employment status and on the distribution of the working population by occupation and industry.

In the interest of ease of handling and economy, it was decided after the Pilot Census experience that the questionnaires should be bound up into pads of 50 questionnaires each consisting of 10 lines. Since the vast majority of household comprised less than 10 persons, the arrangement was very convenient as it allowed all the particulars for a household to be accommodated on one page in the majority of cases. This made for easier cross-checking of answering to questions pertaining to the members of the same household and promoted more accurate reporting.

#### 1.2.2.3. The census publicity and education committee (CPEC)

Another Committee set up by the Census Commissioner/Chairman was the Census Publicity and Education Committee. The importance of publicity in any census operation, particularly in the African situation cannot be over-emphasized, for without the willing co-operation of the population, no census can succeed. The main objectives of the Publicity/Education work for the 1985 census were:-

- i to inform the general public about the Census, the reasons for having a census and the role they have to play and thereby solicit their co-operation
- ii to explain to the public the reasons for asking certain questions such as "where did you sleep last night"; relationship to the Head of household; number of children born and so on. and hopefully allay their fears, anxiety and disaffection about such questions
- iii to build up the image of all census officers particularly the enumerators, who were invariably much younger than the respondents and hence at a disadvantaged position, as responsible persons who can be trusted with intimate personal details
- iv to reassure the public that the information gathered would be treated as confidential and measures would be taken to ensure that such information would not pass to unlawful private or official hands who could use the information to the detriment of respondents.

The publicity/education work was carried out in three phases. The first phase was rather informal. It was started in October 1984 at the same time as the mapping work and both activities went on concurrently. As teams of mappers went about their duties, they were able to talk to Paramount Chiefs, Village Headmen and Local Elders in the towns they passed through and made them aware of the Census as planned. The second phase was more formal. The campaign was launched early in January, 1985, with a press conference given by the Census Commissioner/Chairman.

Plans for the main publicity/education campaign were drawn up between January and February, 1985 after the Government had definitely decided to hold the census in December, 1985. The NPEC comprised important personalities in the community, to formulate and co-ordinate plans and also prepare materials for a broadcast campaign in the four main national languages. It was intended to ensure that everyone knew that a census was to be taken and that the Government regarded it as an important national undertaking. In particular, it was also intended to answer the questions most often asked and which, in some cases, indicated doubt or fear and, in other cases, arose out of a

desire to be better informed. At the provincial level, District Census Officers were appointed for each of the twelve (12) districts in Sierra Leone mainly for the purpose of publicising the census programmes, in collaboration with District Officers, Paramount Chiefs, Village Headmen and Local Elders.

Census Officials began to visit Primary and Secondary Schools all over the country to talk to students and teachers about the census and its aims. The students and teachers, apart from becoming rather well informed about the census, became the vehicle for disseminating this information to parents, relations and acquaintances who were not easily accessible by other means. This campaign was combined with a recruitment drive which was intended to obtain some preliminary estimates of the number of teachers and pupils that could be counted upon in each area of the country to serve as enumerators and supervisors. From the start of the mapping work and throughout the entire period of preparation, the Census Office relied heavily on the Sierra Leone Broadcasting Service (SLBS) for disseminating information on the census, both at the start of some field activity and also at frequent intervals during the progress of the activity. Later on it was possible to include talks on the census, in discussions and other feature programmes, which employed mainly the major local vernaculars. However, the effective use of the radio in the publicity campaign was limited to the Western Area due to technical and other problems then prevailing in the broadcasting system.

Consequently, publicity work in the Provinces became a major activity of the District Census Officers. Despite the constraints of transportation, fuel, bad roads and so on, they visited all the Paramount Chiefs, Other Heads of Local Administrative Units and schools in their respective districts to acquaint them with the census and solicit their help in the dissemination of information on the census.

Public meetings were also convened in various parts of each chiefdom in a District, taking particular care to include remote and inaccessible localities. District Census Officers also exploited to maximum advantage special events which attracted large numbers of people such as Agricultural Shows, Trade Fairs and Party Conventions.

Contacts established between field mappers and census officials on the one hand and Paramount Chiefs, teachers, pupils and others, on the other, had given rise to useful discussions on the census. Many issues were raised and questions asked, which gave clear indications of the major fears and misconceptions held about the census. Notes were made of all such questions so that they could be studied in the census office. This provided a good basis on which the final phase of the publicity programme was built. Based on information collected during the publicity work, the Census office was able to identify problem areas which needed special attention and treatment in the main publicity programme. These were the diamond mining areas of Kenema and Kono, where the constant differences between security forces and illicit miners had created among the latter, a deep feeling of fear and mistrust of any Government, no matter what its good aims were. Border districts like Kailahun, Kambia, Koinadugu and Pujehun were given special treatment.

Between October and mid-December when the enumeration was completed, over fifty hours of broadcasting time had been exclusively devoted to the census. Every broadcast was preceded by a special composed Census Calypso Music. Slogans sketches were featured as well as a large number of discussion programmes conducted in English and the main national languages. School broadcasts and weekly children's programmes also came in for their own share of census information material.

These broadcast programmes formed the bulk of the publicity work, but they were supplemented appropriately by television broadcast, press coverage, country-wide tours by the Census Commissioner/Chairman and National Population Census Staff and the use of mobile publicity teams which travelled all over the country, giving talks on the census and distributing posters and leaflets.

A lively publicity programme was mounted in the diamond mining areas of Kenema and Kono and extensive use was made of mobile teams using loud-speakers which combed the areas and blared out to allay their fears and enlist their co-operation. There is no doubt that virtually every one in Sierra Leone knew that a census was being undertaken and that it was an important element in enhancing the Government's plan for economic and social development.

On Census Night (1st December 1985) Census Commissioner/Chairman made a nation-wide broadcast soliciting the co-operation of the general public during the actual counting exercise.

#### 1.2.2.4. The census logistics and support committee (CLSC)

The Census Logistics and Support Committee under the chairmanship of the Census Commissioner/Chairman comprised mostly of:-

- i All Senior Police Officers in Sierra Leone
- ii All Senior Officers of the National Population Census Secretariat
- iii All Senior Officers of the Central Statistics Office
- iv UN Personnel attached to Statistics Projects
- v Representatives of the Ministries of Social Welfare, Transport and Communications, Education, Information and Broadcasting and Health

As the name implies this committee's main tasks were:-

- i Do all back stopping of activities
- ii Give all necessary support especially in crisis periods
- iii Make all advance planning and preparations particularly in areas of accommodation, communication, transportation, security, health facilities, border problems

#### 1.2.2.5. Cartographic operations

The census cartographic operations started with census mapping. Census mapping is one of the most fundamental operations in a census, because it largely determines the success of the census. The basic purpose of census mapping is to provide a geographic frame for the enumeration, that is, the totality of distinct and identifiable geographic units into which the entire territory is divided for counting the population. A census based on a house to house canvass requires that the country be divided into enumeration areas, which are census units of manageable size to which one enumerator is assigned. This cannot be achieved unless the extent of the territory is known as well as the manner in which the population is distributed over the land. Maps are needed to provide this information and to establish the enumeration area boundaries.

The basic set of maps used for the 1985 census consisted of a series of 118 topographic maps on a scale of 1/50,000, which covered the whole country. This series was based on air photograph carried out in 1958/59 with incorporated revisions made at various dates since then. They, however, required extensive revision to bring them up to-date as they did not reflect changes in the distribution of the population that had been associated with the more recent social and economic developments in the country.

For the largest towns, there was a set of large-scale maps on a scale of 1/2500 which were fairly up-to-date and so needed only minimal revision. For medium-size settlements, that is, those containing 200 or more dwellings, sketch maps were prepared.

The 1963 and 1974 censuses had shown that about 80 percent of the population lived in settlements of less than 1,500 persons, 25 percent of these were to be found in 13,000 settlements of less than 100 persons. It was obvious that the degree of completeness achieved in the enumeration would depend greatly on the extent to which these smaller localities were located and enumerated. Subsequent plans were drawn up with this in mind.

The field work for the revision of the 1/50,000 maps was designed with the primary objective of ensuring that all localities were plotted accurately on the map, named and listed. Also, a count of dwellings was to be obtained for each locality which would permit the making of population estimates and thus facilitate planning for the enumeration.

Some idea of the nature of the operation and the problems involved were obtained from the fact that the field work entailed covering approximately 71740 sq km (28000 square miles) of territory and checking over 18,000 localities. The bulk of the work had to be carried out during the dry season when weather conditions permitted easier travelling and accessibility to remote areas of the country. The problems were compounded by the lack of adequate transport in the early stages of the operation. Consequently, the procedures had to be simple and consistent with the prime objective of making a complete list of localities.

The staff available for the field work included a number of experienced field workers in the Central Statistics Office. These were taught to read maps proficiently and mastered orientation and scale. The more talented were taught the elements of making simple town sketch maps adequate for the purpose. They were organized into teams of 5 mappers to a vehicle and despatched into the field with enough pencils, papers and 1/50,000 maps. Each team worked under a Supervisor with the Regional Field Officer in overall charge of the operation. The number of teams at the start of operations was only two, but this was increased gradually to a maximum of six teams as new vehicles arrived.

Annotated field sheets were returned to the Census Office where they were checked and returned for clarification if necessary, before the details were entered on a master sheet. Town maps were drawn up in Indian ink on cartridge paper in a form suitable for reproduction.

The principal technical difficulty was in determining Administrative Boundaries, particularly Chiefdom Boundaries which in general could not be followed on the ground. Where boundaries were not defined in terms of visible geographical features such as watersheds or streams, no attempt was made to establish them. Instead, all localities in the area were located as accurately as possible on the map and boundaries adumbrated so that the localities were assigned to their correct administrative units. There were occasions when the locality had to be arbitrarily assigned, because more than one chiefdom claimed it. Such localities were, however, very few and generally consisted of only a few dwellings.

Names of Places were a source of problem. These assumed many forms; the absence of a system of standard spellings of place names, the proliferation of small localities within a few miles of each other, all having the same or similar names, the practice in some areas of changing the names of localities or having more than one name for the same locality. In these circumstances names were sometimes duplicated or plotted twice some distances apart by different mappers. These errors were detected and corrected in the office as far as possible.

Enumeration area boundaries were delineated in the Central Statistics Office, based on all available information. This ensured even treatment of the country as a whole. It was decided to plan for a ten-day enumeration, making reasonable allowance for unforeseen difficulties. This implied an average number of 140 dwellings per enumeration area in the Rural areas and 180 dwellings in Urban areas where the population was more concentrated and less travel time was required for canvassing.

Enumeration area boundaries were drawn so as not to cross existing administrative and electoral boundaries, except in Freetown where a slightly different approach was followed. Here, electoral boundaries had been drawn to include both sides of a street in same constituency, presumably because this arrangement facilitated voter registration. At the time of revising the maps, it was discovered that, in most parts of the city, the original electoral boundaries including the empty spaces adjacent to them had become thickly covered with dwellings, some of which were astride the original boundaries. This situation created serious confusion over the sources of the boundaries so that it became impossible to decide on which side of the original a given dwelling lay. In order to ensure a precise and unequivocal delimitation of boundaries for Freetown, it became necessary to make the boundaries run down the middle of the streets.

From the point of view of its ultimate objective of ensuring complete coverage of the population, the mapping work resolved itself into the task of compiling a complete list of localities and devising a simple procedure to enable the enumerators to reach their respective localities.

Since the enumerators were persons with local knowledge of their respective localities this presented no difficulty. It was only necessary for each enumerator to be given clear instructions for reaching the nearest locality in his enumeration area, using his chiefdom headquarters as base. The other localities in his area were then listed in sequence, following the shortest itinerary. Thus, there was both a map and a list of localities for each enumeration area.

Altogether, over 3,000 different maps were required for the census exercise and those were to be reproduced in sufficient numbers to provide copies for the various levels of field staff. Five copies of each map were reproduced by photo-copying, a rather expensive process which was, however, fully justified by the need to have the maps reproduced quickly and efficiently.

The mapping work involved the revision of 118 map sheets on a scale 1/50,000, the preparation of 175 town sketch maps and the revision of 11 maps on scale 1/2500. A total of 2,650 enumeration areas were delimited and reproduced together with maps for the use of Field Officers and Supervisors.

### 1.3.1. Field Organization and Operations

The field organization and operations started immediately after the National Population Census Secretariat was established. The question of manpower for enumeration was the most important item on the agenda. It was recognized that the enumeration would make heavy demands on manpower and it was important to take steps early to ensure that an adequate number of the right type of people were available when needed.

Four main categories of Field Staff were required:-

- 1) District Census Officers; 2) Field Officers 3) Supervisors and 4) Enumerators

#### 1.3.1.1. District census offices

Before the end of the second quarter of 1985, twelve District Census Officers, one representing each District, a Census Officer and an Assistant for the Western Area had been appointed. The District Census Officer will among other things:

- i be responsible under the guidance of the Census Office, for publicity in the district.
- ii carry out a preliminary recruitment feasibility exercise for Field Officers, Supervisors and Enumerators in the District as he goes about his census publicity duties.
- iii with the help and guidance of the Census Office, recommend for selection and training of Field Officers, Supervisors and Enumerators.
- iv with the help and guidance of the Census Office organize and conduct the Census Enumeration in the District.
- v be responsible for all census materials, documents and money entrusted to his care.
- vi be responsible to the Census Secretariat through the Chief Census Officer for all matters connected with the Census. He was responsible for the efficient conduct of the enumeration within his district.
- vii In addition to the above responsibilities he had particular responsibility for carrying out certain checks in the overall Census control. He was also required to submit reports on the enumeration when handing over Census Documents of his district. On completion of enumeration it was his responsibility to make sure that all Field Staff engaged for the census were duly paid, provided all census documents were handed over through their Supervisors to the Field Officers, and was empowered to delegate some of his responsibilities to the Field Officer serving under him.

Besides their academic, professional and administrative attainments, District Census Officers were recruited on the basis of their ability and competence to cope and execute their assignments and duties efficiently. By and large those recruited to fill these vacancies were those who also knew their areas and people very well. They were experienced and mature people with high sense of responsibility and accountability.

#### 1.3.1.2. Field officers and supervisors

The Field Officers were :-

- i responsible to the District Census Officer for the efficient conduct of the enumeration within his area in the District.
- ii required to assist in the recommendation for recruitment of Supervisors and Enumerators and when requested in the training of those selected.
- iii responsible for all census materials, documents and money entrusted to his care.
- iv particularly responsible for carrying certain checks in the overall Census Control, and submit detailed written report on the enumeration when handing over census documents and materials to the District Census Officer.
- v to ensure complete decorum of the entire Field Staff in his Area; settle disputes and correct errors as and when reported.
- vi to check the Master List against the Enumeration Books and ensure that all questions are answered correctly and countersigned the sheet.
- vii to authorise payment of honorarium to Field Staff who have completed their work efficiently and submitted all that should be handed over after the Census exercise.

The Supervisors were:-

- i responsible to the Field Officer for the efficient conduct of the enumeration within his assigned Area in the District.
- ii to master the Questionnaire and the Enumerators Manual and know the locality and its people.



- iii to assist in the training of Enumerators.
- iv to check the contents of each satchel, ensure that all that would be required in the field are in the satchel.
- v to have close supervision of the Enumerators work and correct mistakes on the spot.
- vi to report to the Field Officer the progress of the census exercise in his Area.
- vii to settle promptly any difficulties, disputes or problems which may arise and report to the Field Officer.
- viii to ensure decorum of Enumerators in the field; make sure that each knows which Area he has to cover. Go over his map with him and make sure he understands what places he has to visit and how to get there.
- ix to make arrangement for meeting each in turn and as soon as after the start of the enumeration as possible.
- x to deal speedily with any queries they may have and if necessary refer to the Field Officer.
- xi to ensure that enumeration starts on time daily; witness one complete interview conducted by the Enumerator and satisfy himself that he is doing his work correctly.
- xii to ensure that all localities are being visited, including localities which may not be shown in the Enumeration Map.
- xiii to satisfy himself that any locality said to be deserted is in fact deserted.
- xv to satisfy himself that at the end of the enumeration every house has been visited, the inhabitants enumerated and that all bear the blue sticker.

#### 1.4.1. Training for the 1985 Census

Reports from previous censuses, surveys and experience from the Pilot Census conducted in May, 1985 suggested that the quality of the candidates selected for training as Field Officers, Supervisors and Enumerators could be greatly enhanced by prior interviews of the candidates. The sources for candidates were from Principals of Secondary Schools and Teachers Training Colleges, Senior Personnel in Extension Services, Serving or Retired Public Officers of the rank not lower than that of Assistant Secretary or equivalent for Field Officers. Head Teachers of Primary Schools, Teachers in Secondary Schools and the Supervisory Staff in Extension Services of the rank of Agricultural Officer or equivalent were selected to train as Supervisors. Teachers in Primary Schools, Students in Teachers Training Colleges and Higher Institutions above Secondary Schools, Extension Workers in Agriculture, Veterinary and Local Government Officers were selected to train as Enumerators.

The application forms among other things required information on age, sex, qualification, occupation, work experience, language spoken, and chiefdom the candidate would prefer to work.

Following the completion of application forms, Senior Technical Staff from the Central Statistics office and the National Population Census Secretariat were sent to each district and together with the District Census Officer scrutinized each application and made final selection of applicants who would go into training. The required number of Enumerators plus 10 per cent for each district were selected for training. This number varied from district to district. Again efforts were made to include and encourage as many capable females who passed the test and interview among the candidates.

Training of field personnel was done at different stages and at different levels. Special training sessions and briefings were held for all participating Central Statistics Office Staff; National Population Census Secretariat Staff, District Census Officers and Independent Observers. Training for Supervisors and Field Officers was done in each of the District Headquarter Towns for five days, between the 19th and the 31st August, 1985. There were at least two trainers at each centre.

The main objective for training was to ensure that no mistakes were made during enumeration, that coverage was complete and that data collected were accurate. The secondary objective was that if mistakes were made, they would be put right on the spot. Training therefore followed a pattern of classroom teaching, where trainees were taught the techniques of filling the questionnaire and how to canvass their enumeration areas. Trainees were given an opportunity of actually doing enumeration practice around the training centre.

At the end of training the candidates were tested. There were two parts to the test for Supervisors and Field Officers; a comprehension test with twenty short questions, and a test based on filling out the questionnaire from a profile. Based on the results of the test, recommendations were made to the Secretariat for the selection of Field Officers and Supervisors for the Census exercise. The final selection was made strictly on the merit and ability of candidates' performance.

Training of Enumerators followed a similar pattern as for the training of Supervisors and Field Officers. Training in all Districts and the Western Area lasted for five days, from the 25th to the 29th November, 1985 and a proficiency test was conducted at the end. Every effort was made to ensure that training was uniform throughout the country. Trainers consisted of some Field Officers and Supervisors; Census and Statistics Office personnel who had previously been trained in August. Training packages were prepared and on the 23rd of November, 1985, a day's briefing was again given to all trainers. In order to make training more effective and easy, it was decided to use a trainer/trainee ratio of 1:25, that is, one trainer to twenty-five trainees.

Profiles used for the training of supervisors were also used as Practice Profiles for the training of Enumerators. Trainers were asked to write other profile for practice as found necessary. A different profile was however used for the test. After having gone through several practice profiles in the classroom, enumerators went out to interview households living around the training centres.

The results of the test conducted for Supervisors and Field Officers showed that there was a positive correlation between marks obtained in the comprehension paper and those obtained in the profile test. As a result of this correlation, it was decided that a single test paper be given to enumerators. Their test covered filling out a questionnaire from a profile prepared by the Census Secretariat. Based on the result of the test, successful candidates were employed as enumerators.

#### 1.4.2. The Pilot Census and Evaluation

The Pilot Census Enumeration was conducted during the period 27th to 31st May 1985. The experiences gained were used to improve procedures for the main enumeration procedures. The objectives of the Pilot Census were to:

- i test the Census Questionnaire and observe the reactions of respondents to certain Census questions
- ii test and assess the suitability, effectiveness and duration of training
- iii test the adequacy of sources of recruitment of field staff
- iv check the quality of Cartographic work done by the time of the Pilot Census
- v test the effectiveness of logistic planning
- vi collect data for determining the work rate of enumerators for the main census enumeration
- vii assess the correlation, if any, between the selection, test marks obtained and quality and output of the enumerators
- viii evaluate the adequacy of the census manuals

The sample for the Pilot Census consisted of two of the smallest chiefdoms in each district as well as two enumeration areas each from Freetown, Bo, Kenema and Makeni. The results of the Pilot Census revealed the adequacy of the basic design of Questionnaires, Manuals and Field Procedures and the Cartography work so far accomplished. With regard to the extent that these objectives were met by the exercise, the Pilot Census could be regarded as a success. One major point that came up was that of selection of enumerators. It was found out that some of the District Census Officers were not conscientious in the performance of the aspect of their duties. There was considerable amount of unemployment in the country thus the District Census Officers were under considerable pressures from both political and family sources. Past experiences of census taken in the country indicated that supervision of enumerators was lax, the current Pilot Census showed that had supervision not been tight some enumerators would have been negligent in their duties. The selection of enumerators and supervisors thus became an issue to be handled with care if the results of the census enumeration were to be credible.

The decision to train the Supervisors in August 1985 was to have enough time and greater degree of control on the selection and training of enumerators in November. Candidates for the post of supervisors were invited for interview and only those short-listed were trained. It was the hope that this procedure would relieve the pressures on the District Census Officers and that the quality of candidates for training would be higher than it would otherwise have been.

#### 1.4.3 Census Training Materials

The materials for training of all census field personnel were provided by the Census Secretariat. These included manuals, schedule of training, profiles, questionnaires, events calendars, control lists, enumeration area maps, stickers and writing materials for District Census Officers, Supervisors and Enumerators.

#### 1.4.4. Pre-canvassing and Preparations for the Main Census

The actual number of Field Staff required at each level was determined after the delimitation of enumeration areas had been completed and the details of field organization had been worked out.

A ten-day enumeration period was planned for as the most efficient in the circumstances. A shorter time was considered as a means of reducing the effect of population movement on the census and so improving the coverage. It was also felt that the general quality of the reporting would benefit from an arrangement which would enable the enumerators to complete their tasks quickly, while their morale was still high and boredom had not yet set in. However, this required proportionately more manpower, and the indications were that this posed a very serious problem. In the rural areas particularly, suitable people were hard to find in sufficient numbers.

By mid-October 1985 the exact details of field staff requirements had been worked out. The country was divided into enumeration areas, which were aggregated into supervisor areas and Field Officers areas. The field organization was based on a ratio of about five (5) enumerators to one (1) supervisor and about twelve (12) supervisors to one (1) field officer.

All census materials were ready in the Census Secretariat for packing by the end of October, and packing started in mid-November. The work was completed and all materials distributed to the prospective field officers by late November. Census Office staff packed one satchel for each enumeration area with all materials, including the map for the area and an appropriate number of questionnaire books to cater for the estimated population. Questionnaire books were strictly accountable and their serial numbers were listed on a control form which also served as a receipt during checks and handovers on route to the field and back again to the office. Satchels were packed for supervisors and field officers and a few for reserve use. All satchels were then arranged, area by area, for easy distribution before being placed in crates for carting to their respective destinations.

Much thought was given to the system of payment for the staff and its administration. The rates were seen to be fair and realistic in order to attract good people and stimulate them to work well. The operation of the system was efficient but simple so as to avoid delays which could seriously disrupt the extremely tight schedule of activities that was planned for the enumeration. It was decided that each category of staff was to receive a bulk sum payment as honorarium after the satisfactory completion of the assignment. In addition, a training bonus and a small amount for travelling expenses were paid before the enumeration. Field officers made payments from imprests received for the purpose.

Few days before the enumeration, transport was acquired and provision made for fuel supplies to enable field officers and census officials to travel quickly and regularly in their respective areas. Every field officer was provided with a vehicle for the duration of the enumeration. Where necessary, suitable arrangements were also made for the hire of launches and canoes.

In order to keep the Census Secretariat in constant touch with the progress of the enumeration, arrangements were made to enable census field staff to communicate directly with the National Population Census Secretariat in Freetown. In this way the Census Secretariat became aware of any difficulty which arose during the enumeration and prompt remedial action taken. For this purpose the entire communications network in the country was put at the disposal of the Census Secretariat and every field officer had access to the wireless facilities located

nearest to his base.

By the 1st December, 1985, reports from all over the country indicated that everything was ready for the enumeration and that enumerators and supervisors were already on the move to take up their positions in their respective enumeration areas. By mid-night on December 1st, enumerators had reached the starting point in their assigned enumeration areas.

The count-down to the Census commenced on Friday, 22nd November, 1985, when all schools went on vacation in order to have the services of the tutorial staff of these schools as field officers, supervisors and enumerators. In this connection, all those who had been invited for training had ample time to travel to their respective centres as from the 23rd November, 1985.

The deployment of field personnel for enumeration was as follows: two (2) enumerators were assigned to each enumeration area and one (1) supervisor was in charge of either four (4) or five (5) enumerators. A field officer was assigned to supervise enumeration in two chiefdoms while in the Western Area each Ward had one (1) field officer with a few exceptions that were combined under the supervision of one field officer. Freetown West III had two (2) field officers. In all, 7,000 enumerators, 1,100 supervisors and 110 field officers were employed. In most cases five (5) enumerators were supervised by one supervisor and ten (10) supervisors were under the general supervision of a field officer, so that a field officer's team generally consisted of ten (10) supervisors and fifty (50) enumerators and they covered fifty (50) enumeration areas estimated to contain about 50,000 people. Each field officer was supplied with a vehicle in order to facilitate his movement and that of his supervisors.

Altogether approximately eighty (80) vehicles were hired from private owners and five (5) vehicles were obtained on loan from the Sierra Leone Police Force and five (5) on loan from UNFPA (United Nations Fund For Population Activities). In addition to these there were sixteen (16) vehicles, ten (10) of which had been supplied by the United Nations Agencies. Also eight (8) outboard motor launches and six (6) canoes for the riverine area of the Port Loko District, five (5) launches for the Bonthe area, four (4) for the Moyamba area and two (2) for the Pujehun area were hired. These launches and canoes enabled the enumerators and supervisors to visit every riverine town and village as well as to carry out enumeration on all the surrounding islands.

On the 1st of December, 1985, Census Night, at 12 mid-night sirens were sounded by ships at anchor, church bells were rung, vehicles hooted, mosques sounded tabules (drums) and even from the Chiefs' compounds the traditional drumming announcing important occasions filled the air that ushered in Monday, 2nd December, 1985, as the commencement day for Census Enumeration. Prior to this, there were other activities during the day. In Freetown, there was a 'Float' parade through the streets with 'Miss Census' seated majestically on the float accompanied by an array of musicians, dancers, masqueraders and a host of other entertainers. At the fore noon, Divine service that day, special prayers were offered and worshippers were reminded about the census and its importance to our national development. On the preceding Friday there were similar prayers in mosques.

#### 1.4.5. The 1985 National Population Census Enumeration

The Census Enumeration duly commenced on the morning of Monday, 2nd December, 1985. In most areas throughout the country, counting started at dawn, while in a few others it started between ten and eleven o'clock in the morning. Persons in hospitals, hotels, prisons, lock-ups, secret societies and other institutions were enumerated by enumerators or supervisors by kind permission of the respective authorities concerned.

The Census Secretariat was inundated by several calls late on the first day of enumeration by people very eager to be enumerated. They were given full assurance that during the course of the week, the enumerators would call on them. In the rural areas, some Chiefs did not allow their subjects to go out until they had them enumerated - especially in the mining areas.

The 'Floating population' that is people who have no fixed abode but find shelter wherever they could for the night, were also enumerated in special operation mounted at mid-night, of December 2nd and 3rd, 1985, throughout the country. This was carried out with the assistance of police personnel and some stalwarts from the 'Invisible community'. In the Western Area, particularly in Freetown where a large number of this category of people are, as compared with other areas in the country, the usual haunts were identified and listed and strategy worked out well. The enumerators, both male and female, were all personnel of the Central Statistics Office. On the whole, the response from these people was very good and the leaders in each of the hide-outs visited were most co-operative.

Throughout the enumeration exercise, the Census Secretariat in Freetown was in constant touch with the field through the field officers and census personnel. The general public manifested interest which no doubt was indicative of the excellent publicity embarked on and the wide coverage the enumeration continued to receive through the mass media, throughout the enumeration period. However, although there were no major or insurmountable problems, there were a few instances of local difficulties, which were amicably resolved.

There was abundant evidence of a nation-wide awareness of the census exercise and so it was whole-heartedly accepted by patriotic citizens who were prepared to "stand up and be counted", in order to reap the full benefits derivable from a census. Since the census was scheduled for 2nd to 11th December, some two to three days to the scheduled date, a few concerned citizens who had not been enumerated became worried and a volley of reports was received at the secretariat either by telephone or personal calls. All complainants received full assurance that they would be enumerated. In order to allay fears, there was a radio announcement that all those who had not been enumerated would be enumerated before the close of the enumeration exercise.

The enumeration, as already mentioned was scheduled for ten days and in most areas this deadline was attained quite easily while in a few others, mostly urban areas due to some unforeseen circumstances enumeration was not completed until the 18th of December 1985.

For identification purposes, enumerators were provided with blue and yellow stickers. The blue stickers were affixed to mark buildings which had been visited and whose occupants had all been enumerated while the yellow stickers were used to mark any building which had

either not been enumerated or enumeration of all the house-holds in the dwelling had not been completed. The use of these stickers helped to check on coverage. During the campaign and through the mass media, the populace was made aware of the implications of the blue and yellow stickers that were affixed to their buildings by enumerators. They were told that the stickers should not be removed by them for any cause whatever and each enumerator before leaving a dwelling would remind the occupants not to remove the stickers. The enumerators were warned not to fix a blue sticker to any dwelling unless all its occupants had been enumerated. This was strictly adhered to by enumerators. The first checking of enumeration was done by the Supervisors and then the field officers who did some checking on random sample basis. This was closely followed by the independent observers who were deployed to observe the process of enumeration, the demeanour of Enumeration Personnel, the reactions of respondents and to check on the correct use of the stickers and census materials. The Independent Observers were required and submitted reports on the Census enumeration.

Thus from the judgement of the National Population Census Secretariat and the reports of the Independent Observers deployed throughout the country, it is estimated that total enumeration covered was more than ninety-five percent achieved.

### 1.5. Post Enumeration Activities

As each enumerator completed his assignment he handed his satchel with all documents to his supervisor for checking for completeness of coverage and to ascertain that all documents have been returned. The supervisor in turn handed over all documents to his field officer for another set of checks. The field officer in turn handed over all the census documents and materials to the District Census Officer who was thus finally responsible for ensuring that all documents and materials for his area were returned to the Census Office and accounted for. The District Census Officer was also responsible to verify the field counts on the cover of the books before they were despatched to Freetown.

As the documents and materials were received in the Central Statistics Office they were checked against a Master Control Record to ensure that all enumeration areas have been enumerated. The number of books used and unused were also verified. After all office checks have been completed the totals for each enumeration area were posted to a Master Control Sheet and the enumeration area totals were then summed up to provide provisional total figures for the Chiefdoms, Districts, Provinces and Sierra Leone.

By the end of the first week of January 1986 the collection of the enumeration returns had been completed. The results were presented to the Government on the 16th January, 1986 and the Government accepted the results as a fair estimation of the country's total population and geographical distribution as of December 1985 based on the accessed enumeration coverage of about 95 percent.

The Preliminary Census Report was written and presented to Government in August 1986. The Preliminary Census Report among other things contained:-

- i Details of Methodology of the Census, Preparatory Activities and Enumeration Operations
- ii A set of Tables on Population Distribution and Composition by sex on District and Chiefdom Levels
- iii Illustrative Maps of the Statistical Data presented in the Report

### 1.6. The Problems of the 1985 Census

The problems can be broadly grouped under the following:-

- i The Legal Basis
- ii The Timing
- iii Cartography
- iv Data Processing
- v Transportation
- vi The National Economy
- vii The Implementing Agency
- viii The Funding Agency
- ix Non-Sierra Leoneans

#### 1.6.1 The Legal Basis

The Census Commissioner in 1986 wrote inter alia on the Census Act and its Practical Applications the following:-

The 1974 amendment did not change the basic provisions for an effective Census, it repealed and repeated all the Sections dealing with the general duties and obligations of persons employed in the Census operation, etc. It, however, introduced important administrative changes affecting the power and authority of the Census Commissioner, created a new post of Chief Census Officer with parallel functions to those of the Commissioner and introduced political control into the appointment of certain Census Officers. These changes weakened the powers of the Commissioner to control the Census and introduced considerable confusion into the management and operation of the field staff.

The Commissioner was also given the general supervision and management of the Census. Under the amended Act, he is to share his power of appointment and control with the Chief Census Officer, whose duties now include the appointment of all temporary Census personnel and the general administration and direction of the Census Secretariat. At the same time, the Commissioner is empowered to appoint Census Officers, Supervisors and Enumerators required for the taking of the Census. These posts are also temporary. It was not clear therefore which staff the Census Commissioner could appoint and which the Chief Census Officer could appoint. The net effect of all this is that it was possible for the Chief Census Officer to appoint staff without any reference to the Commissioner and for the Commissioner to appoint staff without any reference to the Chief Census Office. This fortunately did not happen. moreover, whereas the Chief Census

Officer could appoint temporary staff without reference to anyone the Census Commissioner could do so only with the approval of "the Minister". The process of obtaining Minister's approval, though simple, led to some delay in the appointment of the twelve (12) District Officers required for operation in the provinces. The crunch came, however, when the Census Commissioner had to appoint about 7,000 Enumerators, twenty-four hours before they were due to go into the field. Owing to considerations of economy, mobility and convenience, it had been decided to train potential enumerators within the districts in which they would operate. The successful trainees had to be dispatched to their respective enumeration areas as soon as they were appointed. In these circumstances it was not possible to obtain the approval of the Minister to appoint them within the time available. Technically, therefore, the appointment of the enumerators for the 1985 Census was illegal. However, the matter was subsequently reported to the Minister for retrospective approval.

#### 1.6.2. The Timing

Most of the basic and preliminary work for the 1985 Census started in earnest in December 1984. The task was Herculean but was not insurmountable. Because of lack of adequate time a lot of unnecessary and avoidable problems were created but through the diligence and devotion of all involved in the Census Organisation and Operations most problems were amicably resolved.

#### 1.6.3. Cartography

One of the most difficult technical problems that had to be overcome related to the cartography necessary for an efficient census. There were no up-to-date maps of Sierra Leone and the enumeration maps of 1974 had never been up-dated. The first task therefore of the Central Statistics Office was to send mappers into the field to obtain up-to-date information with which to either re-define or amend the enumeration areas. This meant that the mappers had to travel all over the country, count dwelling units in every town and village and bring these figures back to the Central Statistics Office where they were to be translated into maps and enumeration areas. This proved extremely difficult.

In this exercise the Statistics Division of the Economic Commission for Africa (ECA) assisted through experts on short-term missions to review and advise on the work done up to the time of their visit. In this way, errors or areas of possible delay were brought to the attention of CSO in time for action to be taken. Also assistance was received from the University of Sierra Leone and from the Ministry of Lands. As a result of this co-operative effort, the cartographic problems were largely overcome. Even so, it posed some difficulty for the enumerators when the census was in progress. These difficulties were overcome because of the fact that the enumerators and supervisors were recruited to work in the areas where they lived and which they knew very well. They were able, together with their supervisors and field officers, to correct on-the-spot any errors in the enumeration area maps.

#### 1.6.4. Data Processing

The start of the post enumeration is adjudged to be the commencement of data processing. The provisional figures were accepted in January 1986 but data processing was delayed due to a number of administrative reasons - Vacation leave taken by a number of the very few key personnel, delay in writing up of coding manuals and recruitment of coders. The training of coders eventually started sometime in early April 1986 and coding began in May 1986.

Data recording took a much longer time to get under way. The reasons were as follows:-

- i Considerable delay in identifying a suitable and willing candidate and in the recruitment of a UN Data Processing Adviser.
- ii Loss of important staff of the Data Processing Division through resignations.
- iii Delay in the installation of the Wang Workstations due to difficulties with the National Power Authorities.
- iv Prolonged and frequent electricity power cuts.
- v Problems with malfunctioning and missing parts and budgetary difficulties in installing a new electricity power generator plant.
- vi Frequent breakdowns of the Wang computer system resulting in long periods of non-activity in the areas of data entry and processing.

#### 1.6.5. Transportation

Vehicles and launches were provided for the field officers where necessary. Although this enhanced their performances in the field, some problems were encountered with regard to fuel supply and the unwillingness of some of the drivers of the hired vehicles to work after certain hours in the evening. Precaution for storing tanks at Makeni, Kenema, Bo and Freetown had been taken. A lot of these were lost however, through alleged leakages and theft. The result was that a lot of money had to be spent buying petrol in the field to keep the teams mobile. Each field officer had an initial supply of forty gallons of fuel and arrangements were made for replenishment as and when necessary. With the then prevailing circumstances it was not quite possible to receive immediate supply when they were short of fuel. Some of the vehicles were not suitable to ply some of the roads that were badly damaged; however, with understanding and goodwill they managed to perform their allotted tasks with assiduity.

#### 1.6.6. The National Economy

During the peak year (1985) the availability of government finance for servicing of the census became tighter and tighter with daily devaluation of the local currency. This was further exacerbated by the non availability of the currency itself from the banks which in turn led to unnecessary budgetary constraints and slowing down of some census activities.

Throughout the 1980'S though the Government of Sierra Leone attempted to address the serious down trend in economic situation through

consultations with international financial institutions the development planning effort in the country had come to a standstill and the link between population, development and resources hardly existed. Development programmes had to depend largely on foreign aid. With inflation skyrocketing and the consumer price index spiralling, the Census Organisation had to use all its technical and persuasive skills to get people who were reluctant and bitterly complained of their economic plight to Stand up and be counted.

#### 1.6.7. The Implementing Agency

The Central Statistics Office of the Ministry of Finance, Development and Economic Planning being the implementing agency and empowered by the Statistics Act of 1963 to carry out the exercise of a National Census of Population and Housing was beset by malignant and mitigating problems such as:

- i Lack of adequate technical capability
- ii Poor staffing conditions
- iii Unavailability of Government Inputs

Poor working and salary conditions and promotional prospects in the Central Statistics Office and lack of job satisfaction and frequent disruption of work due to non-availability of funds and facilities were major constraints in the speedy execution of the census. Another factor which contributed to this problem is in filling up the resultant vacancies on account of administrative delays and non-availability of adequate qualified candidates. In the field of data processing, the situation became more and more alarming due to the increasing demand of trained hands by the parastatal bodies and the private sector who were acquiring computers and were prepared to pay much higher salaries than the Government.

The working environment needed considerable improvement in terms of basic facilities like regular supply of water and electricity and toilet facilities.

#### 1.6.8. The Funding Agency

The Central Statistics Office had a series of procedural problems with the local office of the funding agency UNFPA, which also introduced delays in the approval and disbursement of funds and consequently on the implementation of programme activities.

#### 1.6.9. Non-Sierra Leoneans

In some areas, both in the Western Area, Freetown in particular and the Provinces in general a few enumerators encountered difficulties with minority groups of Non-Sierra Leoneans who did not want to be enumerated. Some entertained the fear that the census exercise was a plan to a deportation drive aimed at foreigners. Others regarded it as a waste of time, because the results would neither be published nor would the government embark on any development programme in order to meet the dire needs of the people. In the case of foreigners the whole exercise had to be thoroughly explained to them in order to convince them, while tribal heads were contacted to persuade their groups to receive enumerators and make themselves available for enumeration. Some measure of success was achieved.

#### 1.7.1. The Successes

That the 1985 Census was ever carried out was a miracle and a signal success. The Census enumeration was a success judged from the fact that coverage was better than in previous Censuses and that the Government had no hesitation in readily accepting the results of the enumeration. The enumeration was conducted in December 1985, the preliminary results were presented to and accepted by Government in January 1986. This compares with the fact that the December 1974 Census enumeration results were not accepted by Government until 1981.

The 1985 National Population Census and Housing provided up-to-date Statistical data on:-

- i Demographic and related socio-economic baseline data required for Development Planning and day-to-day Government Administrative Decision-Making.
- ii Information relevant for the determination of Fertility, Mortality, Population Growth Rates, Migration flows, Housing Conditions etc.
- iii For the complete revision of the sampling frame for subsequent surveys.
- iv For the development and improvement of national skills in conducting and analysing large-scale data (the first time national experts were fully utilized and several fellowships and scholarships awarded).

The Census data have also been used in various ways by Government, Commercial and Educational Institutions and Private Researchers. The Census data, for example were used in redelimiting some parliamentary constituencies in the last General Elections. The Government is using the data in planning its allocation of rice to various administrative divisions. Maps prepared for the 1985 Census are being continuously requested for and used.

Most importantly, the successful outcome of the 1985 Census enumeration has added to the established stature of the Central Statistics Office and the National Population Census Secretariat and has also created a lot of confidence in these institutions leading to Government requesting them to conduct sensitive Censuses in the areas of Education and Public Service of Sierra Leone. The Government is being urged and requested to establish a permanent National Population Census Secretariat.

#### 1.7.2. Government's Positive Attitude

In his acceptance speech the Preliminary Census Report in January 1986, His Excellency the President made the following statement:-

"From your account of this great undertaking, Mr Chairman and commissioner and from the experience we have gained, it would now appear that there is need for some permanent arrangement to be made for the collection and up-dating of population statistics as well as the co-ordinating of other activities connected with population data, to be taken only at ten yearly intervals. My government will give serious consideration to this while the National Population Census Secretariat continues its work on the 1985 Census".

### 1.7.3. Public Relations

Because the Census Commissioner/Chairman attached great importance to relations with the public, a Public Relations Co-ordinator was appointed very early in the census exercise. This was an innovation. In his view, the conduct of the various activities connected with the Census would be made easier if the people are made to identify with and have a sense of belonging and commitment to the Census.

It was in furtherance of this view that Census Commissioner/Chairman and his staff travelled extensively, discussing and explaining the Census and its organisation to important and influential personalities and Institutions. In the course of these visits, the Census Commissioner/Chairman and staff spoke to Paramount Chiefs, Headmen, Religious Leaders, Heads of Government Departments. Members of the Business Community and members of the Diplomatic Corps and other Opinion Leaders.

Invariably, a lasting and fruitful relationship was formed which not only facilitated the work of Census Personnel but made it easier for them to ask for and be given assistance in procuring materials and services necessary for Good Census Operations. Examples are many but the one worth mentioning was the result of personal contacts made by the Census Commissioner/Chairman with the Government of the Federal Republic of Germany through its Embassy in Freetown that resulted in the free provision of the printed questionnaire books and other very useful stationery and satchels for the Census.

### 1.7.4. Special Areas

In the Mining areas and International Market Centres where much problem was anticipated, the enumeration in most of these areas went on extremely well. The Chiefs, Tribal Authorities and the Census Personnel were commended for work well done, because most of the enumerators did not encounter much difficulty in penetrating even the exclusive domain of illicit miners. Once again, the easy access could be attributed to the marvellous work of the publicity team and the mass media. However, the possibility of some people who through sheer ignorance thought it prudent to hide themselves and to avoid coming into contact with enumerators was not ruled out. The percentage of such category of people was no doubt infinitesimal.

There was a consensus of opinion that this census was unique in that indigenous persons were appointed to serve as Census Personnel within their own areas or localities they know well. Most of them were quite familiar with the terrain of their assigned enumeration areas.

## 1.8. Conclusion

From the above details the 1985 Census of Population and Housing has provided a wealth of information for Government Administration and National Development and Economic and Social Planning.

A Team of Consultants all of them Sierra Leonean have looked at the results in greater detail and come up with Analytical Reports. In the meantime this information will be made available up to the chiefdom level for individuals/organizations who want such information.

More importantly the census results are now finally out and the National Population Census Secretariat should start making provision immediately for the 1996 Census which is expected will be an even better census and whose results will indicate an accelerated improvement for the welfare of our people.

APPENDIX 1.1 - THE CENSUS QUESTIONNAIRE

**THE CENSUS QUESTIONNAIRE**

**No** 243795 **STREET:**\_\_\_\_\_ **CHIEFDOM NAME:**\_\_\_\_\_ **EA** **LOCALITY:**\_\_\_\_\_ **HOUSE SERIAL No. H/H No.**

**NPC 1: 1985 NATIONAL POPULATION CENSUS (PILOT CENSUS) HOUSE No.**

ALL PERSONS								ALL PERSONS 5 YEARS & OVER		ALL PERSONS 10 YEARS AND OVER								FEMALES AGED 10 TO 50 YEARS			
NAME	RELATIONSHIP	SEX	AGE	ORPHANHOOD	PLACE OF BIRTH	NATIONALITY	PLACE OF RESIDENCE A YEAR AGO	EDUCATION		MARITAL STATUS	TYPE OF ECONOMIC ACTIVITY		OCCUPATION	INDUSTRY	HOW MANY CHILDREN HAVE BEEN BORN ALIVE TO THIS ..... WHO ARE			PARTICULARS OF HER MOST RECENT BRITH			
								SCHOOL ATTENDANCE	HIGHEST CLASS PASSED												
What are the names of all persons who spent last night here? (Record names of all young and old starting with the head of household?)	What is ..... relationship to the Head House-hold?	1. M 2. F	Age at last Birth day (If under one, enter 00)	Is ..... mother alive?	In which Chiefdom/ country was ..... born?	What is ..... nationality ?	Where was ..... living a year ago? 0000 Not born 0001 in the building 0002 Elsewhere in this locality	Has ..... ever attended school?	What is the highest class that ..... attained	Is ..... Married?	During the past one month did ..... Work regularly for cash?	What did ..... Do?	What kind of work did ..... Do?	What is the main product/ service/ activity of ..... place of work?	Living in this house	Living elsewhere	Dead				
	1 Head 2 Spouse 3 Son/ Daughter 4 Brother/ Sister 5 Nephew/ Niece 6 Parent 7 In-law 8 Grandchild 9 Other..... (Specify)			1 Yes 2 No 3 Don't know				1 Never attended 2 Still attending school 3 Left school (If 1, go To P12)	1 Primary 2 Secondary 3 University	1 Never married 2 Engaged 3 Married 4 Separated 5 Divorced 6 Widowed	Yes 1 For some one else Yes 2 For self 3 No (if 1 or 2, go to P15)	1. House wife 2. Student 3. Retired 4. Family Farm 5. Periodic piece job 6. Look-ing for Work 7. Others (if 1 to 5, go to 17)							Year	Month	Is the child Alive?  1 Yes 2 No
P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16	P17	P18	P19	P20	P21	P22
	15 16	17	18	20	21	25	29	33	34	36	37	38	39	42	45	47	49	51	53	55	56

**HOUSEHOLD QUESTIONS**

What kind of toilet facilities do you have?	What is your principal source of water supply	What is your principal supply of fuel for:-		Materials of construction of dwelling units			How was this dwelling acquired?	Comments	
		COOKING	LIGHTING	ROOF	WALL	FLOOR			
1 Communal _____ PRIVATE 2. Flushed 3. Pit 4. Bucket 5. Bush/River 6. Other.....	1. Piped indoors 2. Public Tap 3. Ordinary Well 4. Mechanical Well 5. River/River bed 6. Other.....	1. Electricity 2. Gas 3. Kerosene 4. Charcoal 5. Wood 6. Other .....	1. Electricity 2. Gas 3. Kerosene 4. Candle 5. Charcoal/Wood 6. Other .....	1. Concrete/Tiles 2. Asbestos 3. Zinc 4. Thatch 5. Other.....	1. Stone/Cement/ Tiles 2. Asbestos 3. Zinc 4. Plank 5. Mud 6. Poles/Reed 7. Other.....	1. Stone/Cement/Tiles 2. Wood 3. Mud 4. Other.....	<b>OWNER</b> 1. Purchase 2. Constructed 3. Inherited <b>EMPLOYER PROVIDED</b> 4. Government 5. Private <b>RENTING</b> 6. Government 7. Housing Corporation 8. Private 9. Other .....		..... <b>ENUMERATOR</b> DATE:..... ..... <b>SUPERVISOR</b> DATE: ..... <b>FIELD OFFICER</b> DATE:.....
H1	H2	H3	H4	H5	H6	H7	H8		



## CHAPTER 2

### THE LAND AND THE PEOPLE

G.T.TENGBEH

#### 2.1 Location and History.

Located on the west coast of West Africa, Sierra Leone is a country with an area of about 72,000 square kilometres. It extends from latitude 7 degrees north to 10 degrees north, and from longitude 10 degrees west to 14 degrees west. It is bordered on the north and north east by the Republic of Guinea and on the east and south east by the Republic of Liberia. On the west and south west, the country is washed by the Atlantic Ocean (Figure 2.1 )

Sierra Leone's earliest known contact with Europe was in the fifteenth century during the Portuguese voyages of exploration. On one such voyage to discover a sea route to India they reached the coast of the Sierra Leone Peninsula. Because of the high coastal mountain ranges that resembled lions they called the area Sierra Lyoa meaning Lion Mountains. Over time this has been modified to its present name of Sierra Leone.

Contact was accentuated in trade, with manufactured goods from Europe and in fruits, carvings and gold from the country. However, in the sixteenth century the trade took another dimension in the trade in human beings. In 1562 the earliest known shipment of slaves was taken from the country into the Americas. A further strengthening of the European link with the country was made with the founding of a settlement for freed slaves in 1787. The first batch of 411 freed slaves were settled on land bought from King Tom of the Sierra Leone Peninsula. Administration of the settlement was under the Sierra Leone company which was founded in 1791 with the aim of re-establishing legitimate trade with the inhabitants. With the abolition of the slave trade and with further pressure from individuals and organisations in Britain, the British Government took direct responsibility for the new settlement. In 1808 the British Government declared a crown colony over the new settlement. This move was intended to facilitate the enforcement of the Slave Trade Abolition Act.

British rule covered only the Colony which comprised the Freetown Peninsula and Bonthe Island. The largest part of the country referred to as the hinterland was in the hands of traditional rulers. However, in 1896 a Protectorate was declared over the rest of the country; this was followed two years later by the Hut Tax War.

Today the country is a republic within the British Commonwealth of Nations having gained independence from Britain on the 27th April 1961. It gained republican status in April of 1971 and then adopted a one party system of government in 1978. In 1991 it reverted to multi-party system of politics. Sierra Leone belongs to many international organisations such as the United Nations of which she is the 100th member, the Organisation of African Unity (OAU), the Non-Aligned movement and the Economic Community of West African States (ECOWAS).

#### 2.2 Physical Regions

The structural variations in the rocks of the country have produced distinct variations in relief which are similar over large areas. On this basis, Sierra Leone can be divided into four physical regions: The Freetown Peninsula raised beaches and hills, the Coastal Plains, the Interior Lowlands and the Interior Plateaux (Figure 2.2).

The Freetown Peninsula consists mainly of three roughly parallel arcuate range of highlands which are relatively narrow but stretch for about 37km south of Freetown, extending from just east of Goderich (near Lumley) and continuing first south eastward, then southward towards Kent, and into the nearby Banana Islands (Figure 2.3). The hills and mountains in these highlands rise impressively from 200 - 1000m above the low-lying narrow coastal areas which are mainly raised beaches.

The slopes of the numerous peaks, mostly more than 600m (Picket Hill 900m) are steep-sided and rugged with v-shaped valleys (gorges) occupied by plunging streams. The plunging rivers such as the Congo stream, George brook, Mountain torrent and Kissy brook maintain their courses on the uplifted lands by cutting down fast towards sea level. Only the northern slopes overlooking Freetown have been occupied residentially, with habitation elsewhere limited to the fringes of the raised beaches that almost surround the mountains. These raised beaches have been identified at four general levels coinciding with locations at Connaught hospital, the Cotton Tree and Law Courts, State House/Paramount Hotel and House of Parliament. These are all directly related to variations in sea-level during Quaternary times (Gregory, 1962).

Because of this distribution of relief features, the growth of Freetown has been restricted in the north by coastal swamps and in the south by the steep slopes of the mountains. The city therefore exploits the lower lying foot-hills areas and benches on the hillslopes. A similar limitation is imposed on the development of roads.

The Coastal Plains area is close to the coast and is composed of relatively recent sedimentaries which are called the Bullom series. These rocks have given rise to areas of either level or very gently undulating land and hence of low

Figure 2.1

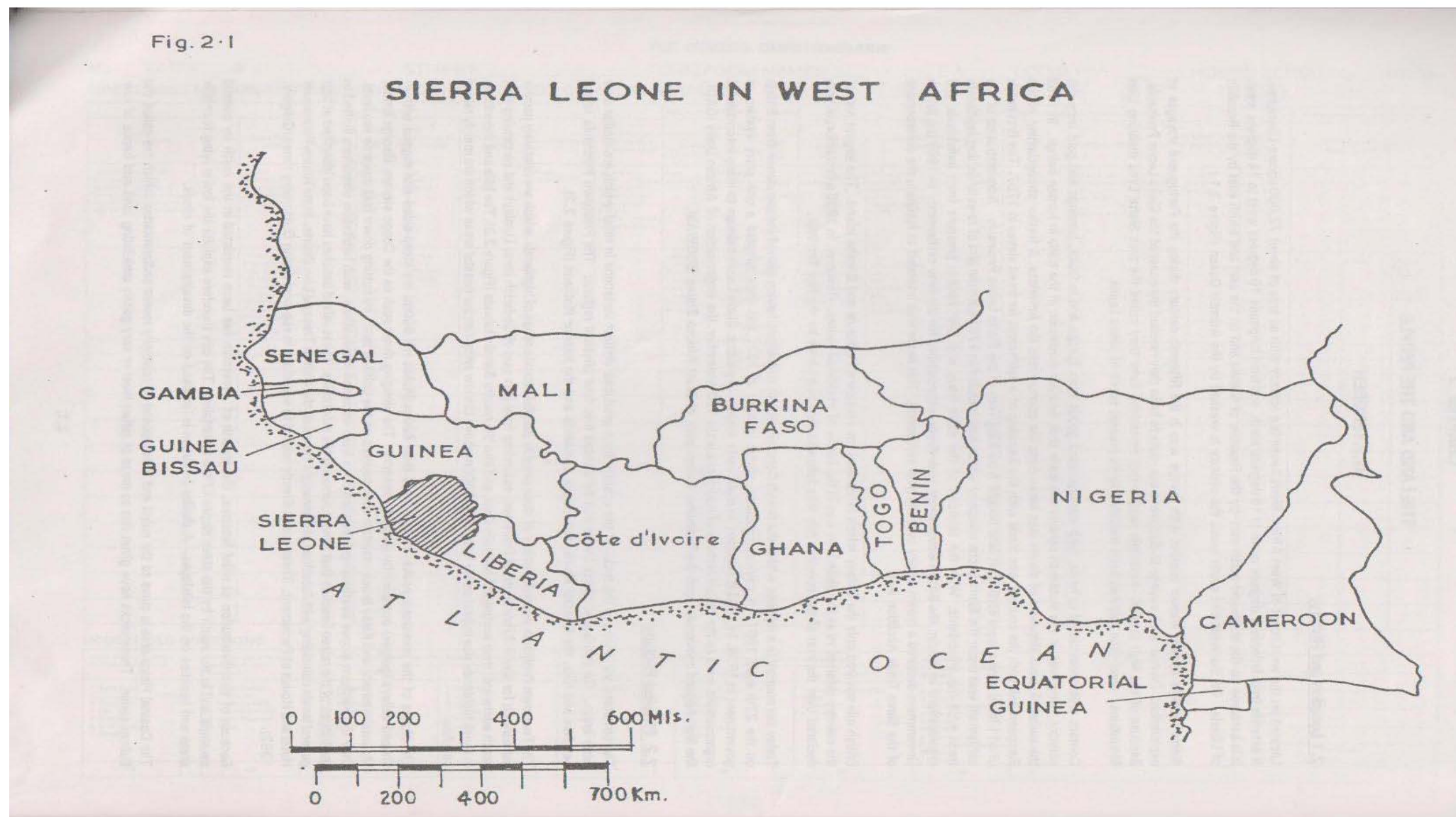


Figure 2.2

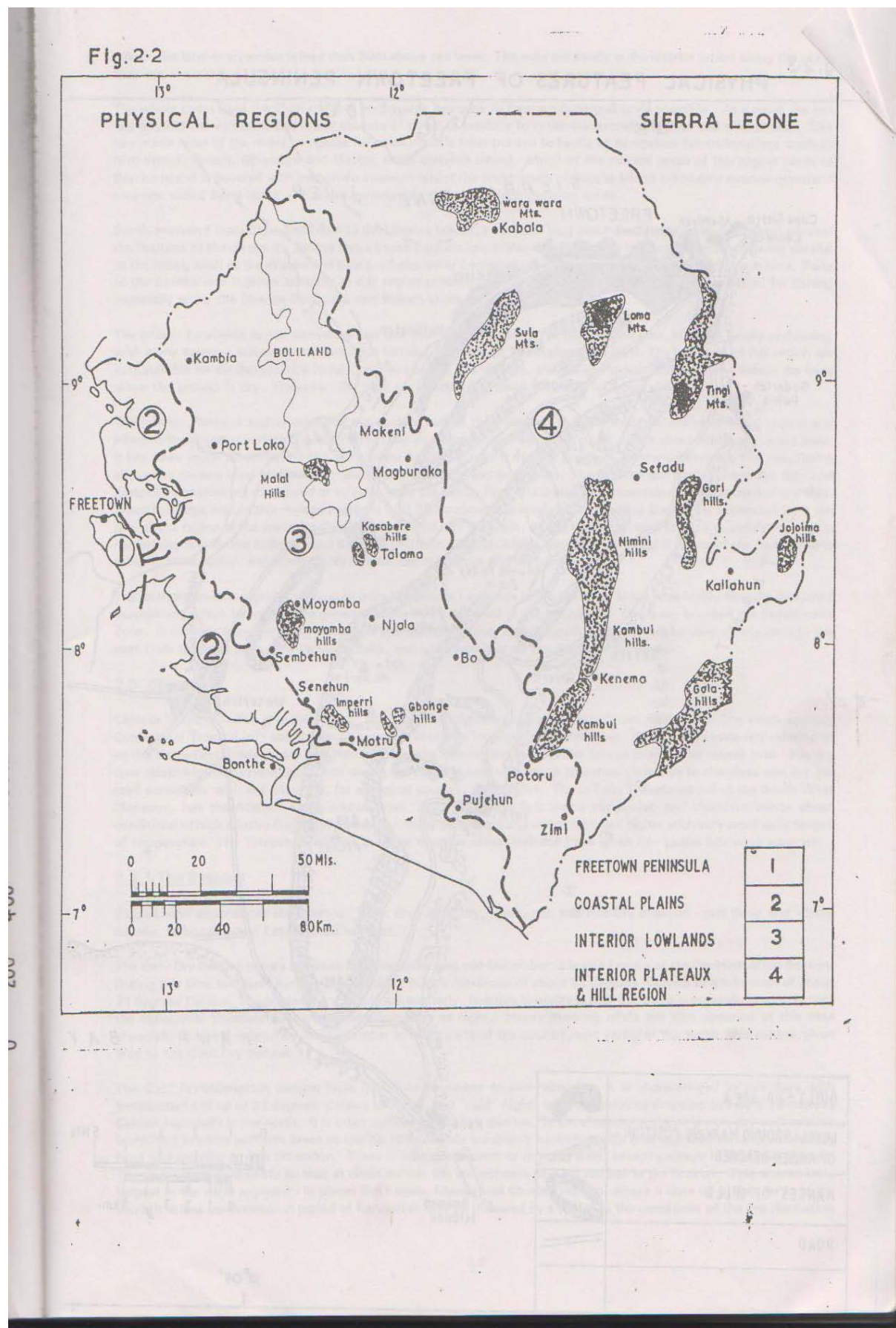
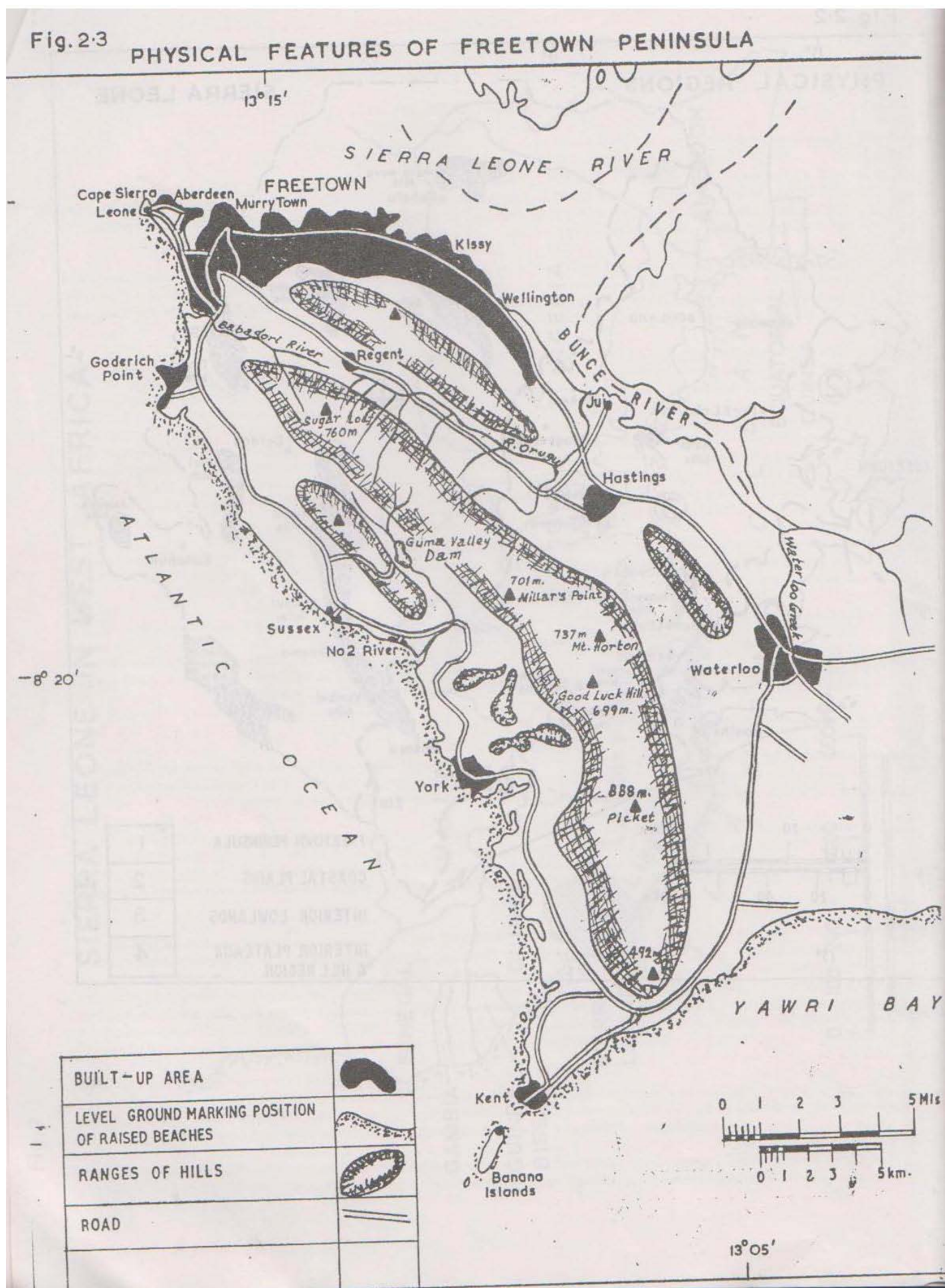




Figure 2.3



relief. The land everywhere is less than 30m above sea level. The soils are sandy in the interior whilst along the coast they are swampy.

The whole coast from the Sherbro River northwards has sunk to form a submerged or ria coastline. As a result the sea has entered the estuaries and lower courses of rivers to produce long narrow estuaries, inlets and tidal creeks. This has made most of the rivers navigable for small vessels from the sea to heads of navigation towns/locations such as Nitti Wharf, Potoru, Gbondapi and Matru, some distance inland. Much of the coastal areas of this region north of Bonthe Island is covered with mangrove swamps whilst the areas south of Bonthe Island are mainly riverine grassland swamps called Battii-lands. All these swamps do make good rice-growing areas.

South-eastward from Cape Saint Ann to the Liberian border, a series of long beach bars have developed which conceal the features of the ria coast. Behind these beach bars are lakes (Mape and Mawesi), lagoons and rivers running parallel to the coast, such as the Wanjei and Sewa, whose lower courses have been diverted by the series of beach bars. Parts of the Bonthe and Pujehun Districts in this region produce piassava for export. This region is also noted for fishing especially along the Shenge Peninsula and Bullom shore.

The Interior Lowlands region comprises just less than half of the country. Most of the area, which is gently undulating with many swamps suitable for swamp-rice farming, is less than 150m above sea level. The bolilands of this region are very suitable for mechanical rice farming as there are no tree stumps, and ploughing can easily be done before the rains when the ground is dry. However, the soils are infertile and need fertilisers for good yields.

The Interior Plateaux region occupies the eastern half of the country. It is the most extensive physical region and includes the greatest variety of landforms. It has a general level of 450m but much of it is about 300m above sea level. It has been much dissected by the main rivers flowing across it as they progress westward towards the sea. Rising above the general level of this region are a number of hills and mountains. The Kambui and Gori hills and the Sula and Kangari mountains are composed of schists, while the Loma, Tingi and Wara Wara mountains are composed of granites. There is a large area in this region, between 150-300m above sea level, called the Moa Basin. It is separated from the rest of the region in the north by the Kambui, Nimini and Gori hills. It is a relatively open low-lying undulating region comprising mainly the Kailahun and Kenema Districts. The soils here are very fertile and it is one of the best farming areas in the country, especially important for cocoa, coffee and oil palm produce.

The Interior Plateaux region is separated from the Interior Lowlands in the east by a 32km wide highly fluviially dissected escarpment which interrupts the general continuity in the relief of the landscape. This zone is called the Escarpment Zone. It extends from between Kamakwie and Bafodia to near Potoru south of Bo. It can be very clearly seen to the east from the road from Yele to Magburaka, and near Senehun on the Taiama - Bo road.

## 2.3 Climate

Climate in Sierra Leone is mainly due to the seasonal migration and pulsation of two air masses: The north easterly Continental Tropical (cT) and the south westerly Maritime Tropical (mT) air masses. The cT air is variously referred to as the North-East Trade Winds, the Harmattan or the Desert air mass and the Sahara desert is its source area. It is dry (low relative humidity) and dusty, hot during the day and cold at night. It therefore gives rise to cloudless and dry (no rain) conditions with hot days and, for a tropical country, cold nights. The mT air, sometimes called the South West Monsoon, has the Atlantic as its source area. Because of this it is warm and moist, and therefore brings about conditions of high relative humidity, cloudiness, rainy conditions and warm days and nights with very small daily ranges of temperature. The Temporal variation in these weather characteristics have given rise to the following seasons.

### 2.3.1 The Seasons

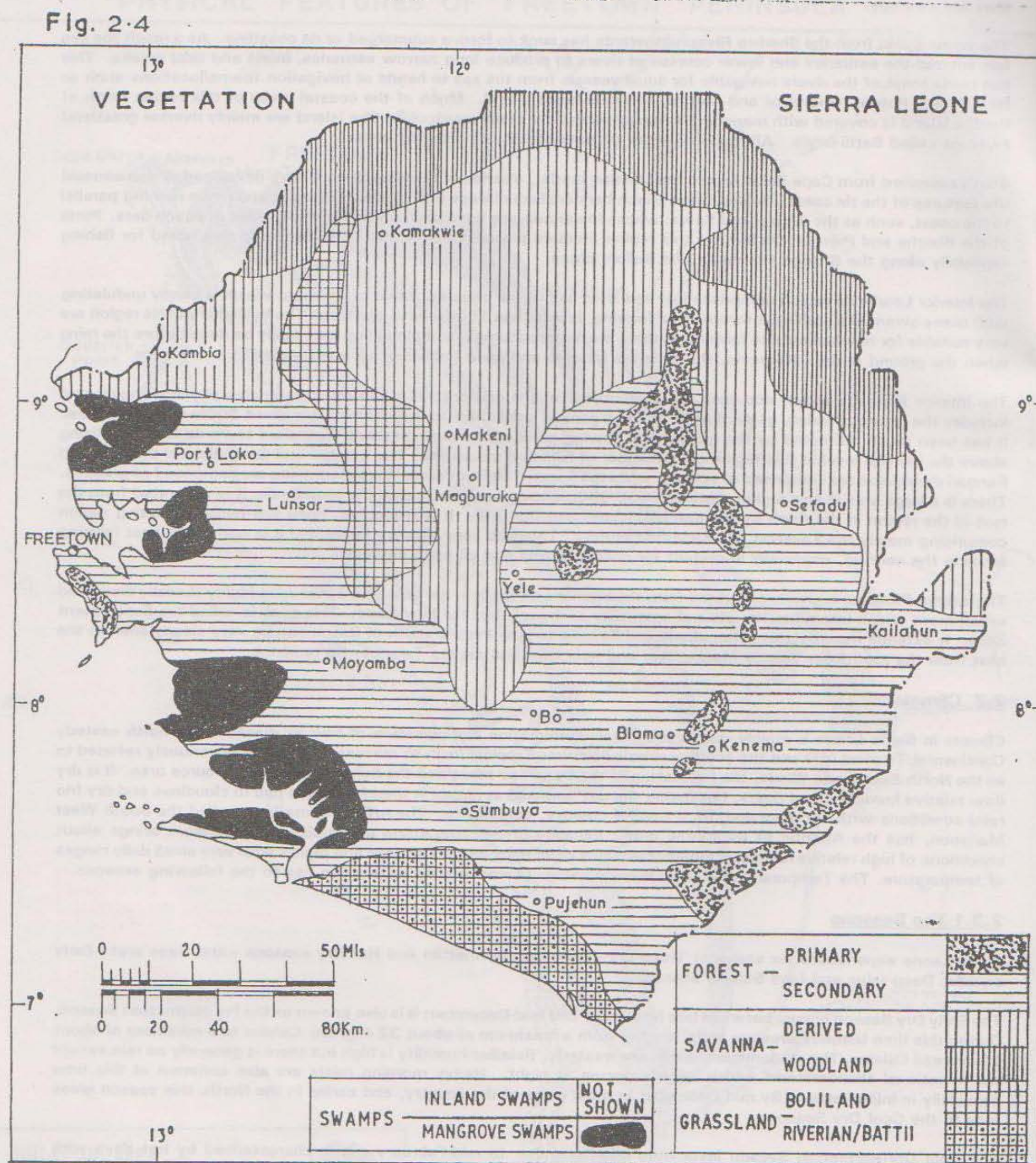
Sierra Leone experiences six seasons: Three dry - Early dry, Harmattan and Hot Dry seasons - and three wet - Early squalls, Deep rains and Late Squalls seasons.

The Early Dry Season occurs between late November and mid-December; it is also known as the Pre-Harmattan Season. During this time temperatures are high, ranging from a maximum of about 32 degrees Celsius to a minimum of about 21 degrees Celsius. The predominant winds are westerly. Relative humidity is high but there is generally no rain except the occasional thunderstorm which usually occurs at night. Heavy morning mists are also common at this time especially in inland areas. By mid-December in most parts of the country, and earlier in the North, this season gives way to the Cool Dry Season.

The Cool Dry/Harmattan Season lasts from mid-December to mid-February. It is characterised by hot days with temperatures of up to 32 degrees Celsius or above, and "cold" nights with temperature dropping to below 10 degrees Celsius especially in the north. It is often coldest just before sunrise. In the afternoons the air is very dry with relative humidities in some northern areas as low as 10%. Winds are mainly easterly at this time and they often blow steadily from mid-morning to late afternoon. There is little cloud cover or morning mist, except perhaps in the coastal areas. The air is sometimes dusty so that at about sunset the sun appears as a big red ball in the horizon. This season lasts longest in the north especially in places like Kabala, Musaia and Gberia Timbako, where it lasts up to February. In the south it is less continuous: A period of Harmattan may be followed by a return to the conditions of the Pre-Harmattan



Figure 2.4



Season, and then once more the Harmattan. Along the coast the Harmattan conditions may not be experienced due to the moderating maritime conditions.

The Hot Dry Season follows the Cool Dry Season and it lasts from mid-February to April or May when the first thunderstorms begin. For most of the country, this season therefore lasts until April whereas in the south east and the coastal areas it lasts up to late March and May respectively. This season resembles the Early Dry Season. Both days and nights are warm and relative humidity is very high; this makes it feel hot and sticky. The wind near the ground is mainly westerly. There is generally no rain, and morning mists, when they occur, are not as heavy as in the Early Dry Season.

The Early Squalls Season which lasts from April/May to July, is the first of the rainy seasons. In the east and south east of the country, squalls tend to occur in the early evening but in the west and central areas it occurs progressively later. They tend to extend from north to south in a line and so are often called line-squalls. This season is also warm and the air is often clear after a line-squall. A drop in the temperature takes place as a line-squall passes over a place, and so the nights often feel cool. This season gradually merges into the persistent rains as the number of line-squalls increases in late May and June.

The Persistent or Deep Rains Season lasts from July to September. At this time it is cloudy and damp. The weather is cool, the air being cooled by the rain and also because the cloud cover prevents the sun's rays from reaching the ground. This is also a time of frequent/persistent rains which are sometimes heavy but with very little or no thunder.

The Late Squalls Season is the last of the rainy seasons. It lasts from mid-September to mid-November. It is essentially similar to the Early Squalls except that during this time the squalls become progressively fewer as the season advances until it merges into the Early Dry Season.

## 2.4 Vegetation

The present distribution of vegetation in Sierra Leone has been influenced not only by factors of climate and soil but also, and probably mainly, by man. Much of the country is believed to have been once covered with primary forests (Cole, 1968; Clarke, 1969). At present the following vegetation communities can be distinguished: Forests, Savannas, Grasslands and Swamps (Figure 2.4).

Forests mainly include primary or tropical lowland rain forests and secondary or forest regrowth which is sometimes called Farming Bush (Gwynne-Jones et al, 1978). The tropical lowland rain forest at present covers only about 5% of the land area of Sierra Leone (Davies, 1987). They are found mainly in Forest Reserves in the Freetown Peninsula Hills and at other locations in the eastern half of the country such as: the north east of Magburaka (north west of Koidu), between Bo and Magburaka just east of Yele, south of Sefadu, the Kambui and Gola Hills and an area south of Buedu on the Liberian border. The forests are very rich in flora and fauna but their exploitation for timber, farming and firewood, has not been managed in a systematic way (Davies, 1987). Consequently they have been depleted and have shrunk to their present size. The vegetation is characterised by densely growing trees usually more than 60m tall with large and high buttress roots. There are usually two or three tiers of vegetal growth beneath this with an undergrowth of climbers, mosses and lichens.

Where primary forests have once been cleared (either for timber, farming or fuelwood) and left to regrow, we have secondary forests. If they are left to mature, they are hardly distinguishable from primary forest because all the indicator tree crop species found in younger secondary forests disappear (Cole, 1968). However, because of increased economic activities, the fallow periods of these forests have become considerably shorter than 15 years. Consequently the secondary forests have given way first to farm bush and then to forest-savanna mosaic. The former is the most extensive type of vegetation (more than 55% of the country) and covers most of southern Sierra Leone. The forest-savanna mosaic is essentially a mixture of patches of forest and grasses and are usually found within a short distance of the main roads because they are more accessible than distant secondary forest areas. The secondary forest has a floral list made up of an abundance of quick-growing 10-12m tall trees. Other trees such as old crop trees and a few large trees left standing when an area was farmed, are also a common characteristic. The understorey consists mainly of herbs, shrubs and thicket (Cole, 1968).

Two broad categories of savanna vegetation can be distinguished in Sierra Leone: Derived savanna and woodland savanna. Derived savanna vegetation occupies the Pepel-Port Loko-Masiaka triangle. In the ecotonal regions between the forests and savanna where the climax vegetation is moist forest, the extreme influence of man in cultivation and of fire, has favoured the development of derived savanna woodlands rather than the development of moist semi-deciduous forests. If fire is excluded, the derived savanna consists mainly of non fire-resistant moist forest tree species. Derived savanna is characterised by the abundance of oil palm trees, the presence of coppiced forest shrubs and other common secondary forest trees (Cole, 1968). Normally, the undergrowth is dominated by a patchwork of tall grasses and weedy secondary forest herbs. In heavily farmed areas where annual fires are frequent, fire-resistant species such as Lophira alata, a fire climax, become dominant in association with tall grass cover.

As the wet season becomes shorter (6 months or less), with low mean annual rainfall values (less than 2000mm) and severe harmattan (Low relative humidities), grasslands of the South Guinea type become the dominant vegetation. This vegetation occupies mainly the north west, north and north east of Sierra Leone stretching from north of Kambia through Musaia to north of Sefadu. In general, in the south this vegetation is characterised by a fairly closed canopy of woodland with grasses, whilst in the north these are replaced by other species in more open savanna grassland (Cole, 1968).

Two categories of grasslands can also be distinguished in Sierra Leone. The Boliland grasslands and the Riverine grasslands. The Boliland grasslands stretch from Yonibana to Batkanu and extend south to just north of Taiama. Boliland is a local term in Sierra Leone for seasonally flooded saucer-shaped depressions covered with grasses of medium height. They are a common feature in tree savanna regions (Cole, 1968).

The Boliland grasslands comprises different plant communities located at different topographic features within the Bolis (Cole, 1968).

Medium height grass savanna without trees or shrubs are found to grow in the slough of the saucer of the boli depression. On the gentle slopes, there is shrub savanna which merges with *Lophira* tree savanna on the uplands. The levees on the banks of the rivers are covered with fringing forests. The grass in the depression is 1.5-2m high and is dominated by the thatch grass *Anadelphia leptocoma*. The Boliland grasslands of Bombali, Tonkolili, Port Loko and Kambia Districts have been mechanically cultivated for rice since 1951 (Cole, 1968).

The Riverine Grasslands or Battii lands are found in extensive areas of floodplains along many large rivers. They are however best developed in the floodplains and near the mouths of two of the largest rivers in Sierra Leone - The Sewa and Wanjei rivers south of Pujehun and Sumbuya. It covers an area of more than 1500sq.km, and lies parallel to the sea near the south coast but is separated from the sea by the parallel sandy beach ridges of the Turner's Peninsula.

Near the mouth the riverine grasslands predominate right from the banks of the rivers extending inland for a few kilometres on the flood plains that merge into the uplands. In the floodplains at the upper reaches of the Sewa river, cane grasses are common. Where flooding is more prolonged near the mouth, there are tall sudd grasses which appear to float in the floodwaters. As the floodwater recedes during the dry season, shorter floating grasses (1-2m tall) appear in the swamps. Other herbaceous plants are mainly floating aquatic weeds, water ferns and halophytes.

Generally, two swamp vegetation types exist in Sierra Leone. These are the freshwater inland swamps and mangrove swamps. Freshwater inland swamps are found in low-lying areas near rivers and streams mainly within closed forest communities. They are particularly well developed in the forests on the granite acid gneisses of the Kenema Assemblage. These swamps are commonly cultivated with rice but only during the wet season even though they remain damp and waterlogged throughout the dry season. At present, in some areas, such as Bo, where improved farming techniques have been used, these swamps are cultivated throughout the year. The vegetation consists mainly of broad-leaved evergreen forest trees 10 - 18m high and the herbaceous flora is characteristic for such waterlogged areas. In most areas ferns, grasses, shrubs and raphia palms form the dominant vegetation but in other areas raphia and rattan palms interspersed with forest trees are more common.

Mangrove swamps form the most typical vegetation of the coast of Sierra Leone. They are especially prevalent in creeks, deltas and lagoons in brackish and tidal waters where the vegetation declines in height away from the water's edge. It is composed mainly of evergreen forest trees which produce dense canopies. The red mangrove is the commonest tree. They can grow up to 20m or more high. They have a high calorific value and so are used very extensively along the coastal areas as firewood and to produce charcoal. In some areas, such as north of Freetown between Pepel and Rokupr, the mangroves have been extensively cleared for rice cultivation.

## 2.5 Wildlife

Hunting and trapping of wildlife has always occurred all over Sierra Leone. Villagers trap animals around farmlands whilst local hunters hunt game mainly for local consumption. Sometimes nets are used to hunt some smaller mammals. However before the current invasion of the eastern and southern provinces of Sierra Leone by Liberian rebels, commercial gangs hunted-out forest and farm bush areas in a more systematic way. Much of the bushmeat was exported to Liberia to earn dollars. Sometimes groups of Liberian hunters would be granted permission by the local chiefs in Sierra Leone to hunt mainly monkeys for days or weeks. Obviously if this kind of hunting remains unchecked animal populations will be eliminated as has already happened in parts of Liberia. As Davies (1987) points out, Sierra Leone stands alone compared to her neighbours, Liberia, Cote D'Ivoire and Ghana which have all set aside rainforest areas to preserve their natural heritage. Until the Outamba-Kilimi National Park, the Tiwai Game Sanctuary and the Mamunta-Mayoso Game Sanctuary came into being, the only protected areas for wildlife were four Forest Reserves: Freetown Peninsula Hills, Kangari Hills, Loma mountains and Tingi Hills (Davies, 1987). Here hunting without a license was prohibited. It is however common knowledge that illegal farming and hunting have been going on in most if not all of these areas. Recommendations have been made to set aside parts of our forests either as Strict Nature Reserves or as National Parks (Davies 1987).

## 2.6 Soils

Soils in various parts of Sierra Leone differ in their physical and chemical characteristics and hence in their productivity. Odell and Dijkerman (1967) have divided Sierra Leone into 16 soil provinces or physiographic areas within each of which the soil forming factors are reasonably constant or vary in a well defined pattern. However these 16 provinces can be grouped into the following 7 broad types: Soils of the Freetown Peninsula, Soils of the Beach Ridges, Soils of the Mangrove swamps, Soils of the Alluvial or Riverine grasslands, Soils of the Interior Plains and Plateaux, soils of the Moa Basin and Soils of the Boliland (Figure 2.5).

The soils of the Freetown Peninsula have formed from the ferromagnesian norite and gabbro rocks; they are therefore rich in iron. The high rainfall and pronounced dry season provides an optimum environment for the formation of plinthite which is abundant in the form of gravel, boulders or hardpan. The steep slopes are characterised by very stony and shallow soils over bedrock. On the footslopes of the mountains, soils have developed that have less than 15cm of surface soil over a hard impenetrable, highly indurated plinthite sheet. The latter is formed from the iron present in seepage water (Odell and Dijkerman, 1967). In many of the valleys, areas of thick gravel-free soils are present. These colluvial soils are extensively and intensively used especially for vegetable gardening.

The soils of the Beach Ridges occupy the southern sandy beach ridge and lagoons coast of Sierra Leone which include part of Sherbro Island, Turner's Peninsula and a small coastal strip south of Shenge. The soils vary according to the age of the ridge formations. The ridges closest to the sea are the youngest and so they show little soil development. On the older beach ridges two kinds of soil have been identified (Odell and Dijkerman 1967): Soils with an illuvial iron and humus B horizon, and soils with no illuvial horizon and with very gradual soil horizon boundaries. Both soils are well drained and very infertile with extremely low water-holding capacities. They are consequently unsuitable for most agricultural crops although coconuts and cassava may be exceptions.

The soils of the Mangrove swamps have formed in brackish water environments from recent marine and estuarine sediments. Parts of these swamps are composed of very poorly drained soils which are waterlogged throughout the year and never dry out. These soils are known as



acid sulphate soils. Other parts of the swamps have firmer, nonfibrous soils that are more sandy. Upon empoldering and drying these soils do not develop acid conditions. Most of the soils of these coastal swamps are fertile and can be used for swamp rice cultivation.

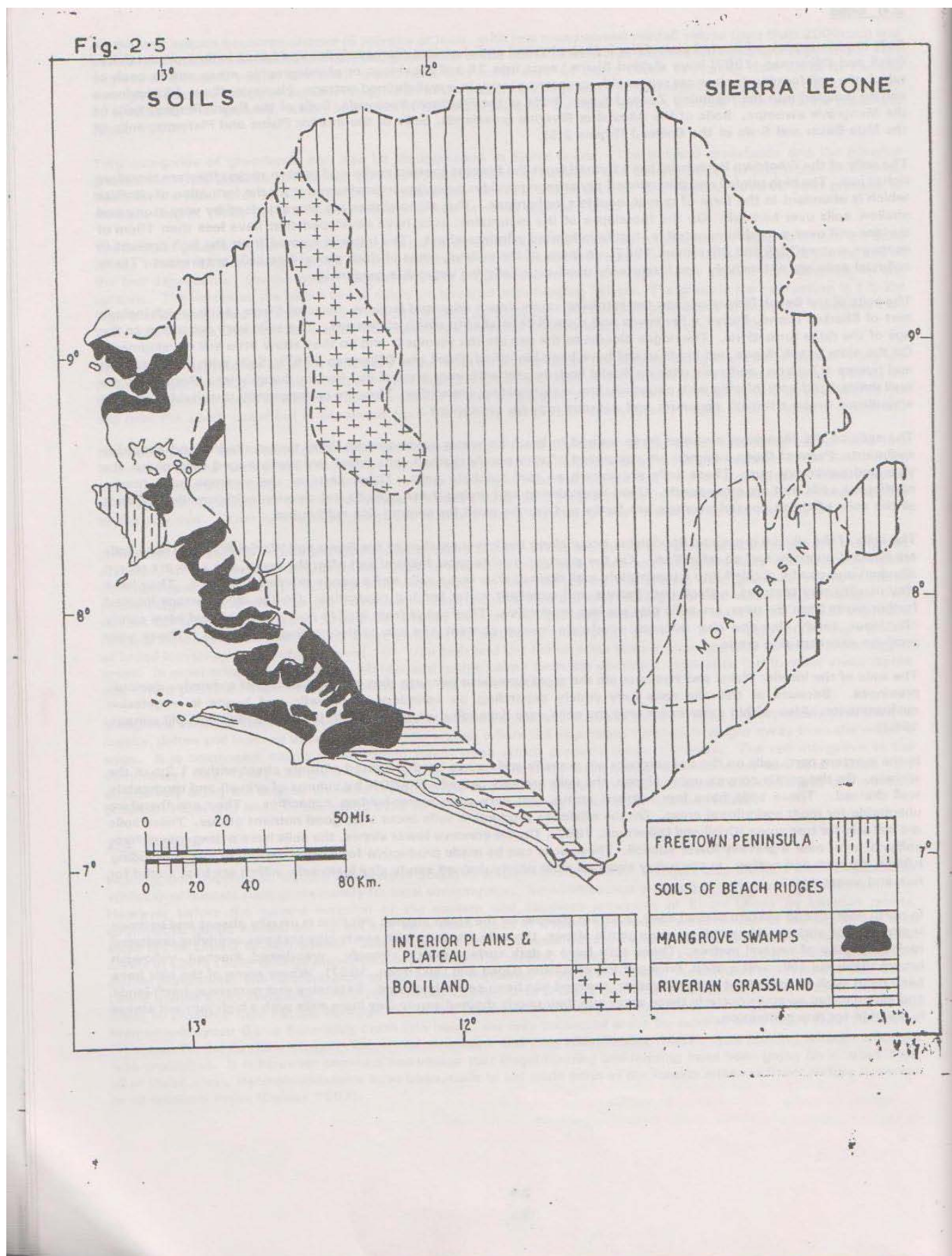
The soils of the alluvial grassland floodplains occur along the lower reaches of the Sewa and Wanjei Rivers. These soils are flooded annually and so refertilised. On the younger river terrace, located just after the levee, the soils are recent alluvium and can be divided into a moderately well drained river levee soils and a poorly drained basin soil. They have clay or silty clay textures, a thick dark humus and excellent water holding capacities. On the older terrace located further away from the river, are soils that are less productive. They range from well to poorly drained and have sandy clay loam, sandy clay and clay textures, moderate humus content and low water-holding capacities. These soils produce excellent rice crops.

The soils of the Interior Plains and Plateaux are the most extensive because they occur in the most extensive geologic provinces. Because of this the soils vary widely depending on variations in climatic and hence in vegetation environments. Also within a particular area the soils vary depending on topographic location (Odell and Dijkerman, 1967).

In the western part, soils on the flat summits are gravelly and have a hard indurated plinthite sheet within 1.2m of the surface. On the gentle convex upper slopes, the soils are very gravelly (50-80% by volume of gravel) and moderately well drained. These soils have low nutrient status and very poor water-holding capacities. They are therefore unsuitable for most agricultural crops. On the hillslopes productive soils occur with good nutrient status. These soils are suitable for tree crops (Odell and Dijkerman, 1967). On the concave lower slopes, the soils have a deep gravel-free, colluvial layer over a gravelly lower subsoil. These soils can be made productive for a great variety of crops including rubber, oil palm and coffee. In the valley swamps exist poorly drained sandy clay loam soils which are best suited for rice and vegetables.

In north eastern and eastern Sierra Leone, soils are shallow on the steep slopes. Plinthite is usually absent and bedrock is close to the surface. However on more gentle slopes, the soils are deep with sandy clay textures overlying unaltered rock to depths of several metres. These soils have a dark surface over a strongly weathered, leached, yellowish brown upper subsoil, over a deep, brick-red lower subsoil (Odell and Dijkerman, 1967). Where some of the hills have been used such as for upland rice cultivation, the land has been severely eroded. Extensive and numerous batti-lands and inland valley swamps occur in these areas and their poorly drained sandy clay loam soils with a high nutrient status is suitable for rice cultivation.

Figure 2.5



In south eastern Sierra Leone, soils are also closely correlated with topography. On the dissected uplands, soils are very gravelly and dominate the gentle convex slopes. On the flat summits, soils have a shallow indurated plinthite sheet. On the lower concave slopes soils usually have a thick gravel free layer over soft plinthite nodules. In the bottomlands, the soils are gravel free and poorly drained and can be made very productive for rice. On the river banks are the moderately well drained and silty Moa soils. These soils are fertile with good water-holding capacities and can be used for a great variety of agricultural crops. These soils are the best for cocoa in Sierra Leone.

The soils of the Bolilands are, in general, quite similar to those of the Rokel River series under secondary bush vegetation. These soils are poor and have abundant soft plinthite in the subsoil. Consequently, use of fertilisers is essential for increased rice yields.

## 2.7 Drainage and Water Resources

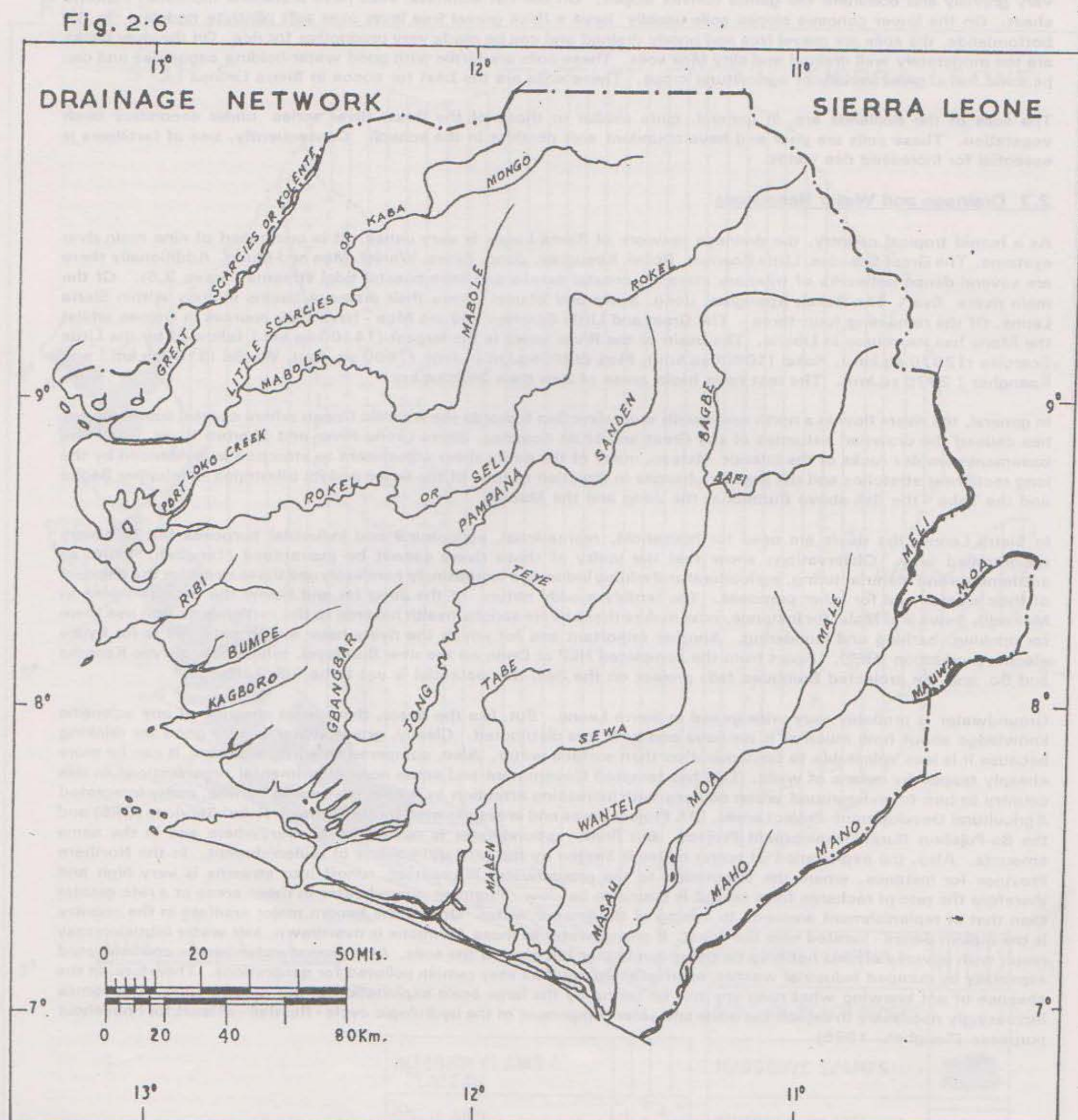
As a humid tropical country, the drainage network of Sierra Leone is very dense. It is composed of nine main river systems. The Great Scarcies, Little Scarcies, Rokel, Kpangbar, Jong, Sewa, Wanjei, Moa and Mano. Additionally there are several dense networks of tributary streams, coastal creeks and intra-coastal tidal streams (Figure 2.6). Of the main rivers five - The Rokel, Kpangbar, Jong, Sewa and Wanjei - have their drainage basins entirely within Sierra Leone. Of the remaining four, three - The Great and Little Scarcies and the Moa - have their sources in Guinea whilst the Mano has its source in Liberia. The basin of the River Sewa is the largest (14100 sq.km.) followed by the Little Scarcies (12870 sq.km.), Rokel (10600sq.km.), Moa (9200sq.km.), Jong (7500 sq. km), Wanjei (3100sq.km.) and Kpangbar (2970 sq.km). The rest have basin areas of less than 2600sq.km.

In general, the rivers flow in a north east-south west direction towards the Atlantic Ocean where coastal submergence has caused the drowned estuaries of the Great and Little Scarcies, Sierra Leone River and Sherbro River. Over the basement complex rocks of the Interior Plateau, many of the rivers show adjustment to structure as evidenced by the long rectilinear stretches and the angular changes in direction of flow of the Sewa and its tributaries - the upper Bagbe and the Tabe - the Seli above Bumbuna, the Jong and the Mabile.

In Sierra Leone, the rivers are used for household, recreational, agricultural and industrial purposes but in a very uncontrolled way. Observations show that the purity of these rivers cannot be guaranteed (Tengbeh, 1986) as settlements and manufacturing, agricultural and mining industries increasingly carelessly use these rivers for the disposal of their wastes and for other purposes. The terribly muddy nature of the Jong (at and below the Bauxite mines at Mekanji), Sewa and Male, for instance, now makes these rivers serious health hazards to the settlements that use them for drinking, bathing and laundering. Another important use for which the rivers have a high potential is for hydro electric production (HEP). Apart from the completed HEP at Dodo on the river Bundoyei, which now serves Kenema and Bo, and the projected Bumbuna falls project on the Seli, this potential is yet to be fully utilised.

Groundwater is probably very widespread in Sierra Leone. But, like the rivers, there is an absence of any scientific knowledge about how much of it we have and how it is distributed. Clearly, groundwater is very good for drinking because it is less vulnerable to contamination than surface water. Also, compared to surface waters, it can be more cheaply tapped by means of wells. This has tempted Government and some non-governmental organisations in this country to turn to underground water sources with increasing attention as is now the case in Bonthe, many Integrated Agricultural Development Project areas, IDA Project areas and areas assisted by the Catholic Relief Services (CRS) and the Bo-Pujehun Rural Development Project. But firstly, groundwater is not available everywhere and in the same amounts. Also, the exploitation of water tables is limited by the rate and volume of replenishment. In the Northern Province for instance, where the temptation to tap groundwater is greatest, runoff into streams is very high and therefore the rate of recharge from rainfall is bound to be slow. Pumping groundwater in these areas at a rate greater than that of replenishment amounts to mining of the ground water. One of the known major aquifers in the country is the Bullom Series - located near the coast. If groundwater in these locations is overdrawn, salt-water intrusion may result with adverse effects not only on the groundwater but also on the soils. Also groundwater can be contaminated especially by dumped industrial wastes; such infected aquifers may remain polluted for generations. Therefore, in the absence of not knowing what risks we may be taking by the large scale exploitation of our groundwater, it becomes increasingly necessary to exploit the other and safer component of the hydrologic cycle - Rainfall - at least for household purposes (Tengbeh, 1986).

Figure 2.6





## 2.8 Administrative Divisions

The provinces and districts are unequal in size. The largest being the Northern Province which covers nearly one half of the country. Coincidentally the boundary between the Northern Province and the two other provinces is more or less a tribal divide separating the Temne and Koranko in the north from the Kissi and Kono in the south and east. The average area of a district in Sierra Leone is approximately 5950 square kilometres. The most extensive district is Koinadugu and the smallest is Kambia, both in the Northern Province. (Figure 2.7)

Further down the administrative hierarchy are the chiefdoms which are ruled by paramount chiefs who are elected from traditional ruling houses or families. There are at present 149 chiefdoms after splits and amalgamations, some occurring as recently as in 1974. The Northern Province has 53 chiefdoms, the Southern Province 52 chiefdoms with the Eastern Province making up the remaining 44.

In the Pujehun District (Southern Province), there were boundary changes in Panga Kabonde and Peje Chiefdoms between 1963 and 1974. In the same district a new chiefdom, Sowa, was created in 1974. The Eastern Province on the other hand did not experience many changes. In 1974, Jawi Upper and Jawi Lower were merged to form Jawi Chiefdom. In the same year, Peje West was split to form Peje West and Peje Bongre Chiefdoms. Chiefdom boundaries in the Northern Province have been much more fixed than in the other two provinces. In 1974 Tinkatupa-Makama Safroko in the Port Loko District was split to form Tinkatupa-Makama Safroko and Dibia Chiefdoms.

By and large there have been no other chiefdom boundary changes anywhere in the country after the 1974 spate of splits and amalgamations.

## 2.9 Settlements

Settlement can refer to any permanently occupied human dwelling place. Although an isolated occupied hut may be described as a settlement, the word more usually indicates a community of dwellings and associated buildings ranging from a hamlet to a conurbation.

Settlements in Sierra Leone are characterized by large villages and outlying hamlets. This set up was altered under European influence and the development of new economic systems: roads, mines and trade. Settlements in the country like in most other countries were built on sites that provided protection, food, source of good water, dry places and in most cases level ground. Depending on shape, alignment and sometimes lay out, settlements in the country are classified as either compact/nucleated, scattered, linear or grid-iron. This holds more for villages and other rural settlements. In pre-independence period, settlements were greatly influenced by the construction of the railway. New towns such as Bo, Makeni and Kenema on the railways grew at the expense of other settlements like Pujehun, Mano Salija and Sumbuya off the railways.

At another level mining, especially gold, in early times was a factor in the founding and expansion of towns like Mongeri, Bumbuna, Mabonto and Mbawomahun. Diamond and iron ore mining led to the growth of towns like Lunsar and the expansion of Tongo Field, Yengema and Koidu plus many other towns in the Sewa basin. In the last few years, rutile and bauxite mining in the Southern Province has led to the expansion of Mankanji, Moriba Town, Kpetema and Mogbemo townships. This phenomenon has led to the decline of outlying older settlements like Mano, Gbangbatoke and Kangahun. Several other settlements in the area have become moribund towns.

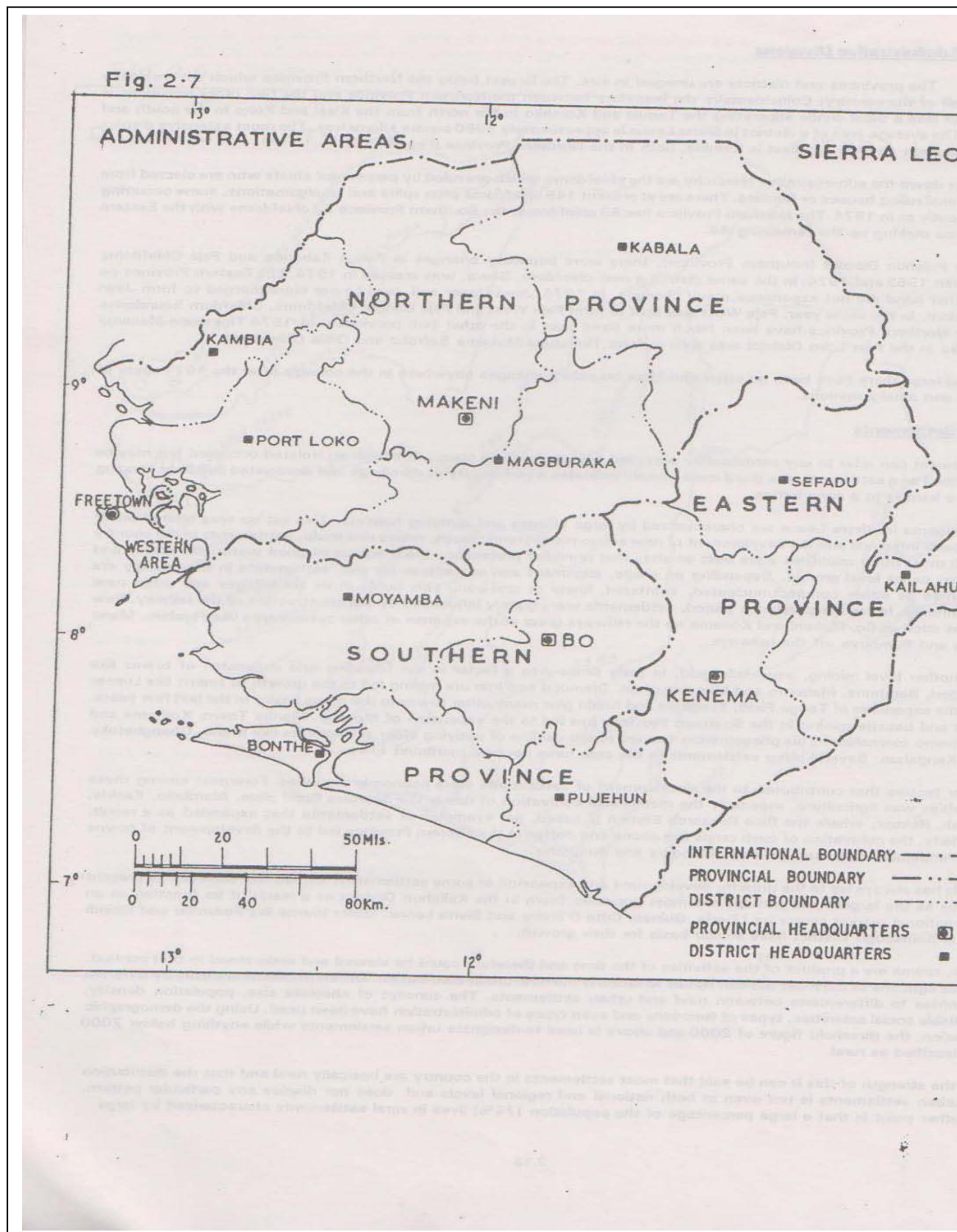
Other factors that contributed to the development of settlements were economic activities. Foremost among these activities was agriculture, especially the mechanical cultivation of rice in the Scarcies flood plain. Mambolo, Kasirie, Royak, Rokupr, where the Rice Research Station is based, are examples of settlements that expanded as a result. Similarly, the cultivation of cash crops like cocoa and coffee in the Eastern Province led to the development of towns like Pendembu, Kailahun, Baiwala, Manowa and Bunumbu.

Trade has always led to the growth, development and expansion of some settlements. Koinadu has achieved its present status as the largest and perhaps the most populous town in the Kailahun District as a result of its function as an international market centre for Liberia, Guinea, Cote D'Ivoire and Sierra Leone. Other towns like Fotumbu and Gbindi in the Koinadugu District have similar basis for their growth.

Also, towns are a product of the activities of the time and therefore could be viewed and understood in that context. In this light one of the most difficult issues to tackle is the rural-urban distribution. Different criteria are used by different countries to differentiate between rural and urban settlements. The concept of absolute size, population density, available social amenities, types of functions and even types of administration have been used. Using the demographic criterion, the threshold figure of 2000 and above is used to designate urban settlements while anything below 2000 is classified as rural.

On the strength of this it can be said that most settlements in the country are basically rural and that the distribution of urban settlements is not even at both national and regional levels and does not display any particular pattern. Another point is that a large percentage of the population (74%) lives in rural settlements characterized by large

Figure 2.7



villages. Urbanization is still low in the country. By 1974, only 5 towns had 20000 or more inhabitants. These urban centres constituted the centre of social, economic and administrative activities. The situation was not any different in 1985. During the inter censal period of 1974 and 1985, some settlements lost their urban status because of drop in population due to reduction in economic activities and at the same time some rural settlements emerged as urban centres. The distribution of population by size of settlement during the last three censuses is given in Chapter 6.

Besides Freetown, most of the settlements that are above 4999 inhabitants are either provincial or district headquarters like Bo, Makeni, Kenema and Koidu.

## 2.10 Ethnic Composition

Before now ethnic groups lived in distinct geographic locations. This was the accepted phenomenon after the wave of immigration of various tribes and groups into the country. However the situation has changed of late as a result of trade, the spread of education, medical facilities and the development of mining activities in certain areas. As a result the present spatial distribution of these tribes shows a great deal of geographic overlap.

There are 17 ethnic groups in the country. Out of this number there are about four major ones (Temne, Mende, Limba and Creole) and representatives of each of these groups are found in nearly all districts of the country. However, some groups are found to be much more dominant in some provinces than in others as the table below shows.

Table 2.1: Location of predominant ethnic groups in Sierra Leone

Predominant ethnic group/ tribe	Province
1. Temne	Northern
2. Mende	Southern and Eastern
3. Limba, Koranko, Susu, Fullah, Loko, Mandingo and Yalunka	Northern
4. Kono and Kissi	Eastern
5. Sherbro, Krim, Vai, Gola and Gallinas	Southern
6. Creole	Western Area

Compiled from: Sierra Leone in Maps, J.I. Clarke (Ed) 1969.

These groups or tribes dominate specific districts in the provinces in which they are found. In each of these areas there is homogeneity in farming and other cultural activities.

According to the 1963 census the Mendes and the Temnes form the highest proportion of the population, accounting for 30.9 per cent and 29.8 per cent respectively. In the last census much efforts were made to avoid questions on ethnic origin. This was meant to prevent any tribal or ethnic feud. This therefore makes it even more difficult to get up-to-date figures on the ethnic composition. Closely behind the Temnes and Mendes are the Limbas accounting for 8.4 per cent. The other tribes have been either overshadowed by the other major tribes or have lived side by side in mutual co-existence.

The Creoles, though forming only 1.9 per cent of the population, exert a very effective influence on both the social and political life of the country. This is largely due to their background; as descendants of freed slaves they were the first to have benefitted from western education and as a result hold important positions in the legal, medical, banking and educational fields. This factor may have led to the adoption of their language as the lingua franca of the country.

## 2.11 Economic Activities

Sierra Leone's economy is mainly rural based. The most important economic activities include agriculture, forestry, fishing and mining. In fact 1972 estimates have it that about 73 per cent of the population gain employment in agriculture, forestry, hunting and fishing (FAO, 1979).

### 2.11.1 Agriculture

Although relatively underdeveloped, agriculture is easily the most important economic activity in Sierra Leone. About 80 per cent of the population derive a livelihood from agriculture and other related activities. An estimated 23060 families are actively engaged in farming, operating on small holdings of an average of 4.4 acres. Nationally, agriculture provides a third of the gross domestic product (GDP), and 16 per cent of the export earnings of the country (FAO, 1979).

#### 2.11.1.1 Rice farming.

##### i) The Rotational Bush Fallow System:

This is a modification of the old shifting cultivation system. It differs from the latter in the sense that the farmers in this case are sedentary and it is only the farms that are rotated. This has the objective of allowing the soil to regain fertility through fallowing.

The system is characterized by the use of simple and locally made tools; it is mainly subsistence and labour intensive. The main crop grown in this system is rice. Other minor crops include cereals such as guinea corn and millet, tuber crops such as potatoes, cassava and yams, and legumes such as peas and beans. These crops are either grown as mixed crops or in gradations until the land is finally abandoned to revert to natural cover.

Rotational bush fallow is practised throughout Sierra Leone as upland rain-fed agriculture, but is more common in the interior lowlands and plateaux. About 64 per cent of all rice is produced under this system.

Upland rice which is the chief crop grown in this farming system is highly dependent on the time of onset and indeed on the length of the rainy season. The erratic nature of the rains in the country therefore is one of the major problems that contribute to decimating the already low yields of rice obtained in the uplands. Apart from the climate, soil fertility is also a problem that plagues upland rice cultivation. The soils of the country are predominantly latosols which are low in plant nutrients and also easily erodible. Moreover the rapidly increasing farming population has seriously affected the viability of this system by making the available cultivable land short in supply and thus creating a decline in the length of the fallow period and the subsequent draining away of nutrients thereby increasing the need for clearing of the young forest and the reuse of old plots with its attendant land degradational problems. Estimates show that the area under upland rice between 1965/66 and 1970/71 increased from 589250 acres to 640500 acres. A continuation of this trend is bound, in the long run, to lead to a drop in yield as fallow periods are reduced to the minimum necessary for maintaining soil fertility.

However, the few risks, low investment and the use of simple tools involved in this system have all contributed to making it the most adaptable system to the Sierra Leone environment and indeed to tropical areas in view of the socio-cultural and ecological characteristics typical of these environments. The system guarantees the provision of natural fertilizers through fallowing. Also, the burning provides potash which is important for grains such as rice and maize. What is needed is a slight modification of the system in view of the rapidly growing population and the need for adequate food supply.

#### ii) Flood/Tidal Land Farming System:

This is a farming system mainly concerned with the growing of rice (wet paddy) in the inland valley swamps, coastal flood plains, boli and batii lands. In this system there is no need for fallow since lost nutrients are replenished annually by fresh deposits of alluvium brought by the rivers and streams. Also there is little leaching of nutrients. This farming system is practised mainly along the Little and Great Scarcies river valleys in the Kambia District, and along the Sewa river valley in the Toma Bum areas. Boli and Batii lands are found principally in the north central part of the country in the Tonkolili District running down to the south central part in the districts of Kenema and Pujehun.

Lack of modern technologies to fully exploit these areas is a major hinderance to their effective utilization. The solution might be the introduction of improved and adaptable varieties and also the use of modern farming technologies. Also there is a need for the initiation of more research to look into the complex agro-ecological situations in these regions.

#### 2.11.1.2 Upland tree crop farming:

This is also known as plantation agriculture. It was introduced to Sierra Leone, like in other African countries, by the colonialists in their efforts to ensure a supply of agricultural raw materials to their home industries. Hence this is also referred to as cash crop farming since the crops grown are mainly for sale. This type of agricultural system is practised in various parts of the country-the type of crop grown in a region being primarily determined by the dominant soil, vegetation and climatic conditions. Traditional crops are coffee, cocoa and oil palm although recently, other crops such as mangoes, oranges, cashew nuts and tobacco have been added.

#### i) Cocoa

Cocoa is grown chiefly in the eastern part of the country, where environmental conditions of a long rainy season, humid air, damp and deep fertile soils with high water holding capacity and shelter from drying winds, are favourable for its cultivation. The most important districts are those of Kailahun and Kenema.

Cocoa plantations are mostly privately owned by local farmers who also practise rotational bush fallow. Holdings are generally comparatively small with an average of between 4 - 6 acres. The cocoa beans are processed locally and exported. Sierra Leone exports between 6000 and 7000 tons of cocoa beans per year.

Problems with cocoa farming are both natural and economic in nature. Natural problems include those caused by climate, soils, diseases and pests. Problems of marketing and the socio-economic status of the farmers are among the economic problems. As with other crops grown in the country, climate has a major impact on cocoa production. In particular, the dry harmattan winds dry the pods and the rain storms that characterize the early and late squalls seasons in Sierra Leone break the cocoa branches or large trees that may fall on the cocoa plants. The soils are not ideal for cocoa, being very much eroded and leached.

In addition cocoa is affected by diseases such as the Cocoa Swollen Shoot Virus (CSSV) and the Black Pod disease. The more prevalent in Sierra Leone however is the latter. This disease attacks the cocoa pods making them black before they mature. It is however being put under control by treating affected plantations with modern chemicals. Pests of the cocoa include monkeys, rodents and insects. The damage caused by pests ranges from digging up of the seeds, cutting up of young roots, to the eating of leaves and pods. The monkey is the most notorious. It breaks open the pods and eats the beans. The giant rat digs up the roots of the young plants while capsids suck the sap and kill young shoots and pods on which they feed. The poor road conditions in the country and limited transport facilities are a major constraint that cocoa farmers face. These are compounded by the poor storage facilities they have for cocoa. The resulting effect of this is that a good quantity of the harvest is lost. Since most of the farmers are illiterate they are often ignorant of current cocoa prices. Also because they are poor, they have to take loans in the hunger season to either buy food or hire labour for work on the farms or plantations. These loans must be paid at the time of harvest and they cannot, therefore, wait for the current price increases to be announced. This condition is aggravated



by the lack of adequate storage facilities. Labour shortages at time of peak labour needs (harvesting), also result in a loss of a good quantity of the crop.

#### ii) Coffee

As with cocoa, the coffee growing area covers the districts of Kenema and Kailahun but also extends southward to Pujehun District and northwards to include adjacent areas in the Tonkolili District, which are actually minor producing areas. The variety chiefly grown is Robusta which, being a native of the equatorial forest, loves a long rainy season. Coffee is grown in the high bush or well developed secondary forest. Sierra Leone exports some coffee, but a good quantity is also processed locally for domestic consumption. Problems with coffee cultivation are very similar to those for cocoa. The diseases include the Leaf Rot and the Thread Blight, but as with cocoa these are gradually being put under control by spraying with chemicals.

#### iii) Oil Palm

The oil palm is the most widely grown cash crop. Also it is one of the wildy growing cash crops in the country (the other being piassava); this is because about 80 percent of the country offers suitable conditions for its cultivation. Indeed it is found naturally growing in the farm bush which is the major vegetation type in the country. However, the improved varieties are grown in plantations most of which are owned by private individuals with some being state owned. Associated with these plantations are palm oil mills such as at Daru, Masanki, Kangah, Gambia, Mange and Waterloo. These use machines to press out the oil which is the chief vegetable oil eaten throughout Sierra Leone. The other oil obtained from the oil palm is kernel oil. This is extracted from the kernel, a process done locally by the use of simple technology to press out the oil, locally known as 'nattie'. There is as well the Sierra Leone Palm Kernel Oil Mill (SLPKOM) at Wellington which extracts the oil for use in the manufacture of soap.

#### iv) Tobacco

Tobacco is the only commercial leaf crop grown in Sierra Leone. The cultivation of tobacco is concentrated in the Northern Province. Production is for the Aureol Tobacco Company (ATC) and is supervised by the Rokel Leaf Tobacco Development Company (RLTDC) which contracts farmers and supplies them with basic inputs on a loan basis.

The cultivation of tobacco is an exacting and precarious activity that needs careful management. Watering, transplanting and topping have to be timed carefully so that the crop will flourish. It is very labour intensive and also involves arduous work after harvest. This makes it difficult for tobacco farmers, most of whom are also rice farmers, to concentrate on both activities equally.

#### 2.11.1.3 Vegetable/market gardening.

The growing of vegetables for urban markets is another important economic activity in Sierra Leone. It is a farming system found mostly around the major towns. It is referred to as truck farming in more advanced societies but in Sierra Leone, there is little or no transportation involved since it is often found on the fringes of urban areas especially on hydromorphic soils around swamps. A major rural production centre which is an exception to the urban oriented nature of this system is Kabala and other villages around Freetown, where the produce is especially aimed at the Freetown market.

This is mainly a woman's activity involving much hard labour, intensive tillage and heavy application of fertilizer or manure, and speedy disposal. Crops grown include lettuce, cabbage, onions, garden eggs, cucumber, tomatoes, spinach, okra and pepper. The problems encountered under this farming system include those of perishability of the crops probably as a result of the poor post-harvest technology, as well as those posed by the unavailability of land, a situation resulting from the competing urban land use systems. This last situation is aggravated by the fact that the women, who are the major participants in this activity, rarely own the land they cultivate.

#### 2.11.1.4 Pastoral farming

This farming activity involves the raising of domestic animals for human consumption. In Sierra Leone it is customarily carried out on both a subsistence and commercial basis by the Fullah, a migrating tribe from the neighbouring Republic of Guinea.

It is the most important agricultural activity in the north and north east of the country in the Bombali and Koinadugu Districts where the natural vegetation of extensive grasslands, interspersed with leguminous weeds offer ideal conditions for this activity. Animals reared include cattle, sheep and goats. The cattle kept is the Ndama which has a resistance to the trypanosomiasis disease. It is bred mostly for beef, the small quantity of milk it produces being consumed by the herder and his family. The Fullah herders also practise arable farming on a large scale. Groundnuts, cassava, millet, and maize are the main crops grown.

Bush fires are often used to encourage new shoots but uncontrolled fires are a menace to this system since they destroy the possible grazing ground leading to over stocking in the available areas. Moreover there are frequent clashes between crop farmers and livestock herders as their animals destroy crops. Like most tropical areas, diseases are prevalent which is a hinderance to this farming activity. However, the veterinary service has succeeded in eradicating some diseases notably rinderpest.

Pastoral farming is however the activity best suited to this part of the country since the grassy vegetation, relatively lower population density and the less humid climate are favourable conditions.

### 2.11.2 Forestry.

This is an economic activity that deals with the resources of the forest most important of which is timber. The forests provide direct income to the rural community and other indirect ecological and social benefits; they protect watersheds and agricultural lands from erosion, regulate water flows in streams and rivers, act as habitats for wild life, and provide recreational areas for urban populations. Hence they provide environmental stability and help maintain the productive capacity of a nation's resources.

In Sierra Leone, the forests have been one of the most misused of the natural resources of the country. This has principally been due to human activities such as shifting cultivation/rotational bush fallow and the exploitation of timber without parallel management strategies.

It is in recognition of this that the Forestry Department was instituted in 1911. A number of forest reserves was established all over the country (Figure 2.8).

The major reserves are chiefly confined to the eastern half of the country in the Kenema, Kailahun and Kono Districts. Almost all are climax vegetation of high forest type. In the North, the Reserves such as those of the Kangari hills, Loma mountains, Tingi hills and the Outamba-Kilimi are mainly conserved for the development of game parks. In the South, where vegetation is mainly tropical hard woods, forests were reserved primarily to supply timber for export.

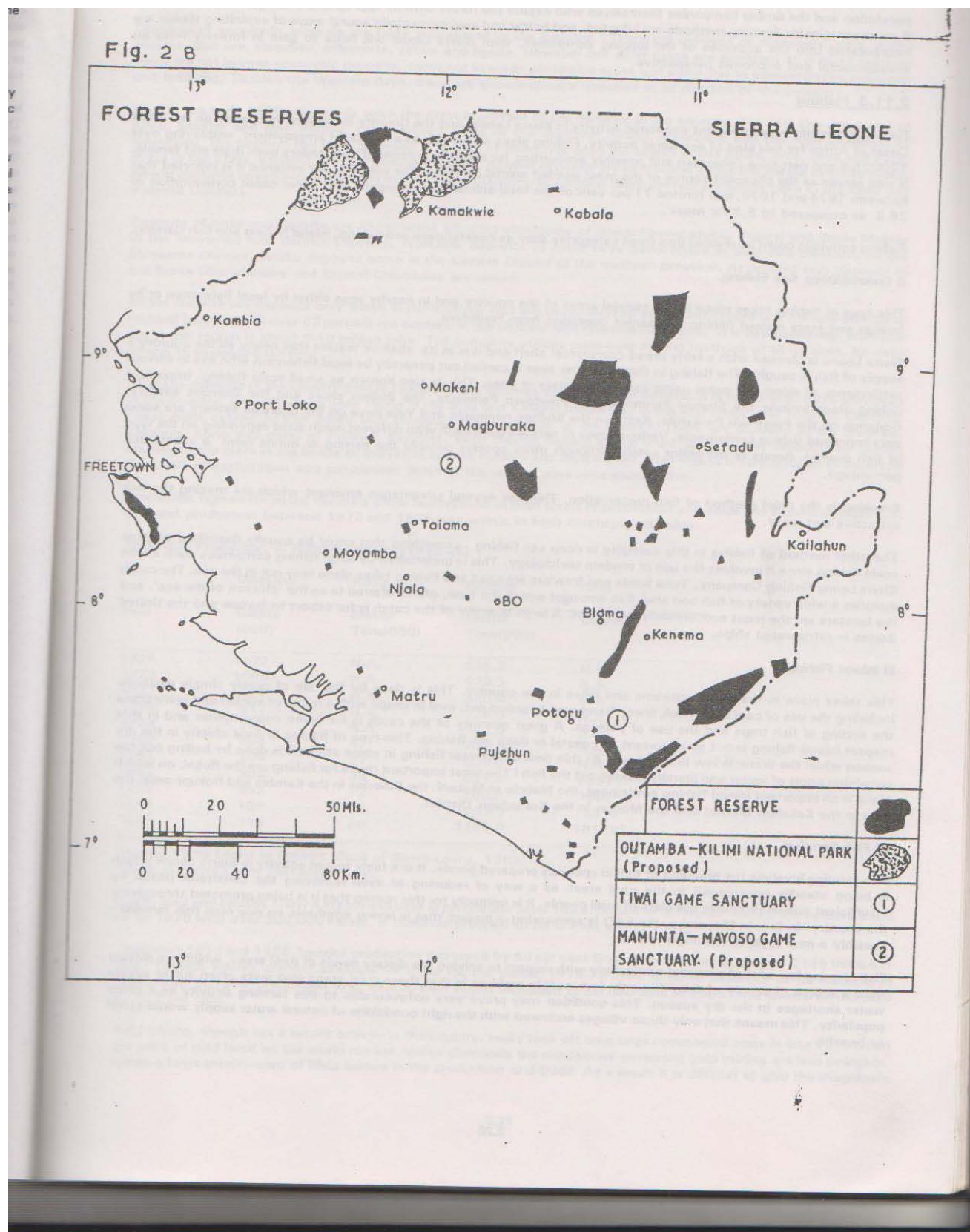
Forestry is one of the important economic activities in Sierra Leone. Two main companies have been active in the exploitation of timber. These are Forest Industries Corporation (FIC), a Sierra Leonean Company under the Ministry of Trade and Industry, and Sierra Leone Timber Industries (SILETI) an Italian-Sierra Leonean company. FIC has been operating in the Gola North Forest Reserve since 1960. SILETI on the other hand operated in Gola West. These two companies are oriented more towards the production and export of logs than processing the logs domestically.

Several saw mills have been installed in various places in the southern and eastern parts of the country in association with the reserves. These include the Kenema Saw Mill which has a factory established in 1944. This factory is the largest in the country, employs about a thousand workers and specializes in the making of furniture. The Gola forest, along with the Kambui Hills Reserves form the bulk of the Kenema Saw Mill series supply area. Another saw mill is the Katema Saw Mill at Panguma with a factory located close to the National Diamond Mining Company (NDMC) concession area at Tongo Field. This factory makes prefabricated houses. Another is the mobile saw mill at Kasewe near Moyamba which processes logs into planks.

The increasing population and the deteriorating forest is already making it impossible for the country to meet the increasing local demand for timber, and therefore timber has to be imported to meet the need in Freetown.

Forestry is perhaps the most promising industry in the country since it is based on a renewable resource - the forest. But as pointed out above, the most potentially threatening danger to this industry is the rapidly growing farming

Figure 2.8



population and the timber companies themselves who exploit the forest with no appropriate management techniques. If more sustainable farming methods are adopted, and better and environmentally sound ways of exploiting timber are incorporated into the activities of the logging companies, then Sierra Leone will hope to gain in forestry from an environmental and economic perspective.

### 2.11.3 Fishing

Fishing is another very important economic activity in Sierra Leone, and the Country is favourably located on the West Coast of Africa for this kind of economic activity. Fishing plays a vital role as a source of employment, employing over 12000 full and part-time fishermen and possibly accounting for a similar number of fish traders both male and female. It also serves as the cheapest source of the most needed animal protein in the country. For instance it is reported that between 1974 and 1976, fish formed 71 per cent of the total animal protein supply with a per caput consumption of 26.8 as compared to 5.3 for meat .

Fishing activities could be divided into three categories such as coastal/deep sea fishing, inland fishing and fish farming.

#### i) Coastal/Deep Sea Fishing.

This type of fishing takes place in the coastal areas of the country and in nearby seas either by local fishermen or by foreign and state owned fishing companies operating from Freetown.

Sierra Leone is blessed with a fairly broad continental shelf and it is in its shallow waters that nearly all the country's supply of fish is caught. The fishing in these shallow seas is carried out generally by local fishermen who live in various settlements all along the coast using canoes and nets or lines. This is also known as small scale fishing. Important fishing areas include the Shenge Peninsula, the Freetown Peninsula, the Bullom shore and the Scarcies estuary. Goderich on the Freetown Peninsula, Katta on the Shenge peninsula and Yele Boya on the Scarcies estuary are some very important fishing settlements. Various types of nets are used each with different mesh sizes depending on the type of fish desired. Bonga is the major catch, although other species notably the herring or minna form a substantial percentage.

Smoking is the chief method of fish preservation. This has several advantages amongst which are making the fish attractive and tasty.

The other method of fishing in this category is deep sea fishing - something that could be equally described as large scale fishing since it involves the use of modern technology. This is undertaken by large fishing companies such as the Sierra Leone Fishing Company. Tuna boats and trawlers are used and fishing takes place way out in the sea. The catch includes a wide variety of fish and shell fish amongst which the tuna, often referred to as the 'chicken of the sea', and the lobsters are the most economically important. A large quantity of the catch is for export to Europe and the United States in refrigerated ships.

#### ii) Inland Fishing.

This takes place in the rivers, streams and lakes in the country. This is done by the use of purely simple methods including the use of cast nets, hook lines, 'bembeys' (a scoop net, oval in shape with a frame of sticks) and sometimes the setting of fish traps and the use of poisons. A good quantity of the catch is for home consumption and in that respect inland fishing is not as important as coastal or deep sea fishing. This type of fishing is done chiefly in the dry season when the water is low in the rivers. At this time of the year fishing in some streams is done by bailing out the remaining pools of water and literally picking out the fish ! The most important rivers for fishing are the Rokel, on which Malal is an important inland fishing settlement, the Maboale at Makeni, the Scarcies in the Kambia and Rokupr area, the Moa in the Kailahun District and the Mongo in the Koinadugu District.

#### iii) Fish Farming

Fish farming involves the breeding of fish in specially prepared ponds. It is a fairly recent activity in Sierra Leone which is being steadily encouraged in the rural areas as a way of reducing or even removing the constraint posed by insufficient animal protein in the diets of rural people. It is primarily for this reason that it is being promoted throughout the country. In fact in Moyamba, the FAO is sponsoring a project that is laying emphasis on rice cum fish farming - possibly a new type of farming system.

Fish farming has a lot of potential particularly with respect to solving the dietary needs of rural areas, which are distant from a source of supply of fish. The only foreseeable problem is that these rural areas also quite often suffer severe water shortages in the dry season. This condition may prove very unfavourable to this farming activity as it gains popularity. This means that only those villages endowed with the right conditions of natural water supply would stand to benefit.

### 2.11.4 Mining

Deposits of economic minerals are fairly widespread in the country. There are deposits of diamonds, gold, rutile, bauxite, iron ore, chromite, columbite, zircon and lignite. However not all of these are exploited at present because some are not in large economic deposits, some not in easily accessible areas and some due to administrative red-tapes and hold-ups. Besides the Western Area, there are known mineral deposits in all districts of the country.

Until in the early 1980s diamonds were the most important of the minerals in the country. But with the expansion of rutile, bauxite and gold mining, the overhead costs of the diamond mining operations and the high incidence of smuggling, the position has been reversed. Deposits of diamonds span the length of the Sewa, Woa, Moa and Kanja rivers in the Kono, Kenema, Bo and Bonthe Districts. Alluvial deposits are also found along tributaries of these rivers. Newer deposits have been discovered in the Pujehun District. In addition there are two

kimberlite belts in the Kono and Kenema Districts.

Deposits of rutile and bauxite are found in the adjacent chiefdoms of Banta Gbangbatoke, Imperri and Banta Mokele in the Moyamba and Bonthe Districts. Workable deposits of rutile have been found in Bagruwa chiefdom in the Moyamba District. Similar deposits occur in the Kambia District of the northern province. At present only deposits in the Banta Gbangbatoke and Imperri Chiefdoms are mined.

Of the Bauxite ore deposits only those in the Mokañji area are being worked at present. There is a 25-mile stretch of residual bauxite with over 62 percent ore content in the Mokañji hills towards Gondama. It is estimated that workable ore in this region is about 9-10 million tons. The company utilizes open-cast mining methods at all its sites. No deep mining is envisaged for now.

Of all the minerals in the country gold is found in more districts than any other mineral. It is found in all three provinces of the country. Deposits have been found in the Sula and Kangari mountains in the Koinadugu and Tonkolili Districts. These belts extend further south into Mongheri/Mbawomahun in Bo District. There are deposits in the Kenema, Kailahun, Kono and parts of Pujehun Districts. Even though mining rights were given to the NDMC, the mining operations are more in the hands of individual license holders and illicit miners. This makes it very difficult to ascertain the levels of exploitation and production. Most of the output goes unaccounted for.

Production figures for all the minerals show fluctuations in both levels of production and value. As shown in Table 2.2, diamond production between 1975 and 1985 was erratic in both caratage and value.

Table 2.2: Production of Major Minerals. (1975-85)

	Diamond Rutile	Bauxite	Gold	
Year	Carats (000)	Metric Tons(000)	Metric Tons(000)	Ounces
1975	1377	N.A.	635.7	N.A
1976	1084	N.A.	629.3	N.A
1977	767	N.A.	820.4	N.A
1978	317	N.A.	728.0	N.A.
1979	190	N.A.	642.0	N.A
1980	594	47	747.0	N.A.
1981	304	57	606.0	N.A.
1982	303	35	631.0	6997*
1983	352	72	785.0	1989*
1984	189	92	1041.0	10316*
1985	349	80	1145.0	18118*

Source: Sierra Leone in Figures. Bank of Sierra Leone, 1989.

\*Bank of Sierra Leone Purchases only.

Rutile, gold and bauxite show a steady increase in production after 1982. Output of diamonds was on the upward trend up to 1978 with over 300,000 carats. It however dropped to its lowest ebb in 1979.

Between 1975 and 1985, bauxite production increased by 80 per cent from 635.7 thousand tons to 1145 thousand tons. Though figures are not available for rutile for the period 1975-79 there is some evidence of its increase in production. In 1980, production was 47,000 tons which increased to 80,000 tons in 1985. This shows an increase of 70.2 per cent.

Gold mining, though not a recent activity in the country, really took off on a large commercial scale in late 1970 when the price of gold leapt on the world market. Unlike diamonds the regulations governing gold mining are less stringent, hence a large involvement of illicit miners in the production and trade. As a result it is difficult to give the magnitude of the level of production. Between 1982 and 1985 official purchases by the Bank of Sierra Leone rose from 6997 to 18118 ounces.

## 2.12 Transport and Trade.

Transport and trade are positively correlated in Sierra Leone. Transport types could be categorized into road, air and water. Each complements the other in the development and expansion of trade in the various regions of the country.

Road transport is classified under the following:

1. Feeder roads - which are roads connecting the interior to the nearest secondary or trunk road.
2. Secondary roads - these are seasonal and unpaved roads. These form the bulk of the road network in the country.
3. Trunk or 'first class' roads - these are surfaced roads which connect the main provincial centres and Freetown, the capital. These are supposed to be used all year round, but they are today riddled with potholes and are as seasonal as any of the secondary roads.

With the phasing out of the railway in 1968 roads have become the most important means of transport for both goods and passengers. Feeder roads connect remote interior settlements with the nearest trunk road. This facilitates the transportation of foodstuffs and other agricultural products from the provinces to Freetown; at the same time imported and manufactured goods from Freetown use the same routes to the provinces.

There is also a positive correlation between roads and the population densities and population distribution except where it is constructed to exploit minerals and other resources. The south east is well served by roads while the north east has a poor road network. A similar situation exists in the north west where the roads compete with waterways.

The main trunk roads stretch from Freetown to Bo and Kenema to service the southern and eastern areas of the country. There is also another segment connecting Freetown, Makeni and Koidu Town. Very recently, the Makeni to Kabala trunk road has been completed. This 122 Km road facilitates the transportation of agricultural products, cattle, and passengers from the north east which has a very poor network of roads.

### 2.12.1 Air

Air services in the country are limited to international services. Domestic air services which were on a small scale were discontinued because they were unprofitable. International air transport is solely from Lungi which is separated from the capital, Freetown, by the Sierra Leone River. One problem of international air transport is the situation of the international airport on the Bullom peninsula on the other side of the Sierra Leone River. This increases travelling time and causes delays and difficulties in transit.

### 2.12.2 Waterways and Ports

Water transport complements road transport along the coast and along some of the rivers in the interior. Outboard motors and launches are used along estuaries and rivers like the Jong or Taia from Bonthe to Mattru and from Kambia to Mambolo on the Scarcies. This handles both goods and passenger transport to Freetown. Nitti is a private port built by the mining companies, Sierra Rutile and Sieromco. It provides facilities for handling the exports of both bauxite and rutile and again acts as a port for some of the essential goods of the companies. The port of Pepel which was used to handle iron ore exports is now in a dilapidated and depressed condition.

### 2.13 Educational Facilities

Educational establishments in the country include formal, non-formal and informal institutions and run by the Sierra Leone Government, Missionary organizations, International Agencies and private individuals. There is a marked unevenness in the distribution of these institutions at the national and regional levels. The present distribution of educational institutions is given in the Table 2.3 below.

Table 2.3: The Distribution of Primary, Secondary, Teacher Training and University Colleges in Sierra Leone 1988/89.

PROVINCE	PRIMARY SCHOOLS		SECONDARY SCHOOLS		TEACHERS COLLEGES	UNIVERSITY COLLEGES
	NO.	ENROL.	NO.	ENROL.	NO.	NO.
Northern	400	125498	55	27441	2	
Southern	412	90691	53	21544	1	1
Eastern	417	114709	53	24068	1	
Western Area	141	62695	37	28642	2	2
Sierra Leone	1340	393593	198	101695	6	3
: Ministry of Education 1989 and Registrar Fourah Bay College 1989. Note: Private schools not included. NO. = Number ENROL. = Enrolment						

The provinces were slow in adopting formal western education. The adoption was much more marked in the Southern province where the first secondary school in the provinces was established in 1900. This was possible through missionary activities rather than through any deliberate government venture.

From the above it is clear that there is a variation in the number of schools and enrolment among provinces. This is also reflected in the number of teachers in each province. It shows a remarkable improvement in the situation of the 1960s when the North was underprivileged educationally. It has been and is still the government's avowed policy to develop more equitable distribution of educational establishments.

Technical, vocational and trade centres are found in all four regions. These train the middle manpower needs of the country. Agricultural secondary schools have been opened in many districts but these are more inclined to teaching grammar school subjects like the rest of the secondary schools in the country.

Non-formal institutions engaged in functional adult literacy programmes are run by International Agencies like the Canadian Universities Service Overseas (CUSO) and German Adult Literacy Programmes. The People's Educational Association of Sierra Leone also plays a very active role in this direction. The Extra Mural Department of Fourah Bay College also runs similar programmes.

### 2.14 Water Supply and Electricity

Public water supply in the country is provided by the Ministry of Energy and Power. Electricity on the other hand is provided by the

National Power Authority (NPA) which is a government corporation overseen by the Ministry of Energy and Power.

Both climate and the economy are factors in the provision of piped water supply. Sources such as streams/ rivers and wells are very highly utilized. They provide the main sources of water supply for almost all settlements. The first pipe-borne water in the country was provided in Freetown in 1872. The first in the provinces was in Panguma in 1923. Since then, efforts have been made to provide all district headquarters with piped water. Under the Degremont scheme several of the projects were completed. But sadly none of these is working today.

Because of this there has been a shift to improved wells systems under CARE, IDA and other international agencies. For quite some time these wells seem to be providing a solution to the water needs of the rural areas. But because of the fluctuation in the dry and wet season water levels some of these wells have water in the rainy season but run dry during the dry season.

The first electricity generating plant was installed in Freetown in 1928. Public electricity supply was not extended to the provinces until in 1945 (Lungi, Port Loko District) and 1949 (Bo). Since then efforts have been made to provide all district headquarter towns with electricity. There was a steady increase in the output and consumption of electricity up to the mid 70s when the country was hit by soaring fuel prices. This plunged most of the towns into darkness and most have not still recovered from it.

Power generated by NPA was on the increase up to 1981. From 1982 there were fluctuations in generating outputs, but there was a dramatic drop after 1984. Sierra Leone has a very high potential for hydro-electricity generation. Local experts put the country's hydro electricity potential at around 1200 megawatts. Feasibility studies were conducted in 1970 by the Italian Company Salini Constructori (SALCOST) on the possibility of harnessing the Bumbuna falls on the Rokel river in the Tonkolili District. This has proved to be the most ambitious and promising with an estimated potential of 320 megawatts. Initial tunnelling started then with funds provided by the Italian government and other donor agencies but work stopped due to lack of sustainable funding. Work however recommenced in 1989 with funds provided by the Italian government (\$104m) and a soft loan of \$48m by the African Development Bank (ADB). When completed the dam will supply electricity to the entire country for domestic and industrial purposes. The first phase will provide 50 megawatts to supply Freetown through Magburaka, Makeni, Lunsar and Port Loko, whereas the second and third phases will provide 109 and 211 megawatts respectively for the rest of the country. Meanwhile the Chinese government embarked on the country's first hydro-electric scheme at Dodo in the Kenema district, Eastern province. The project was successfully commissioned in 1986 and now supplies electricity to the townships of Bo and Kenema and other surrounding villages. Also, two out of three mini hydro projects have been completed. These are the Makali mini hydro and irrigation scheme and the Yele mini hydro-electric project jointly funded by the IDA and the Seventh Day Adventist Church in Sierra Leone. A third mini hydro scheme is currently under construction by the North Koreans at Binkolo in the Northern Province.

The country is also exploiting its renewable resources through its solar Rural Electrification Programme. This programme seeks to supply electricity to health centres, community centres, and agricultural and educational institutions in remote areas of the country. Paradoxically although solar power has the potential to transform the lives of rural dwellers it has yet to make any significant headway in the country. However, considering the rising oil costs, lack of foreign exchange and the cost of spare parts the country's solution to long term fuel shortages probably lies in its fullest exploitation of its hydro electricity and solar energy potentials.

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## CHAPTER 3

### POPULATION SIZE, GROWTH, AGE AND SEX STRUCTURE

A.C. THOMAS and K.V. RAMACHANDRAN

#### 3.1 Introduction

Population size is the total number of persons counted in a well defined territorial area, usually a country or one of more of its administrative units. The count is described as 'de facto' when it includes persons actually present in the given area at a given time and as 'de jure' when it comprises persons who were in the area through citizenship, legal residence or usual residence. The 1985 Population Census was 'de facto' and involved a house-to house count of all persons who were present on Census night.

#### 3.2 Population Size and Growth

For the whole country, that is the Western Area and the Provinces combined, complete Census data are available only from 1901. These show that the population increased from 1,024,178 in 1901 to 3,515,812 in 1985, an increase of 243.2 per cent or 1.5 per cent per annum.

The 1985 figure of 3,222,901 obtained from the computer processing of the data was substantially lower than the provisional count of 3,515,812 (Sierra Leone Government 1986: Table 1), a difference of 292,911 or 9.1 per cent. This difference is attributable to suspected errors during the manual count of the provisional total, the long delay in data processing due to various problems which might have resulted in some questionnaire booklets being lost or non traceable and some administrative shortcomings in handling the completed questionnaires prior to computerisation.

In the absence of a post enumeration check, there is no direct method to determine the completeness of coverage of the census. Therefore, indirect demographic techniques and consistency - convergency methods of data evaluation will be resorted to in order to assess the coverage of the census.

##### 3.2.1 National Growth Rates

The rate of growth of the population has been relatively slow. From the beginning of the 20th Century, it took the population 10 years to increase its size by about one-third, another 10 years to increase by 50 per cent, and nearly 60 years to double its size (Table 3.1). In the 22 years which span the three national population censuses in Sierra Leone that is 1963 to 1985 the population has increased by only 61.2 per cent, slightly higher than the 50.4 per cent increase in the 20 years period between 1901 and 1921.

Similarly, intercensal growth has been moderate. Apart from three periods, 1901-1911, 1963-1974 and 1974-1985, when the population increased by 36.9 per cent or 3.2 per cent per annum, 25.4 per cent or 2.0 per cent per annum and 28.5 percent or 2.3 percent per annum respectively, the intercensal increase has always been below 18.0 per cent, and the average annual growth rate of below 1.4 percent. This is below the 1980-85 average annual growth rate below 1.7 for Africa or 3.1 for West Africa.

At the 1974-85 annual growth rates, it will take the population about 30 years to double its size.

TABLE 3.1: POPULATION AND PERCENTAGE CHANGE IN POPULATION OF SIERRA LEONE 1901 TO 1985

YEAR	NUMBER OF PERSONS	PERCENTAGE CHANGE FROM 1901		
		PERCENTAGE CHANGE	AVERAGE ANNUAL RATE	INTERCENSAL CHANGE ANNUAL AVERAGE
1901	1,024,178	-	-	-
1911	1,400,132	36.7	3.2	3.2
1921	1,540,554	50.4	2.1	1.0
1931	1,768,480	72.7	1.8	1.4
1948	1,858,275	81.4	1.3	0.5
1963	2,180,355	112.9	1.2	1.1
1974	2,735,159	168.0	1.4	2.0
1985	3,515,812	243.2	1.5	2.3

##### 3.2.2 Regional Distribution of Population

The total population of 3,515,812 was distributed over the Western Area and the 12 Districts which make up the three Provinces namely, Eastern, Northern and Southern. The 12 Districts are further subdivided into 148 Chiefdoms. But as data are not available for Chiefdoms, analysis of size and growth of major administrative units will be confined to the Western Area and the 12 Districts.

These 13 administrative units are fairly evenly balanced in population size- only one has more than 400,000 persons; another four each

have population of over 300,000, 200,000 and 100,000 persons respectively. In no district is the total population less than 100,000 persons (Table 3.2 ).

The Western Area with 554243 persons or 15.8 percent of the population, is the most populous. Next in size are Kono with 389657 or 11.1 percent, Kenema with 337055 persons or 9.6 percent and Port Loko with 329344 or 9.4 percent of the total population. In contrast the two smallest districts are Bonthe (including Sherbro Urban District) with 105007 persons or 3.0 percent, and Pujehun with 117185 or 3.3 per cent of total population.

TABLE 3.2. POPULATION OF SIERRA LEONE BY DISTRICTS, 1985

DISTRICT	POPULATION	PERCENTAGE	DISTRICT	POPULATION	PERCENTAGE
BO	268671	7.6	BOMBALI	317729	9.1
BONTHE	105007	3.0	KAMBIA	186231	5.3
BOTHE RUR:	97975	2.8	KOINADUGU	183266	5.2
SHERB: URB.	7032	0.2	PORT LOKO	329344	9.4
MOYAMBA	250514	7.1	TONKOLILI	243051	6.9
PUJEHUN	117185	3.3	WEST: AREA	554243	15.8
KAILAHUN	233839	6.7	FREE TOWN	469776	13.4
KENEMA	337055	9.6	WEST: RURAL	84467	2.4
KONO	389653	11.1	SIERRA LEONE	3515812	100.0

### 3.2.3 Changes in Regional Distribution of Population

Data from the Population Censuses of 1963, 1974 and 1985 allow an analysis of changes in the population sizes of districts between these periods.

Between 1963 and 1985 the population increased by over 30.0 per cent in all districts except Bo.(Table 3.3 ). The percentage increase varied from 28.1 per cent in Bo to 184.2 per cent in the Western Area, representing an average annual growth rate of 1.1 per cent and 4.7 per cent per annum respectively.

Between 1974 and 1985 the figures show a different pattern. For all districts the average annual growth rate varied from 1.1 per cent in Port Loko to 5.2 per cent in the Western Area.

The distribution of the population in 1985, appears to be associated with the nations capital, Freetown, which is the most important centre of industrialization, modernization and in-migration in Sierra Leone. Kenema District and Kono District have important diamond and gold mining activities, and also produce cash crops. But Bonthe District and Pujehun District are relatively poor, have no important mining or commercial agriculture, and have experienced declines in overall economic prosperity.

Observed changes in population size between 1963 and 1974 are closely linked with fluctuations in mining and agriculture. In particular, the decline in diamond mining provides some explanation for the decline in population in Kono District between 1974 and 1985.

TABLE 3.3: POPULATION GROWTH BY DISTRICT 1963 TO 1985 AND 1974 TO 1985.

DISTRICT	PERCENTAGE CHANGE	AVERAGE ANNUAL CHANGE	PERCENTAGE CHANGE	AVERAGE ANNUAL CHANGE
	1963 - 1985		1974 - 1985	
Sierra Leone	61.2	2.1	28.5	2.3
Bo	28.1	1.1	23.4	1.9
Bonthe (including Sherbro Urban Dist)	31.0	1.2	19.9	1.7
Moyamba	49.1	1.8	32.7	2.6
Pujehun	38.1	1.4	14.1	1.2
Kailahun	55.6	2.0	29.6	2.3
Kenema	48.2	1.7	26.4	2.2
Kono	132.1	3.8	18.5	1.6
Bombali	59.8	2.1	36.0	2.8
Kambia	35.1	1.3	19.9	1.7
Koinadugu	42.0	1.6	15.5	1.3
Port Loko	33.1	1.3	12.7	1.1
Tonkolili	31.8	1.2	17.8	1.5
Western Area	184.2	4.7	75.2	5.2

### 3.3 Age and Sex Structure

#### 3.3.1 Sex Composition

The sex composition of a population can be measured by the Sex Ratio, which is usually defined as the number of males per 100 females. A sex ratio of 100 denotes equal numbers of males and females. Above or below 100 the Sex Ratio implies an excess of males or females respectively. Sex ratios can be either 'general' or 'age-specific'. The 1985 Population Census provides data for calculating general sex ratios and age-specific sex ratios for Sierra Leone and the districts.

#### 3.3.2 Sex Ratio

Table 3.4 shows that the country as a whole has a sex ratio of 98.7 males per 100 females, signifying an excess of 23702 females in the population. Between 1963 and 1974 there was a slight increase in sex ratio from 98.4 to 98.8 but between 1974 and 1985 there was a slight fall to 98.7.

The Table further shows that most districts have a relatively low sex ratio which exceeds 100 in only three districts namely, Kenema with 104.2; Western Area, 107.6; and Kono 111.8. For other districts the Sex Ratio varied from 91.3 in Kambia to 96.8 in Bo .

Variations in sex ratios may be the result of possible differences in socio-economic conditions, and hence of population movement, between the various districts. The highest sex ratios are in Kono and Kenema - the centres of diamond and gold mining and cash-crop production, and the Western Area which contains the country's capital and primate city. In contrast, districts with sex ratios of less than 100 rely on subsistence agriculture as the primary economic activity, and enjoy less favourable overall socio-economic conditions. There is consequently net out migration from these districts especially of males, leaving behind an excess of females.

Sex ratios for districts have also fluctuated little over the past 22 years. Between 1963 and 1985, Kenema and Bonthe showed large decreases and Tonkolili and Kailahun experienced large male increases.

Between 1974 and 1985 fluctuations in sex ratios are even less significant. Kono showed a large decline and Tonkolili an increase, These relatively small and inconsistent changes in sex ratios may be the result of fluctuating socio-economic conditions.

TABLE 3.4: SEX RATIOS 1963, 1975 AND 1985 FOR SIERRA LEONE AND DISTRICT

DISTRICT	SEX RATIOS (PER 100 FEMALES)			DISTRICT	SEX RATIOS (PER 100 FEMALES)		
	1963	1974	1985		1963	1974	1985
Sierra Leone	98.4	98.8	98.7	Kenema	117.5	104.5	104.3
Bo	103.8	94.8	96.8	Kono	118.1	125.8	111.8
Bonthe (including Sherbro Urban District)	95.6	95.4	96.7	Bombali	85.2	87.7	97.6
Moyamba	94.1	93.6	93.7	Kambia	92.3	90.7	91.3
Pujehun	88.9	91.0	92.1	Koinadugu	93.2	91.9	91.5
Kailahun	87.3	92.0	93.6	Port Loko	95.2	93.2	92.2
				Tonkolili	89.3	90.5	96.6
Western Area	111.4	111.1	107.6				

#### 3.3.3. Age Specific Sex Ratios

Age specific sex ratio measures the number of males per 100 females in specific ages. Sex ratios at birth usually vary between 102 and 106 males per 100 females. With higher male mortality, at practically every age, sex ratios are expected to decline at each succeeding age. Such a population should therefore have more males at the younger ages, about equal numbers of males and females at the middle ages, and an excess of females at the older ages. This expected pattern can however be modified by migration, which tends to be age and sex selective, or by unusually high mortality affecting certain ages, or by differential enumeration, due to errors in reporting the ages of males or females at certain ages.

Data from the 1985 census are available for analysing single-year and five-year age specific sex ratios for Sierra Leone, and the districts.

Five -year age-sex ratios ( Table 3.5 ) for Sierra Leone exceed 100 from ages 0-4 years to 10-14 years, are less than 100 from ages 15-19 years to 40-44 years, and exceed 100 from ages 45-49 to the oldest age group. Most districts have a male excess at ages 0-4 years, 5-9 years and 10-14 years. In contrast, at ages 15-19 years to 40-44 years, females exceed males in all districts except at ages 35-39 years and 40-44 years in Kono, 30-34 years and 40-44 years in Kenema and 20-24 years to 40-44 years in the Western Area. At ages 45-49 years to 65-69 years the pattern is less consistent. For example, Moyamba and Bombali have a female excess at these ages but Bo , Kenema , and Koinadugu have a male excess. At the oldest ages, that is from 70-74 years to 90 years and over, sex ratios are consistently over 100. There are three significant exceptions, ages 80-84 years to 90 years and over for Bo, Bonthe and Moyamba, ages 75 and over for the Western Area, and ages 80-84 years for Pujehun.

At both national and district level, observed variations in age-sex ratios are the result of a combination of factors, including age-sex differences in levels of mortality, regional variations in socio-economic conditions bringing in age and sex-selective migration, and errors in the reporting of certain ages.

Between 1974 and 1985 changes in sex ratio by five year age groups show a number of distinct features . Age group 0-4 indicated consistent increases, age groups 15-34 showed mostly increases and ages 40 and above indicated mostly decreases (Table 3.6).

Problems associated with the under or over-reporting of the population of different age and sex groups constitute serious obstacles in attempting to explain many of these intercensal changes in age-sex ratios which may have been triggered by variations in regional economic fortunes.

TABLE 3.5: AGE-SEX RATIOS BY FIVE YEAR AGE GROUPS FOR SIERRA LEONE AND DISTRICTS 1985.

AGE (YEARS)	SIERRA LEONE	BO	BONTHE	MOYAMBA	PUJEHUN	KAILAHUN	KENEMA	KONO	BOMBALI	KAMBIA	KOINADUGU	PORT LOKO	TONKOLILI	WESTERN AREA
0 - 4	101	101	102	102	99	99	99	101	100	103	100	102	104	104
5 - 9	101	96	105	105	111	101	97	96	106	106	100	105	106	95
10 - 14	113	111	113	114	127	122	110	106	119	130	107	122	121	98
15 - 19	88	90	84	90	80	82	82	94	91	81	82	87	90	94
20 - 24	81	84	72	76	71	77	82	95	70	63	67	68	80	101
25 - 29	80	80	75	73	70	73	91	98	62	59	64	64	75	108
30 - 34	83	85	78	71	65	74	96	111	65	61	69	67	75	118
35 - 39	97	93	88	77	79	89	118	144	74	72	88	75	84	129
40 - 44	98	95	84	81	77	87	115	156	73	78	91	80	87	134
45 - 49	118	114	103	95	104	105	160	198	84	93	114	93	101	151
50 - 54	108	103	95	90	96	99	148	165	86	96	105	92	94	129
55 - 59	121	114	109	100	107	111	171	192	98	111	141	106	105	177
60 - 64	104	105	93	91	99	104	134	150	85	101	108	100	96	105
65 - 69	111	105	105	99	102	110	144	104	95	120	117	106	97	113
70 - 74	119	121	116	111	109	125	157	129	117	115	116	114	109	105
75 - 79	124	113	106	117	114	132	157	146	121	130	146	126	121	97
80 - 84	104	97	97	93	95	114	132	113	103	103	121	98	101	78
85 - 89	113	95	107	104	104	110	152	132	123	113	120	124	119	72
90 AND OVER	104	96	77	86	108	114	132	114	110	104	112	104	119	69
TOTAL	97	80	94	93	92	94	104	111	90	91	91	92	96	106

TABLE 3.6: PERCENTAGE CHANGE IN AGE-SEX RATIOS BY FIVE YEAR AGE FOR SIERRA LEONE AND DISTRICT FROM 1974 TO 1985

DISTRICT	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64
Sierra Leone	4.1	-	-2.6	2.3	-2.4	-8.0	-6.7	-2.0	-7.1	-	-7.7	-3.2	-6.3
Bo	4.1	-	-4.3	12.5	9.9	12.7	7.6	-3.1	-5.0	2.6	-12.7	-13.6	-2.8
Bonthe (including Sherbro Urban District)	4.1	1.0	5.0	-	2.9	-1.4	-	-	-12.5	-6.4	-18.8	-16.2	-13.9
Moyamba	7.4	4.0	-5.0	7.1	4.1	-1.4	-9.0	3.8	-10.0	-3.1	-15.9	-13.0	-18.8
Pujehun	4.2	-5.1	-3.8	2.5	9.2	14.8	-7.1	-3.7	-8.3	6.1	-5.0	4.9	-3.9
Kailahun	6.6	-4.7	-3.9	6.5	20.3	2.8	5.7	9.9	3.6	7.1	-12.4	-8.3	-7.1
Kenema	4.2	1.0	-5.2	3.8	2.5	-2.2	-6.8	-3.3	-10.9	9.6	-6.3	11.0	3.1
Kono	4.1	4.3	-6.2	-6.9	-26.4	37.2	32.3	-25.4	-11.9	-6.6	1.2	2.1	8.5
Bombali	2.0	-1.9	3.5	15.2	22.8	8.8	14.0	5.7	-11.0	-13.4	-6.5	-6.7	-8.6
Kambia	5.1	-0.9	2.4	6.6	1.6	-1.7	-6.2	-5.3	-4.3	-11.4	-9.4	3.7	-1.0
Koinadugu	2.0	-2.0	0.9	10.8	3.1	-7.2	14.8	-6.4	-8.1	0.9	-10.3	15.6	4.4
Port Loko	4.1	-0.9	-2.4	11.5	3.0	-3.0	-1.5	-8.5	-16.7	-16.2	-16.4	-7.8	-5.7
Tonkolili	6.1	1.9	1.7	7.1	19.4	23.0	10.3	13.5	2.4	8.6	-4.1	-0.9	-3.0
Western Area	6.1	5.6	2.0	-9.6	-19.4	-15.6	-8.5	2.4	-	10.2	-1.5	33.1	-17.3

### 3.3.4 Age Composition

Data on age composition are available in single and five year age groups for Sierra Leone and the Districts. Only less than 0.7 percent of the population were reported as age not stated (0.6 percent for males and 0.8 percent for females). The single year age distribution of Sierra Leone in Table 3.7 shows a number of interesting features. In a developing country, like Sierra Leone, where birth rates are high, the number of children aged under 1 year is expected to be high, but these numbers are expected to decline with advancing years as a result of high infant and child mortality.

The single year age distribution shows a number of significant variations from this expected pattern. Age 0 year has the largest number of persons, but the population aged 1, 2, and 3 years respectively, increases with advancing years, contrary to the expected pattern. There is also a marked concentration of persons at certain ages, sometimes referred to as age heaping. These include ages ending in '0', for example 10, 20, 30, 40 and so on, and those ending in '5' for example 15, 25, 35, and so on. They have relatively larger proportions of persons than adjacent age groups. Similar, but lower, proportions of population, are found at those ages ending in even numbers, for example '2' and '8'. In ages especially those ending in the odd numbers 1, 3, 7 and 9 there are obvious underreporting. For females, the largest number reported was at age 30 and not at 0. This phenomenon has been observed in countries as diverse as India and this is attributed to the conception that age 30 divides the population into the young and old ages. The single year age data presented in a line graph clearly shows the undulations in the reporting of age with peaks at ages ending in digit 0 and 5 and marked troughs at ages ending in digits 1 and 9. (Figures 3.1 and 3.2). Another observation is that male children are generally more than female children between ages 0 and 15 and women are more than men at older ages, 16 to 44 and again males are more at older ages. This also indicates the pattern of age shifting whereby, women tend to be reported in the reproductive ages and men's ages are exaggerated, perhaps for prestige reasons. This type of error affects the estimation of demographic parameters.

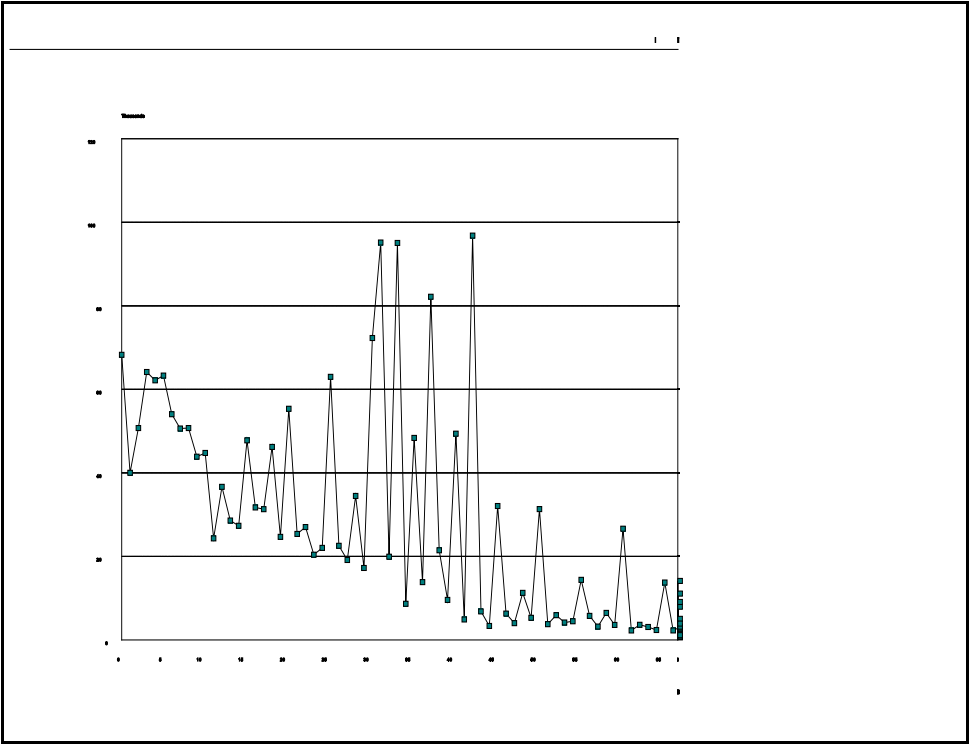
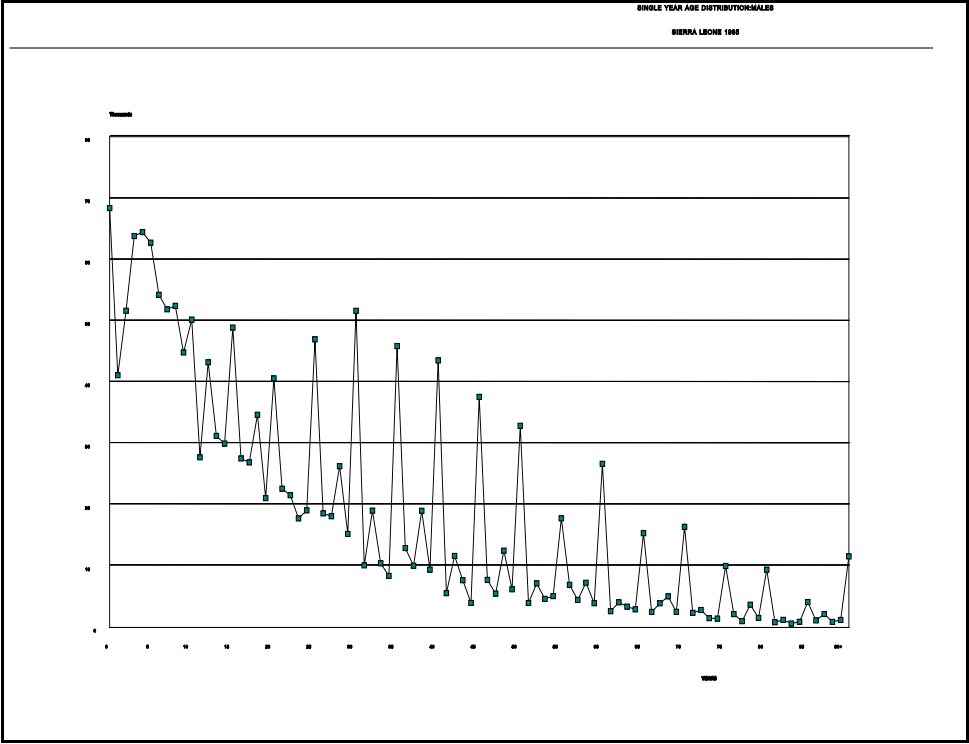




TABLE 3.7: POPULATION BY SINGLE YEARS BY SEX, SIERRA LEONE 1985

AGE	MALE	FEMALE	AGE	MALE	FEMALE	AGE	MALE	FEMALE
0	68370	68285	30	51630	72303	60	26685	26646
1	41119	40021	31	10121	9516	61	2650	2270
2	51638	50742	32	19060	19935	62	4097	3632
3	63817	64153	33	10464	9506	63	3408	3107
4	64458	62153	34	8407	8665	64	2951	2378
0-4	289402	285354	30-34	99682	119925	60-64	39791	38033
5	62740	63299	35	45884	48371	65	15365	13747
6	54242	54047	36	12939	13847	66	2533	2277
7	51870	50626	37	10062	8218	67	3942	2811
8	52444	50744	38	19027	20473	68	5056	5057
9	44830	43883	39	9433	9590	69	2549	2615
5-9	266126	262599	35-39	97345	100499	65-69	29445	26507
10	50198	44772	40	43533	49389	70	16406	14138
11	27740	24316	41	5592	4908	71	2381	1534
12	43225	36662	42	11660	9682	72	2850	2522
13	31230	28593	43	7706	6837	73	1513	1335
14	29988	27341	44	3997	3358	74	1454	1066
10-14	182381	161684	40-44	72488	74174	70-74	24604	20595
15	49803	47789	45	37595	32073	75	10021	7958
16	27545	31724	46	7756	6319	76	2175	1761
17	26902	31312	47	5529	4022	77	1025	647
18	34676	46223	48	12534	11278	78	3718	3197
19	21079	24689	49	6222	5308	79	1552	1339
15-19	160005	181737	45-49	69636	59000	75-79	18491	14902
20	40595	55348	50	32887	31336	80	9427	9102
21	22630	25388	51	3986	3781	81	854	742
22	21567	27041	52	7171	5934	82	1247	1219
23	17773	20418	53	4662	4175	83	648	680
24	19083	22047	54	5114	4479	84	928	849
20-24	121648	150242	50-54	53820	49705	80-84	13104	12592
25	46972	63004	55	17792	14391	85	4155	3920
26	18595	22544	56	6961	5763	86	1149	1137
27	18135	19146	57	4489	3213	87	2193	1467
28	26290	34477	58	7294	6477	88	909	836
29	15248	17237	59	3950	3594	89	1228	1147
25-29	125241	156408	55-59	40485	33438	85-89	9634	8507
						90+	11580	11104
						NS	10255	13644
						TOTAL	1735163	1780649

Observed digit preference, plus other observed distortions, at ages 0 to 4 years, are a consequence of the problems of age reporting in Sierra Leone. These include a high illiteracy rate of about 80.0 per cent, the widespread absence of documentary evidence on date of birth, necessitating the use of aids, including physical characteristics, event calendars and child-bearing performance to estimate age. These methods are usually inaccurate and introduce the type of errors, distortions and irregularities which have been observed in the single-year age distribution.

In order to quantify the digit preference errors, two indices were calculated - the Myers index and the Ramachandran Preference Pattern Index. These indices are calculated for the single year of ages between 10 and 69 in order to eliminate other errors and biases like omission, shifting of ages etc. Calculation is done for the sexes separately, as the types and magnitudes of errors and their implications on other demographic parameters are not similar or same. To gauge the relative quality of the data between 1974 and 1985, these indices are presented for both years in Table 3.8.

Both methods indicate that female reporting is poorer than male and that between 1974 and 1985, there has been a deterioration in the quality of age data as depicted by the single years of age. The indices are extremely large both in 1974 and 1985 and connote that the quality is very poor for most analytical purposes based on single year values.

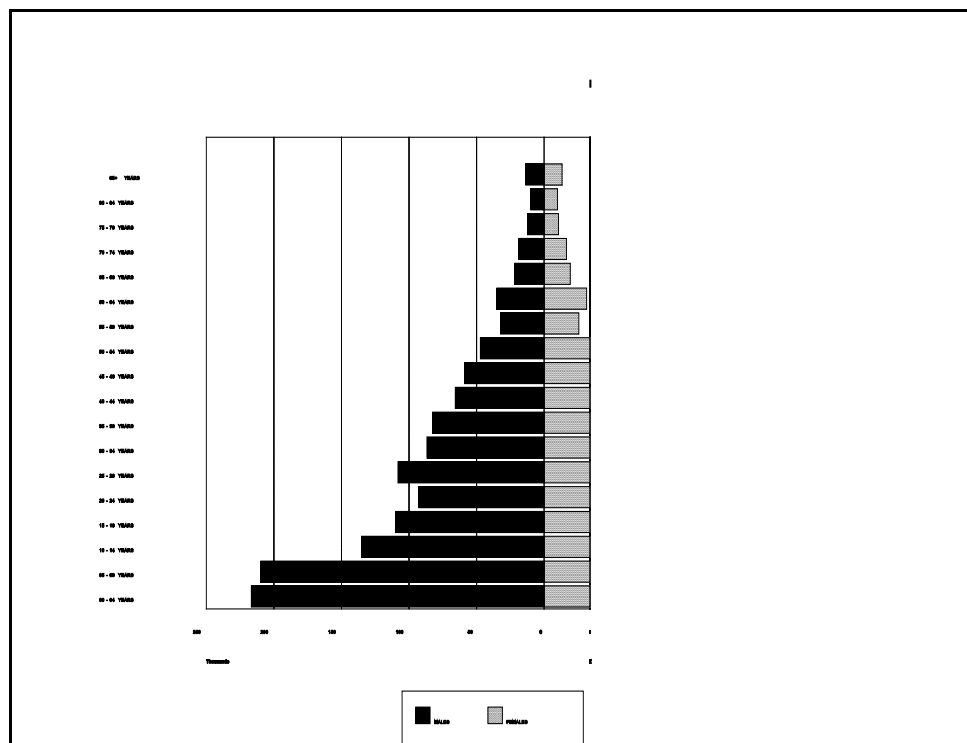
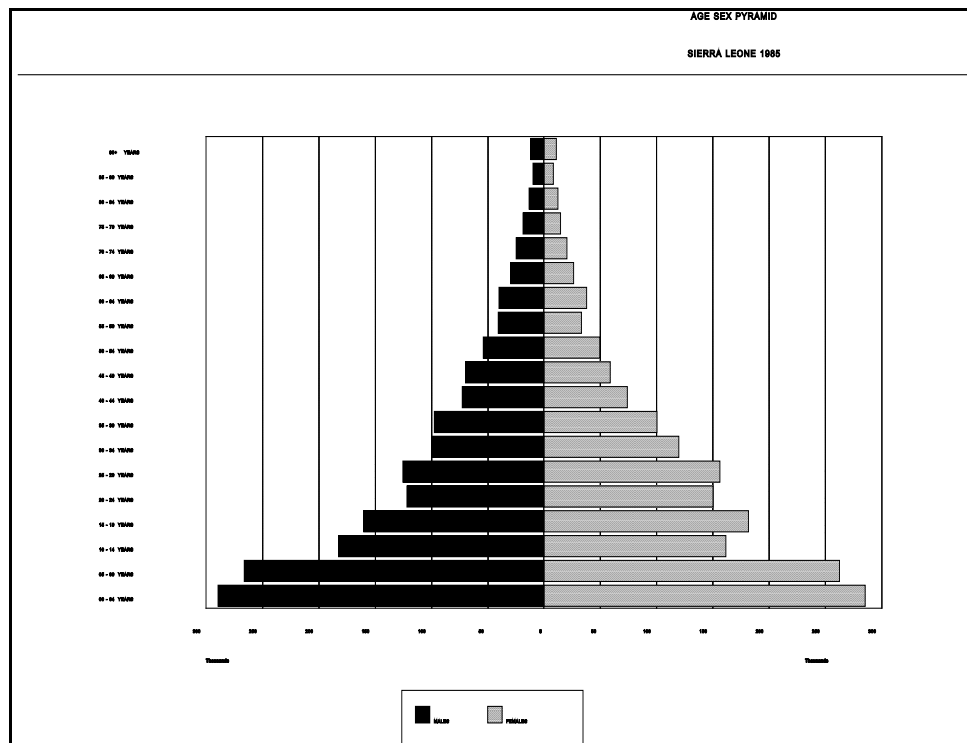
TABLE 3.8 BLENDED PERCENTAGES AT VARIOUS DIGITS  
(MYERS AND RAMACHANDRAN METHODS), BY SEX, SIERRA LEONE 1974 AND 1985

DIGIT	RAMACHANDRAN 1985		METHOD 1974		MYERS 1985		METHOD 1974	
	M	F	M	F	M	F	M	F
0	25.1	28.2	27.1	28.4	22.1	24.4	23.4	22.7
1	4.9	4.5	5.0	4.6	5.6	5.2	5.6	7.5
2	7.9	7.3	8.0	7.0	8.4	7.9	8.4	7.4
3	5.7	5.2	5.1	4.6	6.2	5.6	5.5	5.1
4	5.3	4.9	6.5	5.6	5.9	5.5	6.7	5.9
5	21.4	20.6	15.7	17.1	20.6	19.8	16.7	16.4
6	7.1	6.9	8.3	8.0	7.4	7.4	8.2	8.5
7	6.2	5.4	6.0	5.0	6.8	6.2	6.6	5.7
8	10.5	11.1	11.2	11.9	10.8	11.8	11.4	12.3
9	5.9	5.9	7.3	7.7	6.2	6.2	7.6	8.5
INDEX	54.0	59.9	47.9	54.7	47.0	52.1	43.2	42.8

In the five-year age distribution, distortions observed in the single-year data are generally subsumed in the grouped data. However certain interesting features can also be observed.

As expected, in a country with a high level of fertility, the five year age-structure reveals a relatively broad base. The first two age groups, 0-4 years and 5-9 years, contain 16.3 per cent and 15.0 per cent of the population. At older ages, the age structure has a number of deviations from the expected pattern. For example, there are fewer females at ages 10-14 years than at ages 15-19 years. Again, for both males and females, ages 25-29 years have more persons than at ages 20-24 years. Finally at ages 55-59 years there are fewer females than at ages 60-64 years. Also as mentioned earlier, there are less females at the younger and older ages but many more at reproductive ages. These deficits at ages 10-14 years for females, 20-24 years for males and females, and 55-59 years for females are called 'bulges'.

Figures 3.3 and 3.4 give the population pyramids for the country in 1985 and 1974 to bring out the similarities and differences. In any case, it is clear that the population of Sierra Leone continues to be young with more than 40 per cent of the population under age 15 and only less than 8 per cent over age 60 and 6 per cent over age 65. Since there is so far no evidence that the growth of population in Sierra Leone has been influenced by any unusual changes in fertility or mortality, or international migration the observed distortions in the age distribution can possibly be accounted for by inaccurate reporting and recording of ages, and the possible under or over-enumeration of certain age groups.



In general the districts show features similar to those for the entire country. In each district, the population aged 0-4 years and 5-9 years form approximately one-third of the population. There are also a number of irregularities and distortions in the age-sex composition. For example, there are troughs at ages 20-24 years and 54-55 years for females. Only in the Western Area, is the age distribution regular, with the population size decreasing by age with advancing years.

Confirmation of the relative inaccuracy of the five year age-sex data is provided by the United Nation Age-Sex Accuracy Index (United Nation 1955). As shown in Table 3.9 the age-sex accuracy index for Sierra Leone is 42 in 1985 as compared with 40 in 1974 indicating that both in 1985 and 1974, the quality of five year age group data is poor and has somewhat deteriorated, According to the United Nations an index of 'over 40' signifies highly inaccurate data, and implies a high level of inaccuracy in the age-sex data for Sierra Leone .

TABLE 3.9 UNITED NATIONS JOINT SCORE SIERRA LEONE

AGE	1985		MAR RATIO DIF.		FAR RATIO DIF.		SEX RATIO DIF.1		RATIO DIF.2
	MALE	FEMALE							
0	265291	261581					101	-0	
5-	243955	240720	106	6	108	8	101	11	6
10-	167187	148214	92	-8	84	-16	113	-25	-18
15-	146675	166596	103	3	108	8	88	-7	9
20-	111513	137725	92	-8	94	-6	81	-1	3
25-	114807	143378	106	6	107	7	80	3	2
30-	91378	109933	94	-6	97	-3	83	14	5
35-	89235	92125	106	6	102	2	97	1	-6
40-	66449	67993	93	-7	96	-4	98	20	10
45-	63835	54085	105	5	98	-2	118	-10	-15
50-	49337	45564	99	-1	104	4	108	13	11
55-	37113	30652	93	-7	87	-13	121	-16	-15
60-	36476	34864	106	6	112	12	105	6	11
65-	26993	24299					111		
SCORE				6		7		10	9

UN JOINT SCORE TYPE 1 = 42

UN JOINT SCORE TYPE 2 = 41

AGE	1974		MAR RATIO DIF.		FAR RATIO DIF.		SEX RATIO DIF.1		RATIO DIF.2
	MALE	FEMALE							
0	216701	223328					97	4	
5-	209682	208002	109	9	110	10	101	15	6
10-	135156	116783	92	-8	82	-18	116	-30	-23
15-	109930	128553	98	-2	106	6	86	-2	14
20-	92802	111279	92	-8	94	-6	83	3	3
25-	108214	124653	109	9	109	9	87	2	-1
30-	86759	97959	95	-5	97	-3	89	11	4
35-	82537	83167	104	4	102	2	99	5	-3
40-	65754	62798	96	-4	97	-3	105	13	4
45-	58747	49708	102	2	98	-2	118	-1	-7
50-	47223	40225	102	2	103	3	117	8	4
55-	32232	25164	88	-12	84	-16	125	14	-11
60-	34937	31535	113	13	117	17	111	1	8
65-	21760	19402					112		
SCORE				6		8		8	7

UN JOINT SCORE TYPE 1 = 40

UN JOINT SCORE TYPE 2 = 36

MAR = Male Age Ratio FAR = Female Age Ratio

DIF: For MAR and FAR this denotes difference of the ratios from the expected 100

DIF 1: For Sex ratios it denotes successive first differences and

DIF 2: Denotes half of successive second differences.

UN Joint Score is the sum of Male and Female Age Ratio Scores plus 3 times Sex ratio score

### 3.4 Analysis of Age- Sex Structure

The study of the structure of a population is important to understand the dynamics of change. For instance, the population of Sierra Leone with a large proportion of children and of women in the reproductive ages, augur for a high fertility. To study the structure, we employ two tools - the mean and median age of the population. For the 1974 and 1985 census data, the mean ages were quite similar 22.6 in 1974 and 22.3 in 1985. The corresponding median values were: 20.5 in 1974 and 19.5 in 1985. However, one can discern a decline in both the mean and median which imply that the population is 'younging'.

Many aspects of socio-economic planning require data for special categories of population, for example children aged under 5 years, the pre-labour force population, which comprises children aged under 15 years; the working age population which includes persons aged 15-64 years; and the population no longer in the labour force, that is persons aged 65 years and over. The relative sizes of these broad age groups for Sierra Leone are shown in Table 3.10.

The figures show that the population is relatively young; 16.5 per cent are under age 15 years, 52.9 percent are aged 15-64 years and 5.6 per cent are aged 65 years and over. Differences between males and females are small; more males than females, at younger and at the oldest age groups and more females in the reproductive ages.

The national picture of a population pyramid with a broadbase is repeated for most of the districts.

The proportion of children aged under 5 years varies from 14.6 percent in the Western Area to 18.5 percent in Kambia, while the sex differences indicate that there are more males than females in all districts except Kenema, Kono and the Western Area. This difference is consistent with the high sex ratios observed at these ages. But lack of good vital registration data precludes any evaluation of how these differences are affected by sex differences at birth, or in infant and child mortality in various districts. But some indirect techniques will be applied to evaluate the quality of the data.

The first method is comparing the births reported in the last one year and deaths among them with the number of infants reported in the census. If the data are accurate, they should be consistent with each other. The number of births reported for the last year was 115710 of which 11505 were reported dead. Thus the surviving number of children who will be aged 0 at census will be 104205 as against the reported 123173. Thus there is an inconsistency between these figures and the number of survivors being larger than the number born, indicates that the birth reporting indeed was very poor. The birth rate based on the reported births is 36.3 which indicates a more than thirty per cent omission of births. The infant mortality rate based on the reported births and deaths can be computed approximately by assuming that the reported deaths constitutes only two thirds of all infant deaths which might occur. Under this assumption the infant mortality rate =  $(11505/115710)(3/2) = .149$  i.e., 149 infant deaths per 1000 live births, which also looks rather low as compared with the more than 200 reported for 1974. Thus it looks that the infants reported in the census may not be too bad. To test the relative accuracy of the reported number of infants, we apply Mortara's method relating the infants to births through infant mortality by the equation:

$B = P_0/(1-.67 \text{ IMR})$ , where B is the number of births,  $P_0$  is the number of infants reported and IMR is the infant mortality rate. The coefficient .67 is called a separation factor. The equation is not very sensitive to the value of IMR and therefore, a reasonable value of IMR can be assumed to check the completeness of infant enumeration. Using an estimate of 190 for IMR, the number of births estimated on the basis of the infants enumerated (125270) will be around 144000 which is about 25 per cent higher than the number of births reported. The birth rate based on these births can be calculated by dividing the births by the average population. The mid year population is approximately equal to  $P(1.023)^{-5}$  where P is the total population enumerated in 1985 and 2.3 is the estimated growth rate. The estimated birth rate therefore comes out as :

$$144000/3222901(1.023)^{-5} = 144000/3186465 = 45.2$$

This is quite reasonable, but keeping in mind that in 1974 the birth rate was estimated as around 48, it raises the suspicion that there might have been some under enumeration of infants as well.

We have noted that the number of children reported as aged 1 and 2 are rather too low and therefore raises the query as to the completeness of enumeration of the child population as evidenced in most developing countries. To check whether the child population aged 0 - 4 is reasonably covered, we can apply a similar technique by reverse surviving the children aged 0-4 reported for the five years to obtain births during the period and obtaining an estimate of birth rate for the period.

The number of children aged 0 - 4 reported was 526872 and constitutes around 16.3% of the population. Even though it looks reasonable, one would have expected a slightly higher proportion with the rather high fertility estimated for the country. To evaluate the completeness of coverage of the child population we can use the enumerated child population with an assumed level of life expectation providing the survival ratios to enable one to obtain the estimated births of the past five years. With the mid year population for the period obtained either by reverse surviving the entire population or by using an assumed growth rate, we can calculate the average birth rate for the period. Here we shall use the simple method based on growth rate which is known to be not much different from the full reverse survival of the population.

Since no estimate of mortality is available other than the estimates of infant, early childhood and other mortality parameters from the census, we use the model North life tables with an expectation of life at birth of around 41 years ( a slightly higher or lower value for the expectation of life does not affect the use of the technique, especially when the full reverse survival ratio technique is utilised ) to obtain the survival ratio of births to age 0-4. This value is around .8 and therefore the estimated number of births during the five years based on children aged 0-4 comes out as =  $526872/.8 = 658590$  or an average of 131718 births per year. The mid year population can be obtained either by reverse surviving the 1985 population by age group and sex for the five years prior to the census, or by growth rate method. It can also be interpolated from the 1974 and 1985 figures. We shall use the growth rate method.

The observed growth rate between 1974 and 1985 was 2.3% and therefore the estimated mid year population 1980-85 will be :

$$P_{1982.5} = P_{1985}(1.023)^{-2.5} = 3222901(.9447) = 3044794$$

and hence the birth rate will be  $1000(131718/3044794) = 43.3$ .

With an estimated birth rate of 48 - 50 , this indicates that the population aged 0-4 is underenumerated to the extent of around 11 - 15%.

### 3.4.1 Ages Under 15 Years

Children aged 5-9 years represented around 15% of the population and with the high fertility-mortality regime seems reasonable.

Considering the children under age 15 we note that it was 1327938 and constituted 41.2% of the population and varied from 38.7 percent in Pujehun to 45.5 percent in Kono. The proportion of males at these ages exceeds that of females in all districts except Kenema, Kono, Port Loko and the Western Area. For males, the proportions vary from 38.2 percent in Kono to 49.5 percent in all districts except Bombali and for females, from 36.6 percent in Pujehun to 42.2 percent in Kono.

To evaluate the completeness of enumeration of this group, we can use the reverse projection technique. The children under age 15 are the survivors of the births of the past 15 years . Using model life tables with life expectation around 40 years, the survival ratio from birth to age 15 comes out as .65 and therefore the estimated number of births for the 15 years prior to the census will be  $= P_{0-14}/.65 = 1327978/.65 = 2042982$  and therefore the average annual number of births will be  $2042982/15 = 136199$ . The mid year population 1970-85 will be

$$= \text{Population of 1985 } (1.023)^{-7.5} = 3222901(.8432) = 2717564.$$

Hence the estimated birth rate  $= 1000(136199/2717564) = 50.1$

This looks reasonable and perhaps even on the higher side. Part of the problem of getting a bloated birth rate could be the estimation of the mid year population or a value of the survival ratio which may be on the lower side. For instance had we used a slightly lower growth rate, which actually would represent the fact of increasing growth rate over the period, we would get a different picture. For instance, with a growth rate of 2%, the mid year population will be  $= 3222901(1.02)^{-7.5} = 2778086$  and thus the birth rate would be  $= 1000(136199/2778086) = 49.0$ . A slightly higher value of survival ratio of .67 would decrease the births from the 136199 obtained earlier to 132133 and thereby reduce the estimated birth rate by around 3% to between 48.6 and 47.5 . In order to reduce the uncertainty of this, we use another technique proposed by Venkatacharya and Tesfay which uses only the proportion under age 15 and the probability of a birth surviving to exact age 5  $= I_5$  . The value of  $I_5$  is obtained by the Brass technique on the proportion of children surviving to mothers aged 25-29 and is usually considered as robust. The 1985 census analysis indicated that  $I_5$  was about .675. The technique calculates the birth rate of the past 15 years by the formula:

$b = 10 C(0-14) e^{7.5r}/(.365 + 14.6I_5)$  , where  $C(0-14)$  is the reported proportion of children under age 15,  $r$  is the intercensal growth rate and  $I_5$  is the probability of a birth surviving to exact age 5. Usually the data for the citizen population is preferred because of migration.

For the data on hand,  $C(0-14) = 41.8$ ,  $r = .023$  and  $I_5 = .675$ . Therefore

$$\begin{aligned} b &= 418 ( e^{(7.5)(.023)} ) / (.365 + 14.6(.675)) \\ &= 418(1.1883)/10.22 = 49.67/10.22 = 48.6 \end{aligned}$$

This is quite close to the estimated birth rate and therefore there does not seem to be much under or over enumeration in this age segment excepting the already indicated under enumeration of the infants and children aged 1 - 4 years. This under enumeration amounts to around 63000 persons or under 2% of the total population.

### 3.4.2 Ages 15-64 Years

The population aged 15-64 years constituted 52.9 percent of the population and was over 50 per cent in most districts excepting Bombali, Kambia and Port Loko . However there are significant differences between the sexes. In each district, over 50.0 percent of the female population is at these ages, but only four districts namely, Bo , Kenema, Kono and the Western Area have more than 50.0 percent of males at these ages.

Variations between the districts, and between the sexes, may be the result of differences in the opportunities for employment outside subsistence agriculture. Also some amount of age reporting errors whereby females tend to be reported within the reproductive ages by shifting young children below age 15 to the age range 15 to 49 and shifting of men from ages 40 or below to older ages, may have bloated up the female population and reduced the males in these age ranges.

### 3.4.3 Age 65 Years and Over

With 5.6 per cent of the population reported as aged 65 and over, the population of the country is far from an ageing population. In all districts, the proportion of old people in the population is relatively small, varying for both sexes, from 3.1 percent in the Western Area to 8.6 percent in Pujehun. In all districts, except the Western Area, the percentage of males is slightly higher than for females.

A combination of factors, including high birth rates and low levels of life expectancy, may explain the low proportion of old persons in the

population. Some age exaggeration by males may have increased their relative proportion despite the fact that male mortality is generally higher than female.

### 3.5 Changes in Age Composition (Broad Age Groups)

Table 3.11 indicates that the population is however getting younger. Between 1974 and 1985 the population aged under 15 years increased by 20.2 percent, or an annual growth rate of 1.7 percent. The youngest ages, that is under 5 years, increased by 20.4 percent, or an average growth rate of 1.7 per cent per annum. In contrast, ages 15-64 years increased at a slower rate; by 15.2 per cent, or an annual rate of growth of 1.3 per cent, while the population aged 65 years and over, increased by 26.7 per cent, or 2.2 per cent per annum.

There are significant differences between the sexes. At ages under 5 years, under 15 years, and 65 years and over, the intercensal increase was higher for males than females; but at age 15-64 years, the number of females increased faster than for males.

Intercensal changes in broad age groups show considerable variation between districts. Increases in the population at ages under 15 years range from 9.6 percent, or 0.8 percent per annum, for Pujehun, to 40.8 percent, or 2.7 percent annum in the Western Area. However for the youngest age groups, that is under 5 years, a similar pattern of differences has been observed between the various districts.

In contrast, for ages 15-64 years, the rate of growth is slower. The population declined by 9.3 percent in Kono, but increased from 2.8 percent, or 0.3 per cent per annum in the Western Area. At the oldest ages, that is 65 years and over, the population has increased in all districts, from 16.0 percent in Moyamba to more than 20.0 percent in all other Districts.

There have been significant differences between the sexes in the rates of population change for the various broad age groups.

At ages under 15 years, the number of males has increased faster than for females in all districts except Pujehun and Kailahun. These two districts show slightly higher female increases. For ages 15-64 years the pattern of change is less consistent. Kono has experienced a decline of 17 percent. But in Bo, Pujehun, Kailahun, Bombali and Tonkolili, males have increased faster than females, while in the rest of the country the rate of increase of females is greater. Similarly, the regional differences between the sexes at ages 65 years and over shows no consistent pattern.

The influences of the various demographic and socio-economic factors which have contributed to the regional variations in the sizes of the broad age groups in 1985, and the changes since 1974, can only be assessed with the aid of supplementary data.



TABLE 3.11: PERCENTAGE CHANGE AND AVERAGE ANNUAL GROWTH RATE IN TOTAL POPULATION BY BROAD AGE GROUP AND DISTRICT 1974 - 1985

DISTRICT	PERCENTAGE CHANGE					AVERAGE ANNUAL GROWTH RATE				
	Under 5 yrs	Under 15 yrs	15-64 yrs	65 & over	All Ages	Under 5 yrs	Under 15 yrs	15-64 yrs	65 & over	All Ages
BOTH SEXES										
Sierra Loene	20.4	20.2	15.2	26.7	17.8	1.7	1.7	1.3	2.2	1.5
Bo	27.9	27.5	16.8	28.7	21.6	2.3	2.2	1.4	2.3	1.8
Bonthe	33.3	25.7	10.1	29.5	17.3	2.6	2.1	0.9	2.4	1.5
Moyamba	16.4	11.5	2.8	16.0	7.2	1.4	1.0	0.3	1.4	0.6
Pujehun	9.5	9.6	5.3	22.9	8.3	0.8	0.8	0.5	1.9	0.7
Kailahun	38.6	34.4	29.2	31.4	31.4	3.0	2.7	2.4	2.5	2.5
Kenema	27.8	34.0	19.5	28.1	25.3	2.3	2.7	1.6	2.3	2.1
Kono	3.5	9.5	-9.3	20.5	-1.7	0.3	0.8	-0.9	1.7	-0.2
Bombali	16.8	14.7	21.2	29.3	18.6	1.4	1.3	1.8	2.4	1.6
Kambia	23.0	16.9	13.2	27.8	15.6	1.9	1.4	1.1	2.3	1.3
Koinadugu	11.4	10.2	14.7	29.8	13.3	1.0	0.9	1.3	2.4	1.1
Port Loko	13.7	12.2	9.3	25.0	11.4	1.2	1.1	0.8	2.1	1.0
Tonkolili	16.2	10.5	24.1	29.1	18.2	1.4	0.9	2.0	2.3	1.5
Western Area	34.2	40.8	39.1	31.1	39.5	2.7	3.2	3.0	2.5	1.3
MALE										
Sierra Loene	22.9	21.0	12.7	29.1	17.0	1.9	1.7	1.1	2.3	1.4
Bo	30.8	28.1	18.2	28.0	22.7	2.5	2.3	1.5	2.3	1.9
Bonthe	36.7	26.5	7.1	28.6	16.2	2.9	2.2	0.6	2.3	1.4
Moyamba	20.3	13.1	0.2	15.4	6.6	1.7	1.1	0.0	1.3	0.6
Pujehun	11.9	9.0	5.5	31.2	8.9	1.0	0.8	0.5	2.5	0.8
Kailahun	42.5	34.1	31.2	40.0	33.1	3.3	2.7	2.5	3.1	2.6
Kenema	30.5	35.1	17.7	37.0	25.2	2.4	2.8	1.5	2.9	2.1
Kono	5.3	10.3	-17.3	24.6	-7.2	0.5	0.9	-1.7	2.0	-0.7
Bombali	15.2	15.2	25.3	31.5	20.5	1.5	1.3	2.1	2.5	1.7
Kambia	26.1	18.0	11.0	33.4	15.7	2.1	1.5	1.0	2.7	1.3
Koinadugu	12.5	10.4	13.3	28.3	12.6	1.1	0.9	1.1	2.3	1.1
Port Loko	15.9	12.7	6.8	22.7	10.5	1.4	1.1	0.6	1.8	0.9
Tonkolili	19.1	12.1	30.8	31.8	21.7	1.6	1.0	2.5	2.5	2.2
Western Area	37.3	43.0	32.8	28.2	36.5	2.9	3.3	2.6	2.3	2.9
FEMALE										
Sierra Loene	17.9	19.4	17.6	24.1	15.6	1.5	1.6	1.5	2.0	1.6
Bo	25.0	26.9	15.6	29.4	20.6	2.1	2.2	1.3	1.9	1.7
Bonthe	30.0	24.9	12.8	30.5	18.3	2.4	2.0	1.1	2.5	1.5
Moyamba	12.6	9.9	5.1	16.7	7.7	1.1	0.9	0.5	1.4	0.7
Pujehun	7.3	10.2	5.3	15.2	7.7	0.6	0.9	0.5	1.3	0.7
Kailahun	34.9	34.7	27.5	22.5	29.9	2.8	2.7	2.2	1.9	2.4
Kenema	25.3	33.0	21.4	16.9	25.5	2.1	2.6	1.8	1.4	2.1
Kono	1.6	8.8	2.2	15.4	5.3	0.1	0.8	0.2	1.3	0.4
Bombali	15.6	14.2	18.4	26.9	17.0	1.3	1.2	1.5	2.2	1.4
Kambia	19.9	15.6	14.9	21.9	15.5	1.7	1.3	1.3	1.8	1.3
Koinadugu	10.2	10.0	15.8	31.5	13.9	0.9	0.9	1.3	2.5	1.2
Port Loko	11.6	11.7	11.3	28.2	12.3	1.0	1.0	1.0	2.3	1.1
Tonkolili	13.1	8.9	19.0	26.3	15.0	1.1	0.8	1.6	2.1	1.3
Western Area	31.1	38.6	47.0	34.0	42.9	2.5	3.0	3.6	2.7	3.3

### 3.6 Age Dependency Ratios

The relationship between population in ages 0-14 years, 15-64 years and 65 years and over is usually expressed by the Age Dependency Ratio. The Total Dependency Ratio relates the sum of population in ages 0-14 years and 65 years and over to the population aged 15-64 years, multiplied by a constant, usually 100. Separate calculations can be made of the Child Dependency Ratio or the Old Age Dependency Ratio by restricting the numerator only to ages under 15 years, or to 65 years and over.

Generally, the higher the Age Dependency ratio the greater the proportion of children and old persons in relation to the working age population, and therefore, the greater the 'burden' that the working age population has to carry. In contrast, lower age dependency ratios usually signify better prospects for rapid socio-economic development. In 1985, the population has a Total Dependency Ratio of 89.4, a child Dependency Ratio of 78.5

and an old-age Dependency Ratio of 10.9 (Table 3.12). Age-dependency ratios show considerable variations between Districts. The Total Dependency Ratio varies from 77.4 in Kono to 105.3 in Bombali, the Child Dependency Ratio from 71.2 in Kono to 93.4 in Bombali, and the Old Age Dependency Ratio from 5.9 in the Western Area to 16.2 in Pujehun.

These variations reflect differences in the age composition between the districts; the highest Child Dependency Ratios and Total Dependency Ratios are found in districts with the largest proportion of children, while the highest Old Age Dependency Ratios are found in the districts with the largest proportion of old persons. These variations can be explained by many factors including differences in fertility and mortality, in the availability of opportunities for education and employment affecting migration, and in the extent of age misreporting.

TABLE 3.12: AGE DEPENDENCY RATIOS FOR SIERRA LEONE AND DISTRICTS 1985

DEPENDENCY RATIO [PER 100 PERSONS AGED 15 - 64 YEARS]			
DISTRICT	TOTAL	CHILD	OLD AGE
Sierra Leone	89.4	78.5	10.9
Bo	87.3	73.4	13.9
Bonthe (including)			
Sherbro Urban Dist	90.1	74.6	15.5
Moyamba	92.7	77.0	15.7
Pujehun	89.4	73.2	16.2
Kailahun	94.5	80.4	14.1
Kenema	82.6	71.8	10.8
Kono	77.4	71.2	6.2
Bombali	105.3	93.4	11.9
Kambia	103.8	91.5	12.3
Koinadugu	89.6	80.9	8.7
Port Loko	99.7	87.5	12.2
Tonkolili	93.8	82.5	11.3
Western Area	77.9	72.2	5.7

### 3.6.1 Changes in Age Dependency Ratios

Changes in the sizes of the population of the broad age groups, are reflected in changes in the dependency ratios.

Between 1974 and 1985 the Total Dependency Ratio increased by 5.1 per cent, the Child Dependency Ratio by 4.4 per cent and the Old Age Dependency Ratio by 10.1 per cent, (Table 3.13).

The districts however show significant variations in the pattern of change. Bombali, Koinadugu and Tonkolili have experienced declines of between 2 per cent and 11.0 per cent in both the Total Dependency Ratio and Child Dependency Ratio; while the Western Area has experienced a decline of 5.0 per cent in Old Age Ratio. For all other districts, the age ratios have increased. The percentage increase in Total Dependency Ratio has varied from 0.8 in the Western Area to 21.7 in Kono; the Child Dependency Ratio from 1.3 in the Western Area to 20.7 in Kono. But for the Old Age Dependency Ratio, the increase varied from 2.2 per cent in Kailahun to 34.8 in Kono.

TABLE 3.13: PERCENTAGE CHANGE IN AGE DEPENDENCY RATIO FOR  
SIERRA LEONE AND DISTRICT 1974 - 1985

DISTRICT	PERCENTAGE	POINTS	
	TOTAL DEPENDENCY RATIO	CHILD DEPENDENCY RATIO	OLD AGE DEPENDENCY RATIO
Sierra Leone	5.1	4.4	10.1
Bo	9.1	9.0	9.4
Bonthe (including)			
Sherbro Urban Dist	14.8	14.2	17.4
Moyamba	9.1	8.3	12.9
Pujehun	6.0	4.0	16.5
Kailahun	3.7	4.0	2.2
Kenema	11.5	12.2	6.9
Kono	21.7	20.7	34.8
Bombali	-4.1	-5.4	7.2
Kambia	4.3	3.3	12.8
Koinadugu	-2.5	-3.9	13.0
Port Loko	4.0	2.7	14.0
Tonkolili	-9.4	-10.9	3.7
Western Area	0.8	1.3	-5.0

### 3.7. Summary and Policy Implications

This analysis has shown that Sierra Leone has a small population of less than 4 million; an average annual growth rate of about 2.3 per cent, which is lower than that for the continent or the West African Sub-region; and a relatively young population which is getting younger. These characteristics are a reflection of high and declining levels of mortality, combined with high levels of fertility which show a great resistance to decline.

A continuation of these trends will have serious implications for future socio-economic growth in the country. The relatively slow rate of population growth may, under more dynamic economic conditions have the impact of minimising the population burden on resources and so permit a more rapid rate of population growth. However, an increasing proportion of national investment will be required to provide additional health, education, housing and social welfare facilities to meet the needs of a population that is increasing in size as well as getting younger, and which continues to experience high levels of infant and child mortality. These implications will be crucial in the formulation and implementation of future national population and socio-economic development policies and plans.

However, basic to all future planning efforts, is the availability of accurate census data on population size and its age structure. One of the primary objectives of the next national population census, scheduled for 1996, would be the provision of accurate age data. To achieve this goal, geographic preparations should commence sufficiently early to demarcate the enumeration areas and field enumerators should be well trained on methods of eliciting accurate information on various characteristics including the age of respondents. This would ensure that ages are recorded with a greater degree of accuracy, and so reduce the amount of distortion which the wrong reporting of age would have on the overall age pattern of the population. Also field supervision should be tightened so that the quality of data is acceptable and little time need be spent on editing, correction, consistency checks etc. in the office.

### 3.8. Conclusion

Considerations of the population size, sex composition and age structure, and changes in these characteristics are fundamental in many aspects of human endeavour including national and local government administration, in politics and the formulation and implementation of socio-economic policies, plan, programmes and projects.

This present chapter should fulfil many of these requirements at the national and district level. It should also provide the basis for more in depth studies to determine causes and consequences of some of the intercensal changes that have occurred at both national and district levels.

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## CHAPTER 4

### NUPTIALITY AND FERTILITY

F.YUMKELLA and D.E. KAINDANEH

#### 4.1 Concepts

##### 4.1.1 Nuptiality

Evidence from empirical literature shows that nuptiality and its associated processes with regard to marriage formation and/or dissolution are relatively recent in the field of demography. This has earned it increasing attention today. Its origin as a phenomenon to reckon with may be traced to the post world war marriage and baby 'boom' period of 1945 in Europe and the new world (present day North America).

The study of nuptiality is often faced with the problem of definition. The definition of marriage as understood in non-African cultures will not be applicable in our context. As rightly perceived, marriage in Africa and other developing countries "is a developing process" rather than an event at a point in time marking the start of cohabitation of husband and wife. Such an observation is apt essentially because of the variations prevalent between and within cultures. Marriage is therefore transitory in nature and the accomplishment of each stage is regarded as vital. In place of the conventional definition used in developed regions, marriage for our purpose was defined as any form of cohabitable sexual union that is more or less stable between a man and a woman regardless of whether or not it has been sanctioned legally or by religious, customary and any other forms of ceremonies. This definition takes care of consensual unions as well.

In spite of the prevailing definitional problems associated with marriage, marriage in the Sierra Leone society is seen as the main socially sanctioned institution for any fruitful sexual relations that will thus ensure continued survival. This sanction notwithstanding, pre-marital births do occur.

The marital status composition too has been recognized as the most important factor in population dynamics affecting fertility tremendously and to a lesser extent mortality and migration. Its effect is also felt on other socio-economic phenomena such as school attendance, family formation, households, and labour force participation in late adolescent and young adult age groups.

In a nutshell, socially, an individual's role in society, is to a large extent dependent on the person's marital status. This is so in traditional societies like Sierra Leone where marriage is an integral part of the society through which everyone is expected to pass. The reason being that this is the only sanctioned social institution through which procreation is recognized.

The timing of marriage too is an important mechanism for regulating reproduction. In the case of the former, it has been recognized as the most important factor in population dynamics affecting fertility whereas in the latter it is seen as an important mechanism for regulating reproduction. The important recognition accorded nuptiality has brought it into focus as a relevant demographic variable for fertility studies both in developed and developing countries.

##### 4.1.2 Fertility

As in the case of nuptiality, the concept of fertility is faced with definitional problems across cultures. In other words, variations do exist in the interpretation of the concept of fertility. Fertility is defined as the frequency of childbearing among the population; fertility rate therefore refers to the relative frequency with which births actually occur within a given population. It can be discerned from the definition of fertility that as a dynamic force influencing population change, it can be given a time-scale dimension namely current and lifetime fertility.

Current fertility levels usually refer to births within a calendar year from the time of the survey or census. Lifetime fertility is the retrospective measure of fertility or average parity that is obtained from data on children ever born (CEB).

Natural, desired or expected fertility are additional concepts that deserve some mention with respect to their applicability in the African context. Natural fertility is defined as fertility that results when there is no conscious or deliberate use of either traditional or modern methods of contraception.

#### 4.2 Existing Information and Literature Review on Nuptiality and Fertility in Sierra Leone

##### 4.2.1 The Institution of Marriage

The importance of this institution in Sierra Leone lies in the fact that it incorporates the social, economic, legal, cultural and other factors the society considers vital for its existence. It is therefore seen as an integral part of the socio-economic and cultural cycle through which everyone is expected to pass as it upholds certain norms which every member should observe. Violations of such prohibitive norms such as incest, cross-cousin marriages etc are expiated according to the prescribed norms of the ethnic group in question.

Prohibitions in the past too on marriage made it largely exogamous and residences were either patrilocal or uxorilocal depending on the wealth of a man. The growth of towns and their socio-economic opportunities saw migration into such destination nodes. Such settlements largely influenced the residence pattern of spouses and in most cases could be described as neolocal. This does not however imply that patrilocal and uxorilocal residences do not exist. What is emphasised here is that modernization to a large extent modified them

considerably so that the leading pattern is neolocal. Another consequence of modernization in such settlements is the modification of most of the prohibitive norms amongst ethnic groups. These do have implications for childbearing decision making and is important, as the primary aim of contracting unions is mainly for procreation.

Customary unions are the most commonly contracted unions and had been in existence even before the introduction of religious/civil/ordinance marriages. The origins of the latter may be traced to Western and Eastern cultures. The Western type of union was superimposed through Christianity, formal education etc, whereas the eastern union was through Islam. A feature common to both Christian and Islamic marriages is that they are certified and mostly contracted by the elite group, though it is not a precondition for contracting such marriages. Although provisions have been made to certify customary unions, the practice is not as 'widespread' as is the case of religious or civil unions. Consensual unions are the only uncertified unions contracted.

Polygamy is another feature of our marriage system. Its practice is largely attributed to social and economic factors underlying marriage. It is widely practised in customary, consensual and Islamic unions. The extent to which it is contracted by those who enter Western union types in our society is beyond the scope of the analysis. Finally society permits remarriages of spouses whose unions have been dissolved on legal grounds or by death of a spouse.

#### 4.2.2 Nuptiality

Demographic research in Sierra Leone over the years was centred around fertility, mortality and migration. Very little has been done by way of investigating nuptiality and fertility relationships. The few studies carried out by social anthropologists, sociologists, ministers of religion and lawyers so far largely dwelt on elaborate descriptions of marriage procedures and how they are contracted (see Aldridge, 1910; Aubert, 1936; Finnegan, 1965; Harris and Sawyer, 1968; Harrel-Bond, 1975;). A deviation from this norm was made by Harrel-Bond (1976). Her investigation centred on changes influenced by modernization regarding family type in order to ascertain family formation attitudes. Joko-Smart (1983) attempted a detailed account of customary family law by bringing out the legal implications of the cultural norms in such unions.

Dorjahn (1985) and Isaac (1985) may be credited as the pioneers who attempted relating fertility with nuptiality in the rural settings of Sierra Leone. The former carried out his investigation in a Temne area whereas the latter conducted his in a Mende area. Both studies investigated fertility differentials according to type of Marriage. In this case monogamous versus polygynous unions. Kaindaneh (1988) for the first time carried out a detailed examination of the nuptiality and fertility relationships in Greater Freetown. In this study ever-married women in the reproductive ages of 15-49 years were investigated. It was found out that the most important nuptiality variable that seemed to directly influence marital fertility was age at first marriage. The median and mean ages at first marriage were found to be 18.3 and 18.9 years respectively. A singulate mean age at marriage (SMAM) of 19.3 for females indicated an early age at marriage which thus implies longer period of exposure to the risk of childbearing. The early entry into sexual unions is seen to be an expression of the cultural norm.

The high fertility estimates derived from various sources clearly indicate that marriages are contracted with the primary aim of procreation. Childlessness is frowned upon in unions that fail to live up to this expectation. It is in most cases one of the cause for the dissolution of unions. Therefore there is no doubt that the nuptiality pattern influences fertility levels and differentials in Sierra Leone.

#### 4.2.3 Fertility levels and Differentials

##### 4.2.3.1 Data sources

Sierra Leone like most African countries south of the Sahara suffer from limited and defective data on vital statistics. Such limitations have inhibited the estimation of fertility levels by traditional methods as obtains in developed countries where data of similar nature are regarded as satisfactory. The estimation of fertility levels has thus been based on indirect methods often used on retrospective data on births.

In Sierra Leone, although censuses have been carried out in the country since 1881, retrospective questions on fertility were included in census schedules for the first time in 1974. Prior to this date, estimates of fertility were based on the age-sex composition of the 1963 census and subsequent surveys conducted after the particular census. These studies apart from confirming the high fertility levels characteristic of sub-Saharan Africa, also examined fertility differentials by ethnicity. Geographically, a pattern of high fertility for Northern Sierra Leone and lower fertility in Eastern and Southern Sierra Leone were observed.

The 1974 population census on the otherhand provided the first opportunity for collecting information on retrospective and current fertility at the sametime throughout the country (Okoye,1980).

The Post-1974 estimates made, include those of Sheku (1976), Okoye (1980), Gage (1986), Kaindaneh and Weekes (1988) and Campbell (1989). Sheku and Okoye are credited to have first used the Brass P/F ratios in estimating fertility whereas Kaindaneh and Weekes estimated marital fertility in the Greater Freetown area.

From the 1974 census data an adjusted Crude Birth Rate (CBR) of 49/1000 and a Total Fertility Rate (TFR) of 6.5 children /woman was obtained. Differentials in fertility levels were observed by administrative region, educational status, ethnic group and by rural/urban residence.

#### 4.3 The Nuptiality and Fertility Data

##### 4.3.1 Nuptiality Data

Respondents were asked to declare their current marital statuses at the time of interviewing as to whether they were never married,

betrothed, engaged, married, separated, divorced or widowed. Since cohabitation was the sole criterion for respondents to be recorded as married, women who reported as been engaged or betrothed were all classified as never married for the purpose of this analysis. Table 4.1 gives the marital status distribution for Sierra Leone and Table A.4.1 gives the corresponding data for the districts.

In the absence of a question on age at marriage in the census, the singulate Mean Age at Marriage (SMAM) is employed to estimate the age at entry into first unions.

Marital stability and remarriages cannot be analyzed because of the absence of question on duration of unions. However the marital status composition would be examined from which inferences could be made.

Table 4.1 Percentage Distribution of Women Aged 10-65+ According to Current Marital status by Current Age, Sierra Leone, 1985 Census

Age Group	Never Married	Married	Separated	Divorced	Widowed	Not Stated
10-14	89.91	7.46	0.14	0.02	0.06	2.35
15-19	39.72	57.52	0.98	0.25	0.33	1.21
20-24	15.33	80.66	1.91	0.50	0.73	0.87
25-29	7.05	88.66	1.95	0.55	1.08	0.71
30-34	4.08	90.27	2.20	0.65	2.02	0.78
35-39	2.75	90.17	2.39	0.82	3.26	0.61
40-44	2.45	86.84	2.67	1.07	6.34	0.63
45-49	2.04	82.60	3.03	1.33	10.45	0.55
50-54	2.11	75.89	3.17	1.42	16.77	0.63
55-59	1.90	68.80	3.19	1.55	23.88	0.70
60-64	1.92	61.43	2.89	1.39	31.60	0.76
65+	1.84	40.44	2.41	1.34	53.04	0.94
Total	21.86	66.50	1.87	0.68	8.07	1.02



### 4.3.2 Fertility Data

#### 4.3.2.1. Lifetime fertility

Questions on children ever born alive to women 10 years and over provided the data needed for estimating lifetime fertility. The distribution by age group of mother however revealed the following discrepancies:

1. An appreciable 13,943 did not give information on the number of children ever born. The occurrence of this phenomenon apparently increased with age. The proportion varied from 0.3% in the 10-14 year age group to 2.5% in those 60 years and above. In the 1974 census data, the number of women in the 'not stated' category with respect to children ever borne was as high as 12.1% in the 15-19 year age group. This sort of discrepancy in fertility data is not peculiar to Sierra Leone. It is believed that young unmarried and childless women are usually recorded under the not stated category.

2. 199 women in the 10-14 year age group and 1553 women in the 15-19 age group were recorded as having six or more children borne alive. Since this is biologically impossible, the error is likely due to either age mis-reporting or the inaccurate recording of the parity of these women.

3. An examination of the age distribution of women in the reproductive age group indicate that the number of women recorded in the age group 20-24 is much smaller than the numbers in the adjacent age group 15-19 and 25-29. It is possible that this is a result of age mis-reporting. Women aged 20-24 might have been wrongly categorized in the 15-19 year age group.

4. The proportion of women reported childless is on average higher in this census than for data collected during the 1974 census (table 4.2). In 1974, 21.5% of all women were reported childless, the corresponding figure for 1985 was 28.4%. The difference was even more prominent between the two censuses for the Northern province. 31.8% of women were reported childless during the 1985 census as compared to 19.3% in 1974.

5. Eighty two women in the 10-14 year age group were recorded as having achieved higher educational level. Since higher education implies at least 12 years of schooling it is obvious that the educational attainment of women in this age group have been wrongly classified. This discrepancy will affect the level of mean parity by educational attainment for women in this age group.

Table 4.2 Percentage (%) Distribution of Women Who Are Childless According To Administrative Districts, By Current Age Of Mothers, Sierra Leone, 1985 Census

REGIONS	AGE GROUP OF MOTHER											Not Stated
	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55+	15+	
SIERRA LEONE	98.2	65.7	30.2	19.2	16.2	14.6	16.4	16.5	19.4	24.2	28.4	1.3
SOUTHERN PROVINCE	98.0	63.1	25.2	13.7	11.5	10.6	12.4	12.4	15.9	19.4	24.9	1.1
BO	98.1	60.2	22.2	12.3	10.6	10.6	12.4	13.4	15.9	19.4	22.5	0.7
BONTHE	97.3	58.8	21.0	12.7	11.1	10.1	12.1	12.1	13.6	17.8	27.7	3.4
MOYAMBA	98.3	62.3	23.4	13.7	12.3	11.2	13.7	13.5	18.6	26.2	24.2	0.9
PUJEHUN	96.7	56.9	22.4	14.8	13.1	12.6	14.7	15.1	17.1	19.5	22.5	0.5
SHERBRO URBAN	99.6	77.4	36.8	15.1	10.6	8.5	9.2	7.9	14.4	14.1	27.7	0.2
EASTERN PROVINCE	97.3	60.4	24.6	14.6	12.1	11.3	13.1	13.2	18.8	28.7	25.8	1.6
KAILAHUN	97.2	57.0	22.8	13.2	11.5	10.4	12.4	12.5	16.5	22.8	23.5	1.0
KENEMA	97.1	59.5	24.9	16.1	13.6	12.9	15.2	15.0	16.5	21.4	26.1	2.6
KONO	97.7	64.6	26.1	14.5	11.2	10.5	11.8	12.1	23.4	41.9	27.8	1.3
NORTHERN PROVINCE	98.2	67.5	35.3	25.1	21.8	19.8	21.2	21.0	22.4	24.8	31.8	1.2
BOMBALI	98.4	67.7	30.4	18.1	14.6	13.2	13.7	13.8	14.8	18.3	26.2	1.3
KAMBIA	98.0	61.9	29.1	19.5	16.1	15.1	18.4	16.0	17.8	20.0	26.6	1.5
KOINADUGU	98.3	69.7	37.6	26.1	22.7	20.6	21.8	22.5	25.6	29.1	33.9	0.2
PORT LOKO	98.4	68.8	39.1	30.5	27.5	25.1	27.1	26.4	27.1	28.7	35.8	1.7
TONKOLILI	97.7	69.3	40.3	31.1	27.9	25.0	25.1	26.2	26.9	28.1	36.7	1.2
WESTERN AREA	99.3	73.9	33.0	18.8	14.8	11.7	12.3	13.3	18.2	29.9	31.9	1.3
GREATER FREETOWN	99.5	77.5	37.7	19.8	13.4	10.1	11.0	11.7	14.5	20.5	33.1	0.5

#### 4.3.2.2 Current fertility

To obtain the current fertility level, information was collected on the details of the most recent birth, with regard to month, year of birth and survival of the last born child. A prominent defect of the data is that 2176 women 50 years and over were reported to have borne their last child within twelve months prior to the census date at an age when it is virtually biologically impossible. The error may have been partly due to misreporting of age and to incorrect dates of the last live birth. Table 4.3 gives the number of children ever born and births in past year by age of mother for Sierra Leone and Table A4.2 gives corresponding data for the district.

Table 4.3 Children Ever Born and Births a year before the census by Current Age for Women Aged 10+, 1985 Sierra Leone

Age Group	Number of Women	Children Ever Born	Births in Past Year
10-14	147866	5253	801
15-19	166001	104629	20830
20-24	137009	256210	27932
25-29	142936	436412	28319
30-34	109703	461119	17313
35-39	91965	457211	11243
40-44	67893	355281	4241
45-49	54010	289874	2102
50-54	45508	232194	2176 (age 50+)
Total	1111085	3307911	114957

#### 4.4 Data Analysis

The Agemarry procedure in the POPSYN integrated demographic program based on the Hajnals method for estimating the pattern of age at first marriage was employed for the analysis of the nuptiality data. The procedure assumes that no marriages occur before age 15 and none after age 54. The unknown marital status cases is handled in one of two ways by the program. It assumes first of all that all the unknown marital status have married at sometime and should be included in the ever-married category. The procedure therefore uses only data for persons explicitly reported as never married. By subtracting never-married from total population, the 'marital status unknown group' is treated as ever-married.

The second assumption is that those of unknown marital status have marital distribution identical to that for the persons for whom marital status was reported (sum of single and ever-married). This, in effect ignores the unknown marital status and computes rates based solely on those for which information was reported. Since there is universally no valid way of dealing with this problem, routine AGEMARRY computes singulate mean age at marriage and proportions marrying at each age by both procedures, permitting the user to make a choice. Results under the second option were selected for this analysis given the insignificant proportions of women in the unknown marital status.

The EASWES programme was used to analyse the data on fertility. The procedure is based on the Coale Trussell model that estimates indirectly, fertility levels from data on children ever born and births in the year prior to the census.

The Coale Trussell model is in turn based on the original Brass P/F ratio method. The true age pattern of fertility is obtained by adjusting the level of observed age specific fertility rate to agree with the level of average parities in age group lower than age 30. The average parities of women in this age group are presumed accurate.

Ratios of average parities (P) to estimated parity equivalent (F) (obtained by interpolation using period and cumulated fertility rate) are calculated for each age group. An average of the ratios obtained for women between 20 and 34 years was used as an adjustment factor by which all the observed fertility rates are multiplied.

In examining the nuptiality-fertility relationship, Coale's index of marriage pattern and a more refined version of this technique by Smith were employed. This is because the index so obtained compares the overall fertility resulting from a given marriage pattern with that derived from a pattern of universal marriage from age 15 to 49.

Coale's index of marriage pattern is defined therefore as  $I_m = \frac{\sum m_i F_i / w_i F_i}{\sum F_i}$ , where  $m_i$ ,  $w_i$ ,  $F_i$  are married women, all women and standard marital fertility levels (Hutterites, 1921 - 1930) respectively in five year age groups 15-19... 45-49.

The index ranges theoretically from zero (0) implying that no one is currently married by age 15-49 to one (1) where everyone is said to be currently married. This index unlike SMAM has the advantage of reflecting the fertility impact of loss of marital exposure, since exposure in the most fertile ages is heavily weighted. A disadvantage of this index however, is that, it may be affected by dissolution of unions. To overcome this, Smith (1978) in a modification, substituted  $I_m$  by  $I_{em}$  in the above index. The  $I_{em}$ , according to him, substitutes ever-married for currently married in Coale's index.  $I_{em}$  therefore indexes the pattern of first marriage and is not affected by marital dissolution. The difference between  $I_{em}$  and  $I_m$  is an indication of the effect of marital dissolution on fertility.

## 4.5 Patterns of Nuptiality

### 4.5.1 Marital Status Composition

The current marital status reported by respondents in the 1985 census is presented in table 4.1. The results show that 66.50 percent were currently married. The percentage married was found to increase from a low level of 7.46 in age group 10-14 to 90.98 in age group 30-34. A systematic decline is observed beyond this age group onto older ages. The drop between age 30-34 from 90.27 to 40.44 in age group 65+ indicates that dissolution of unions is found to increase at older ages. The low and constant proportion never married implies a low probability of marriage at older ages.

The results further reveal that dissolution of marriages on the whole was low. From the data, less than one in every twenty women had dissolved their marriages. This figure is the net dissolution after remarriages had taken place. Out of the three causes of dissolution of marriages recorded, that resulting from widowhood (8.07 percent) was found to be the main cause. This was followed by separation (1.87 percent) and divorce (0.68). Dissolution is seen to increase with age. Women in the older cohorts were found to be relatively vulnerable to marital dissolution than their counterparts in the younger age groups. For example, dissolution due to separation and divorce attain their highest peak with cohort 55-59 beyond this point it starts declining and the possibility of age reporting errors may not be ruled out. When dissolution due to widowhood is examined, the pattern observed was that this phenomenon increased with increasing age even onto the oldest cohorts. A distribution of the not stated cases prorata did not significantly change the trend above.

#### 4.5.1.1 Variations at district level

At district level, slight variations were observed in the current marital status distribution for women. Generally, between 65 to 75 percent of women were reported as married in thirteen districts. Greater Freetown and Sherbro were the only exceptions with average about 47 and 49 percent respectively. This pattern has mostly come from the lower proportion reported as ever married.

The trend in the percentage married rising from a low level in age group 10-14 increasing to older ages was a common place in all districts. Age group 30-34 was identified as having the highest percent before a decline in the percentages commence. In spite of this, however, differences for Bonthe, Sherbro, Pujehun (southern region districts), Tonkolili (Northern region district) and Greater Freetown (where the capital city is located) were observed. Bonthe and Tonkolili recorded the highest percentage married in age group 25-29; Sherbro and Greater Freetown in age group 35-39 and Pujehun in age group 40-44. The sudden fluctuation in the percentages for Tonkolili after the peak age group may be attributed to age reporting errors.

Widowhood was still found to be the main cause of dissolution of unions- An indication that marriages are relatively stable hence the very low percentages for both separation and that for divorce.

### 4.5.2 Proportions Ever-married

Universality or near universality and early marriage have been identified as the two features characterizing marriage in traditional African societies. They have resulted from the norms prevalent in these cultures such as influence of the extended kinship groups on issues relating to the marriage process and subsequent procreation. It is against this background that information with respect to proportions married in the population are vital. The usefulness of this information lies in the fact that it acts as an indicator of how changes occur or have occurred significantly (if any) with regards to early and universality of marriage in the society.

The results in the tables 4.1 show that marriage in Sierra Leone is universal in scope. By age 50 only 2 out of a 100 women were unmarried. The proportions ever-married increases with increasing age rising steadily from 61.1 percent for age group 15-19 to 98.0 percent by age group 50.

#### 4.5.2.1 Variation at District Level

In spite of the fact that marriage is universal by age 50 for all women, variations do exist at each age group for both Sherbro and Greater Freetown. In these two regions, the proportions married are lower than for the remaining regions in the country. For instance, for age group 15-19, Sherbro district has the lowest proportion of ever-married women, 24.2 percent when compared to 30.6 percent for Greater Freetown. All districts in the south, north and east have over 50 percent of women ever-married in this age group. For ages 20-44 Greater Freetown has the lowest proportions married than for the rest of the other districts. The conclusion to be drawn is that marriage is not only universal in scope but appears to occur at very early ages.

## 4.6 Age at Marriage

The age at which marriage commences and the length with which it continues and the proportion who ultimately marry affects the fertility level of the population (Sivamurthy and Seetharam, 1976).

Age at first entry into unions has been used as an approximate indicator of a women's exposure to the risk of childbearing. Early marriage has been identified with most African cultures. The reason being that it occurs soon after puberty. The observed variations within sub-groups in the population from empirical studies may be attributed to the factor of modernization.

The Hajnal's methods of computing Singulate Mean Age at marriage (SMAM) measures the mean number of years spent in a single state among women who ultimately marry. It thus measures the mean age at marriage among those women who ever marry by some pre-defined age limit. The underlying assumption is that the mean age at marriage is equal to the mean duration of single life. The latter can be computed from the proportion of single persons at successive ages if there have been no changes of the age patterns of marriage in the

recent past and if differential mortality and net migration rates by marital status may be considered negligible. Under these conditions a cohort moving through life would have the same proportion single at successive ages as persons at the same ages in the present population.

The results in table 4.4 show that the SMAM for Sierra Leone is 18.0. This figure compares favourably with those of other sub-Saharan countries such as Kenya (19.9), Lesotho (19.6), Ghana (19.3) and other developing regions such as Bangladesh (16.3) and Pakistan (17.1). Entry into unions for the first time in these societies commence in the teenage years. In the case of males the SMAM obtained was 27.43 which suggests males in Sierra Leone marry at a much later age than their female counterparts.

#### 4.6.1 Variations at District Level

Variations were also found to exist at district level. The most significant being that Greater Freetown is the only region with a SMAM over 22 years (22.5) followed closely by Sherbro district with SMAM over 21 years (21.2). At the other extreme with the lowest SMAM under 17 years (16.91) is Kambia closely followed by Kenema district (16.9). A SMAM of 17 years characterizes the remaining districts. The results so far suggest that women enter their first unions in the teenage years. This in itself implies longer exposure period to the risk of childbearing.

TABLE 4.4 SINGULATE MEAN AGE AT MARRIAGE FOR FEMALES 1985  
BY DISTRICT

DISTRICT	Bo	Bonthe	Moyamba	Pujehun	Sherbro Urban
SMAM	17.6	17.3	17.8	17.1	21.2
DISTRICT	Kambia	Koinadugu	Bombali	Tonkolili	Port Loko
SMAM	16.9	17.4	17.6	17.5	17.2
DISTRICT	Kenema	Kailahun Kono	Freetown	Western Rural	
SMAM	17.0	17.1	17.3	22.5	20.1
SIERRA LEONE	18.0				

#### 4.7 Estimates of Fertility

##### 4.7.1 Estimate of Total Fertility from Children Ever Born Alive

The reported average number of children ever born alive (parity) by age group and administrative region is shown in table 4.5. The parity at age 45 or 50 is often viewed as an approximation of the total fertility rate (TFR) on the assumption that the fertility and mortality experience have remained unchanged and that the reporting of children ever born is accurate. If these assumptions hold true, then the TFR for Sierra Leone at 50-54 years is 5.1 children per woman.

A trend of increase in parity with age was as expected up to age 45-49 years. However, women in the older age groups 55 years and over showed a lower average parity as compared with women in the age group 45-49 years. A similar pattern of reporting was observed for the 1974 census data. This feature is very likely reflecting the increasing tendency of older women to omit some of their children in their reporting, especially children who may have died young. The mean parities therefore at age 50-54, the end of the reproductive period, cannot be the true estimate of the TFR. In such circumstances, there is need for correction of the reported mean number of children ever born to obtain a more reliable approximation of the TFR given the inherent assumptions.

##### 4.7.2 Estimate of the Crude Birth Rate from Reported Births in the Past Year

A crude birth rate (CBR) of 36.3/1000 population was obtained on the basis of reported live births of 115710. This estimate of CBR is lower than the true value of around 48-50 estimated in 1974.

In the first instance, the population of Sierra Leone shows a young age structure with 41.2% under 15 years of age. Secondly a completed family size of over five children re-affirm the belief that the current fertility is higher than reported.

##### 4.7.3 The Incidence of Childlessness

The proportion of women who were reported childless by age and administrative region is given in table 4.2. There is a distinctive increase in the proportion of women reported childless for this census relative to the 1974 census for each district and for the country as a whole. The national figure reported for women 15 years and over was 28.4% for 1985 and 21.5% for 1974.

The observed pattern by age was however similar for both censuses. The proportion of women declared childless in each administrative district decreased notably with age, up to age 35-39 and then increased at older ages.

Since Sierra Leone is a pro natalist society, one would have expected the proportion childless to decrease with age, stabilizing at older ages beyond age 35-39 years. The higher incidence of childlessness in the older population may be attributed to pathological sterility or under reporting among older women. The latter reason is more likely. Women classified as childless may have had children who had all died.

The data also strongly suggest that child bearing begins at an early age in Sierra Leone. The proportion of childless women aged 15-19 was 65.7%. This implies that about one third of the women in that age group had had at least one child. It is also worthwhile to note that the age of childbearing is increasing. In 1974, the proportion of 15-19 year old women who were reported childless was 57.8%, indicating that nearly half had had a child.

Table 4.5 Mean Number of Children Ever-Born Alive According To Current Age of Women By Administrative Districts, Sierra Leone, 1985 Census

REGIONS	AGE GROUP OF MOTHER								
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59
SIERRA LEONE	0.630	1.870	3.053	4.203	4.972	5.233	5.367	5.102	4.999
SOUTHERN PROVINCE	0.781	2.198	3.470	4.656	5.358	5.598	5.712	5.183	5.155
BO	0.763	2.156	3.504	4.701	5.370	5.620	5.727	5.352	5.280
BONTHE	0.816	2.178	3.300	4.416	5.129	5.301	5.284	5.188	4.823
MOYAMBA	0.698	2.067	3.329	4.495	5.289	5.533	5.711	5.181	4.784
PUJEHUN	0.971	2.560	3.809	5.022	5.656	5.899	6.108	5.761	5.682
SHERBRO URBAN	0.376	1.707	2.881	4.203	5.250	5.625	5.568	4.536	5.206
EASTERN PROVINCE	0.734	2.081	3.310	4.510	5.258	5.492	5.584	5.132	4.740
KAILAHUN	0.834	2.207	3.441	4.604	5.329	5.542	5.596	5.215	5.042
KENEMA	0.781	2.121	3.302	4.451	5.177	5.323	5.409	5.268	5.097
KONO	0.605	1.954	3.233	4.503	5.290	5.659	5.774	4.914	4.080
NORTHERN PROVINCE	0.581	1.712	2.775	3.842	4.588	4.857	5.011	4.953	5.078
BOMBALI	0.582	1.836	3.052	4.338	5.105	5.456	5.605	5.677	5.665
KAMBIA	0.690	1.940	3.074	4.199	4.848	5.089	5.441	5.229	5.487
KOINADUGU	0.511	1.545	2.573	3.583	4.282	4.521	4.654	4.431	4.628
PORT LOKO	0.554	1.599	2.575	3.492	4.243	4.424	4.523	4.413	4.500
TONKOLILI	0.588	1.692	2.671	3.695	4.515	4.885	4.936	5.017	5.112
WESTERN AREA	0.363	1.454	2.703	3.864	4.822	5.185	5.399	4.987	4.633
GREATER FREETOWN	0.353	1.423	2.673	3.860	4.810	5.169	5.413	5.024	5.036
WESTERN RURAL AREA	0.019	0.466	1.745	2.992	3.972	5.373	5.391	4.770	4.229

#### 4.7.4 The Mean and Median Ages at Child Bearing

Differences in the age pattern of child bearing was also computed in terms of the mean and median ages at child bearing. These measures are calculated on the basis of age specific birth rates. The mean is interpreted as describing the age pattern of child bearing of a hypothetical group of women who are viewed as having in their life time the fertility experience recorded in the single calendar year, whilst the median gives the central age at child bearing. Two measures are provided- one is the mean age of the fertility schedule (m) and the other is the mean age of mother at child birth. These measures of average values of fertility for the three provinces, the Western area and for the whole country is given in table 4.6. The mean and median ages of child bearing for Sierra Leone are 28.6 and 27.7 years respectively. The mean age of mother at child birth for Sierra Leone is 26.7.

There was very little variation between the administrative regions. Women in the Western Area for instance had the lowest mean age (m) of 27.8 years and those in the Northern province with the highest of 28.7 years.

Table 4.6 Mean and Median Ages of fertility schedule

REGION	MEAN AGE	MEDIAN AGE
Sierra Leone	28.6	27.7
Northern Province	28.7	28.0
Eastern Province	28.5	27.6
Southern Province	28.2	28.8
Western Area	27.8	27.7

#### 4.8 Indirect Estimates

##### 4.8.1 Crude Birth Rates and Total Fertility Rates

Using the Coale Trussell model which estimates indirectly fertility levels from data on children ever born and births in the year prior to the census, an adjusted crude birth rate (CBR) of 49.8/1000 was obtained for the whole country. This value is more acceptable and compares favourably with the adjusted level of 48.7/1000 from the 1974 census data.

The total fertility rate for Sierra Leone after adjustment was 6.3 births/woman. The same index for the 1974 census data was 6.5 suggesting a slight drop in fertility during the intercensal period. However the present level of TFR could still be described as high and is equal to the average obtained for the African continent (Page, 1988).

##### 4.8.2 Age Specific Fertility Rates

The adjusted Age Specific Fertility Rate (ASFR) for the country as a whole shows that peak fertility is among women 20-24 years (table 4.7). The only exception was the Western Area where the age of peak fertility was 25-29 years.

The 1974 census data revealed a similar pattern. The average age of first child bearing is delayed in the Western Area, probably because women in this region may spend longer years in pursuit of education.

Table 4.7 Coale and Trussell Model For Estimating Fertility of All Women Based On Children Ever-Born, Sierra Leone, 1985 Census

Age Group	Index	Average Parity	Period Fertility Rate	Cumulated Fertility	Estimated Parity Equivalent	Pi/Fi	Adjusted fertility rate*
		(Pi)	(fi)	(Qi)	(Fi)		
15-19	1	0.63	0.13	0.65	0.32	1.99	0.20
20-24	2	1.87	0.20	1.67	1.26	1.49	0.28
25-29	3	3.05	0.20	2.66	2.29	1.33	0.27
30-34	4	4.20	0.16	3.45	3.15	1.33	0.21
35-39	5	4.97	0.12	4.06	3.84	1.30	0.16
40-44	6	5.23	0.06	4.38	4.21	1.24	0.08
45-49	7	5.37	0.04	4.57	4.50	1.19	0.05
TFR		4.55			6.3		

\* Adjustment factor =  $(P_2/F_2 + P_3/F_3 + P_4/F_4)/3$



## 4.9 Fertility Differentials

### 4.9.1 Regional Variations in Fertility

The breakdown of details in children ever born by administrative district gives a range of TFR of 5.5 in the Western Area to 6.9 in the Southern Province (table 4.8 ). Pujehun District had the highest fertility with CBR of 58.1/1000 and a TFR of 7.4. The Eastern province emerged with the second highest fertility. Kenema, Kono and Kailahun the three districts in the province all showed CBR exceeding 52/1000 and TFR above 6.6.

The low fertility level observed in the Western Area is not unexpected. Women in this region have a high level of literacy and show wider practice of family planning .

Fertility has apparently dropped in the Northern Province, from an estimated TFR of 6.7 using the 1974 census data to a level of 5.89 computed for the 1985 census.

Past estimates by Coale and Page and analysis of the 1974 census data revealed a different trend in the regional variation in fertility. The Northern Province showed the highest fertility and the Western Area and Southern Province the lowest. The total fertility estimate of 6.7/woman for the Northern Province obtained using the 1974 census data exceeded the national average of 6.5/woman.

The present level of fertility obtained for the Northern Province has obviously been influenced by the proportion of women reported childless. Nearly twice as many women were reported childless in this district during the 1985 census as compared to 1974. It is however recognized, that variations in the level of total fertility rate will only reflect the actual situation, if the extent in the magnitude and direction of reporting errors between districts is not significant (Okoye, 1980).

Table 4.8 Adjusted Indices of Fertility By Administrative Regions, Sierra Leone, 1985 Census

REGIONS	INDICES OF FERTILITY		
	CRUDE BIRTH RATE (CBR)/1000	TOTAL FERTILITY RATE	GENERAL FERTILITY RATE
SIERRA LEONE	49.8 (35.0)	6.30	204.6
SOUTHERN PROVINCE	51.5 (39.1)	6.88	218.3
BO	51.1 (39.8)	6.79	218.3
BONTHE	49.4 (36.1)	6.70	210.1
MOYAMBA	49.4 (38.8)	6.79	211.6
PUJEHUN	58.1 (40.8)	7.37	236.6
SHERBRO URBAN	42.9 (30.2)	6.31	192.2
EASTERN PROVINCE	53.1 (37.5)	6.76	223.9
KAILAHUN	53.9 (39.8)	6.92	225.7
KENEMA	52.4 (36.9)	6.65	219.9
KONO	53.5 (36.4)	6.79	227.5
NORTHERN PROVINCE	46.7 (31.9)	5.89	188.5
BOMBALI	50.1 (34.6)	6.49	208.0
KAMBIA	50.0 (35.0)	6.36	205.5
KOINADUGU	46.2 (31.6)	5.41	172.2
PORT LOKO	41.4 (30.0)	5.41	172.2
TONKOLILI	44.3 (29.4)	5.81	183.9
WESTERN AREA	43.9 (32.0)		
GREATER FREETOWN	44.0 (31.8)	5.46	185.9
WESTERN RURAL AREA	43.2 (33.7)	6.21	199.8

\*The figures in brackets are reported birth rates (from Table A4.2)

#### 4.9.2 Fertility by Educational Level of Mother

Information on educational level of mother was collected using the six categories, no education, some primary, primary completed, some secondary, secondary completed and higher education.

Table 4.9 gives the mean parity by age group for the three educational levels, no education, primary and secondary plus, which represent 75.6%, 14% and 10.3% of mothers respectively. The expected trend of decline in fertility with educational status held true for women within the age groups 15-19, 20-24 and 25-29. Between age groups 30-49 years women with primary education had borne more children than women with no education. The pattern is irregular for women in age group 10-14. This can be attributed to the faulty distribution by educational level of some mothers within this age group.

To study the variation of fertility for the three categories of educational level the method of direct standardisation was used using the age distribution of all women as standard. Only age groups 10-44 were used. The data support the view that the influence of women's education on their fertility is significant only after post primary education. Fertility was lowest for women with secondary education. This is likely the result of the late age at marriage and therefore reduced period of exposure to the risk of conception. They are also the group most likely to use modern methods of birth control.

Table 4.9 Mean Number of Children Ever Born (Pi) According to Educational Status of Mothers by Current Age, Sierra Leone, 1985 Census

Age Group	None Pi	Primary Pi	Secondary Plus Pi	Not Stated	Female Pop Fi
10-14	0.0616	0.0137	0.1348	0.0520	148214
15-19	0.7853	0.4553	0.1932	0.5625	166596
20-24	2.0282	1.9607	0.8125	1.4429	137725
25-29	3.1376	3.1351	1.8906	2.1304	143378
30-34	4.2602	4.4243	2.9920	2.6012	109983
35-39	5.0097	5.3066	3.7749	3.3356	92125
40-44	5.2626	5.7430	4.1711	3.5000	67992
45-49	5.3819	5.7255	4.5155	4.5213	54085

The standardized mean parities for the three educational groups are : None: 2.49; Primary: 2.50; Secondary plus : 1.61

#### 4.10 Nuptiality and Fertility

In spite of the prevailing definitional problems associated with marriage in traditional settings like Sierra Leone, marriage is still seen as the sole recognized institution for any fruitful sexual relation. The levels and patterns of marriage have a largely profound influence on childbearing. The reason being that marriages are largely contracted for procreation. Newly wedded couple are continually reminded of this aspect of their union. It is therefore not uncommon to see that couples on occasions of contracting unions are showered with blessings to procreate. Naming and outdooing ceremonies too are often celebrated to honour couples who bring forth. More blessings are poured upon them to have additional ones in future. The need to ensure society's survival has therefore placed a high premium on the institution of marriage.

##### 4.10.1 Marital Status Composition and Fertility

###### 4.10.1.1 Pre-marital fertility

When childbearing amongst never-married women was examined, it was found out that the phenomenon of pre-marital fertility was seen to be present in the society (see Kaindaneh, 1988) today. This is seen as a deviation from the norm and may be largely attributed to the factors of modernization. This new phase may be regarded as the "fertility test period" prior to formal contraction of unions.

The percent of pre-marital births in table 4.10 shows that women in the age group 15-19 and 20-24 accounted for about 6 and 5 percent respectively of births in the population. The percentage distribution showed a rapid decline with increasing age. Pre-marital births on the whole accounted for 2 percent of births in the population.

Women in the teenage category, that is those that can be referred to as adolescents recorded the highest percentage. The importance attached to having children at marriageable ages may also help to explain the relatively high percentage for younger women having pre-marital births. The concern with fertility too is a motivating factor for young married couples not to delay having children (Harrel-Bond, 1975). With such a concern therefore, pre-marital conceptions are very likely as supported by the results in the table. This phenomenon is therefore seen to have implications for not only fertility levels estimated (if not reported) but for the institution of marriage as mentioned above. In the case of the former, it may be a potential source for under-reporting the mean number of children ever-born- a situation which may question estimated fertility levels.

The current situation thus provides some explanation for the low level of contraception observed in the country. Pregnancies of this nature may have been averted if modern contraception was appreciably adopted prior to the entry into first unions.

Table 4.10 Percentage Distribution of Pre-Marital Births to Total Births for Women According to Current Marital Status by Current Age, Sierra Leone, 1985

Age Group	Pre-Marital Births (%)	Total Births	Number of Women
15-19	5.99	104629	166001
20-24	4.87	256210	137009
25-29	3.01	436412	142936
30-34	2.08	461119	109703
35-39	1.53	457211	91965
40-44	1.44	355281	67893
45-49	1.26	289874	54010
Total	2.42	2360736	769517

#### 4.10.1.2 Marital fertility

The Mean Number of Children ever Born (MNCEB) to ever married women increase consistently with age (table 4.11). The youngest cohort (age group 15-19) had a mean of 1.00 rising sharply to 4.32 for women in age group 30-34 from where it increased consistently to its peak of 5.43 for the oldest cohort.

The reported total fertility rate and the adjusted TFR for married women were 5.09 and 6.52 respectively whilst corresponding estimates for all women were 4.54 and 6.30 respectively.

Table 4.11 Mean Number of Children Ever-Born to Women According to Marital Status By Current Age, Sierra Leone, 1985 Census

Age Group	Never Married	Married	Sep/Div Wid	Ever Married
15-19	0.09	1.00	1.12	1.00
20-24	0.59	2.12	1.91	2.12
25-29	1.24	3.22	2.89	3.21
30-34	1.93	4.35	3.76	4.32
35-39	2.45	5.11	4.44	5.06
40-44	2.71	5.40	4.59	5.32
45-49	2.89	5.54	4.85	5.43
Total	0.24	3.43	3.71	3.50

#### 4.10.1.3 Marital dissolution and fertility

From existing literature on marital stability and instability, the notion held is that instability of unions have a depressing effect on fertility. The reason being that dissolution of unions due to widowhood, divorce and/or separation implies a loss of exposure time to conception. The rate of occurrence depending on many factors amongst which are differentials in age between spouses and factors affecting male mortality. Women with longer exposures that are devoid of any of the above interruptions, *ceteris paribus*, tend to have higher parities than those who experience marital dissolution.

#### 4.11 Coale's Index of Marriage Patterns

The results obtained for Sierra Leone gave an Iem of 0.866 and Im of 0.825. This results suggest a reduction from a maximum effect of marriage on fertility of 13.4 % and a further reduction of 4.1 percent due to dissolution of marriages. The loss of exposure between the ages of 15-49 shows that fertility is Sierra Leone in about 87 percent of what it should have been.

#### 4.12 Future Prospects

The consistently high level of fertility in Sierra Leone leaves little doubt that the demand for children is still very high. For one to expect a fertility transition, the population must be 'ready' willing and able' to reduce family size. The readiness and willingness can be questioned by the early and universal marriage for women encouraged by the culture, which is reflected in a SMAM of 18 years and a high average parity of 6.3 births.

Furthermore there is evidence of breakdown of traditional child spacing practices such as post-partum abstinence especially in urban areas. This might lead to an increase in fertility in the absence of a strong infrastructure for sustaining effective family planning programmes. However, education has shown to have some influence on fertility and with the noted increase in female education, the reduction in fertility is expected to follow in the years to come.

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Table A4.1 Percentage Distribution of Women Aged 10-65+ According to Current Marital Status by Current Age, 1985

Bo district							
Age	Never Married	Married	Separated	Divorced	Widowed	Not Stated	Total
10-14	87.87	7.13	0.09	0.02	0.01	4.88	100.00
15-19	35.99	61.69	0.52	0.15	0.37	1.28	100.00
20-24	11.90	85.72	1.16	0.26	0.58	0.39	100.00
25-29	4.11	93.21	1.08	0.39	1.01	0.21	100.00
30-34	2.05	94.34	1.26	0.28	1.82	0.24	100.00
35-39	1.17	94.00	1.45	0.44	2.78	0.16	100.00
40-44	1.16	91.13	1.71	0.43	5.34	0.23	100.00
45-49	0.87	88.38	1.71	0.67	8.29	0.08	100.00
50-54	0.94	82.35	1.74	0.60	14.09	0.27	100.00
55-59	0.71	74.76	1.63	1.16	21.49	0.24	100.00
60-64	0.61	68.54	2.00	0.58	27.90	0.38	100.00
65+	0.82	43.94	1.67	0.89	52.33	0.35	100.00
Total	18.22	70.08	1.15	0.40	9.17	0.97	100.00

Bonthe District							
Age	Never Married	Married	Separated	Divorced	Widowed	Not Stated	Total
10-14	87.43	8.23	0.06	0.03	0.03	4.23	100.00
15-19	33.81	63.65	0.86	0.14	0.35	1.19	100.00
20-24	8.99	87.43	1.84	0.51	0.70	0.51	100.00
25-29	3.36	92.78	1.64	0.69	1.26	0.28	100.00
30-34	1.86	92.67	2.37	0.45	2.31	0.33	100.00
35-39	1.49	91.21	2.55	0.98	3.46	0.31	100.00
40-44	0.63	88.94	3.13	0.88	6.22	0.21	100.00
45-49	0.76	84.78	2.77	1.01	10.48	0.20	100.00
50-54	1.00	79.38	2.87	0.88	15.64	0.22	100.00
55-59	0.62	76.37	2.81	0.86	19.03	0.31	100.00
60-64	0.92	65.77	1.64	1.18	30.03	0.46	100.00
65+	0.91	43.30	2.40	1.25	51.04	1.09	100.00
Total	14.89	71.25	1.92	0.67	10.37	0.91	100.00

Moyamba District							
Age	Never Married	Married	Separated	Divorced	Widowed	Not Stated	Total
10-14	92.60	5.36	0.13	0.02	0.05	1.85	100.00
15-19	40.08	57.07	1.35	0.27	0.47	0.75	100.00
20-24	11.64	84.01	2.54	0.44	1.01	0.37	100.00
25-29	4.75	89.77	2.97	0.56	1.39	0.56	100.00
30-34	2.79	90.53	3.09	0.78	2.33	0.48	100.00
35-39	1.71	90.19	3.19	0.79	3.77	0.36	100.00
40-44	1.36	85.95	3.83	1.24	7.25	0.37	100.00
45-49	1.28	83.39	3.85	1.23	10.01	0.23	100.00
50-54	1.43	74.09	4.91	1.32	17.52	0.73	100.00
55-59	0.84	66.64	4.91	1.42	25.25	0.94	100.00
60-64	1.21	57.88	3.78	1.75	34.87	0.51	100.00
65+	0.79	33.87	3.49	1.69	59.70	0.46	100.00
Total	18.42	65.62	2.79	0.82	11.69	0.67	100.00

Pujehun district

Age	Never Married	Married	Separated	Divorced	Widowed	Not Stated	Total
10-14	89.46	9.09	0.18	0.03	0.05	1.19	100.00
15-19	31.96	65.84	0.90	0.17	0.23	0.90	100.00
20-24	7.77	88.47	1.89	0.45	0.73	0.69	100.00
25-29	3.10	92.97	1.86	0.64	0.96	0.47	100.00
30-34	1.60	93.40	2.13	0.30	1.90	0.67	100.00
35-39	1.11	93.50	1.85	0.48	2.42	0.63	100.00
40-44	1.35	91.14	1.65	0.54	4.65	0.67	100.00
45-49	0.85	86.92	2.69	0.45	8.50	0.60	100.00
50-54	1.22	82.79	2.35	0.85	12.22	0.56	100.00
55-59	1.08	77.49	2.37	1.29	16.92	0.86	100.00
60-64	1.09	69.37	2.72	0.54	25.23	1.04	100.00
65+	1.34	44.92	2.46	1.10	49.21	0.97	100.00
Total	14.41	73.26	1.78	0.52	9.26	0.77	100.00

Sherbro Urban District

Age	Never Married	Married	Separated	Divorced	Widowed	Not Stated	Total
10-14	97.44	1.58	0.00	0.00	0.00	0.99	100.00
15-19	75.77	23.04	0.24	0.00	0.24	0.71	100.00
20-24	31.25	65.42	2.92	0.00	0.00	0.42	100.00
25-29	14.55	81.36	3.64	0.00	0.45	0.00	100.00
30-34	4.59	87.16	4.13	0.46	3.67	0.00	100.00
35-39	3.39	89.27	3.39	1.13	2.82	0.00	100.00
40-44	2.60	81.82	6.49	2.60	6.49	0.00	100.00
45-49	3.57	73.57	7.86	0.71	14.29	0.00	100.00
50-54	0.79	61.90	10.32	1.59	24.60	0.79	100.00
55-59	0.00	59.81	5.61	0.93	33.64	0.00	100.00
60-64	1.01	41.41	1.01	1.01	55.56	0.00	100.00
65+	1.22	28.16	4.08	0.00	65.71	0.82	100.00
Total	35.80	47.85	3.09	0.45	12.36	0.45	100.00

Kailahun District

Age	Never Married	Married	Separated	Divorced	Widowed	Not Stated	Total
10-14	88.87	9.43	0.12	0.03	0.08	1.47	100.00
15-19	30.05	67.48	1.31	0.30	0.38	0.48	100.00
20-24	8.57	87.50	2.08	0.48	0.62	0.75	100.00
25-29	3.70	92.33	1.80	0.48	1.16	0.53	100.00
30-34	2.26	92.46	2.18	0.43	2.18	0.50	100.00
35-39	1.14	92.48	1.75	0.47	3.88	0.29	100.00
40-44	1.12	88.37	1.81	0.69	7.37	0.65	100.00
45-49	0.78	84.63	2.35	0.83	10.87	0.54	100.00
50-54	1.22	77.42	2.21	1.08	17.71	0.37	100.00
55-59	1.10	71.01	2.71	1.31	23.49	0.38	100.00
60-64	0.99	63.15	1.85	0.89	32.39	0.73	100.00
65+	1.06	40.29	1.50	0.96	55.62	0.58	100.00
Total	16.75	70.77	1.65	0.54	9.66	0.64	100.00

Kenema District

Age	Never Married	Married	Separated	Divorced	Widowed	Not Stated	Total
10-14	88.83	9.18	0.12	0.04	0.03	0.27	100.00
15-19	29.59	68.27	0.87	0.18	0.38	0.72	100.00
20-24	8.25	88.64	1.29	0.35	0.62	0.77	100.00
25-29	3.28	93.50	1.51	0.24	1.16	1.84	100.00
30-34	1.73	93.83	1.47	0.42	2.18	2.80	100.00
35-39	1.15	93.44	1.60	0.48	3.88	5.43	100.00
40-44	1.16	90.04	1.90	0.75	7.37	9.03	100.00
45-49	1.11	86.91	1.95	0.48	10.87	13.52	100.00
50-54	1.03	82.25	1.88	0.88	17.71	21.56	100.00
55-59	0.87	73.63	2.34	1.07	23.49	28.06	100.00
60-64	0.92	67.66	1.82	0.86	32.39	52.00	100.00
65+	1.14	42.70	2.36	0.94	55.62	6.90	100.00
Total	17.94	72.55	1.35	0.41	9.66	0.64	100.00

Kono District

Age	Never Married	Married	Separated	Divorced	Widowed	Not Stated	Total
10-14	89.55	8.42	0.19	0.05	0.07	1.73	100.00
15-19	35.85	61.65	1.28	0.23	0.41	0.57	100.00
20-24	9.76	86.00	2.31	0.49	0.96	0.48	100.00
25-29	3.90	92.02	1.94	0.51	1.35	0.28	100.00
30-34	2.32	91.43	2.41	0.44	2.90	0.50	100.00
35-39	1.60	90.46	2.45	0.67	4.51	0.30	100.00
40-44	1.78	84.92	2.69	0.75	9.63	0.24	100.00
45-49	1.71	77.79	2.41	1.11	16.37	0.60	100.00
50-54	1.84	67.16	2.70	0.76	27.08	0.46	100.00
55-59	1.26	56.98	3.02	0.70	37.74	0.30	100.00
60-64	0.97	49.64	2.34	1.17	45.31	0.56	100.00
65+	1.19	30.00	2.09	0.90	65.18	0.65	100.00
Total	21.61	67.76	1.84	0.48	7.69	0.63	100.00

Bombali District

Age	Never Married	Married	Separated	Divorced	Widowed	Not Stated	Total
10-14	88.02	10.40	0.14	0.01	0.08	1.34	100.00
15-19	38.00	59.55	0.78	0.27	0.44	0.97	100.00
20-24	11.76	84.23	1.53	0.65	1.08	0.74	100.00
25-29	4.83	91.27	1.36	0.62	1.38	0.54	100.00
30-34	2.66	92.32	1.65	0.73	2.00	0.64	100.00
35-39	1.82	91.64	1.49	0.96	3.55	0.55	100.00
40-44	1.47	88.39	2.01	0.98	6.68	0.46	100.00
45-49	1.81	82.27	2.40	1.40	11.59	0.53	100.00
50-54	1.74	77.65	1.86	1.31	17.04	0.40	100.00
55-59	1.51	69.38	2.03	1.26	25.46	0.35	100.00
60-64	1.74	62.76	2.07	1.28	31.36	0.79	100.00
65+	1.83	45.33	1.28	1.07	49.74	0.75	100.00
Total	20.34	68.65	1.32	0.70	8.24	0.75	100.00



## Kambia district

Age	Never Married	Married	Separated	Divorced	Widowed	Not Stated	Total
10-14	87.96	10.72	0.15	0.07	0.04	1.06	100.00
15-19	29.04	68.56	0.72	0.48	0.24	0.95	100.00
20-24	8.05	89.07	0.91	0.75	0.50	0.72	100.00
25-29	3.58	93.26	1.26	0.76	0.53	0.61	100.00
30-34	2.02	94.71	1.03	0.85	0.79	0.58	100.00
35-39	1.60	93.66	1.45	0.89	1.81	0.59	100.00
40-44	1.52	92.46	1.37	0.92	3.30	0.42	100.00
45-49	1.46	89.71	1.62	1.71	5.29	0.22	100.00
50-54	1.41	85.01	1.97	1.30	9.68	0.63	100.00
55-59	1.41	80.96	2.02	1.65	13.35	0.61	100.00
60-64	1.67	75.04	2.45	1.57	18.69	0.59	100.00
65+	1.60	57.01	2.00	1.16	37.46	0.76	100.00
Total	16.76	75.27	1.18	0.82	5.27	0.70	100.00

## Koinadugu district

Age	Never Married	Married	Separated	Divorced	Widowed	Not Stated	Total
10-14	91.52	6.76	0.16	0.02	0.07	1.46	100.00
15-19	37.25	59.72	1.21	0.18	0.36	1.28	100.00
20-24	8.98	86.36	2.16	0.51	0.77	1.21	100.00
25-29	3.36	91.88	2.23	0.35	1.36	0.82	100.00
30-34	2.34	92.41	1.78	0.55	2.24	0.68	100.00
35-39	1.53	91.13	1.94	0.56	4.57	0.28	100.00
40-44	1.46	87.66	2.20	0.51	7.41	0.76	100.00
45-49	1.13	80.81	3.13	0.80	13.59	0.53	100.00
50-54	1.33	74.47	2.16	0.71	20.71	0.63	100.00
55-59	1.22	64.28	3.17	0.65	29.94	0.73	100.00
60-64	1.42	58.44	2.77	0.96	35.84	0.57	100.00
65+	0.94	40.43	1.87	1.20	54.48	1.07	100.00
Total	19.96	69.24	1.77	0.46	7.63	0.94	100.00

## Port Loko District

Age	Never Married	Married	Separated	Divorced	Widowed	Not Stated	Total
10-14	88.33	8.57	0.22	0.02	0.09	2.78	100.00
15-19	33.61	62.53	1.31	0.39	0.34	1.82	100.00
20-24	10.20	84.19	2.79	0.74	0.86	1.22	100.00
25-29	4.58	89.71	2.57	0.97	1.10	1.06	100.00
30-34	2.42	90.51	2.91	1.30	1.79	1.07	100.00
35-39	2.26	89.27	3.21	1.43	2.89	0.93	100.00
40-44	1.90	86.10	3.29	1.97	5.84	0.90	100.00
45-49	2.19	81.88	3.65	2.35	9.22	0.70	100.00
50-54	1.90	75.81	4.22	2.62	14.71	0.74	100.00
55-59	1.99	68.59	3.66	2.68	22.28	0.81	100.00
60-64	1.64	61.88	3.42	2.77	29.26	1.02	100.00
65+	2.09	41.50	3.27	2.42	49.53	1.19	100.00
Total	18.76	68.24	2.50	1.26	7.89	1.35	100.00

Tonkolili District

Age	Never Married	Married	Separated	Divorced	Widowed	Not Stated	Total
10-14	82.61	11.01	0.35	0.01	0.10	5.92	100.00
15-19	33.97	59.81	1.64	0.32	0.46	3.80	100.00
20-24	11.44	80.85	3.42	0.67	0.94	2.69	100.00
25-29	5.02	87.45	3.05	0.74	1.33	2.41	100.00
30-34	3.07	87.33	3.27	0.87	2.61	2.86	100.00
35-39	2.31	87.38	3.53	1.14	3.44	2.21	100.00
40-44	2.23	82.52	4.10	1.54	7.75	1.85	100.00
45-49	1.49	77.87	4.69	1.99	12.06	1.90	100.00
50-54	2.10	69.12	4.70	2.39	19.74	1.94	100.00
55-59	1.65	62.19	4.49	2.76	26.47	2.45	100.00
60-64	1.59	52.52	4.62	1.90	37.41	1.97	100.00
65+	1.86	33.25	3.57	2.16	56.24	2.92	100.00
Total	18.71	64.94	2.95	1.01	9.31	3.08	100.00

Greater Freetown

Age	Never Married	Married	Separated	Divorced	Widowed	Not Stated	Total
10-14	96.60	1.65	0.02	0.02	0.04	1.67	100.00
15-19	71.14	27.19	0.45	0.17	0.10	0.95	100.00
20-24	44.49	52.77	1.34	0.35	0.33	0.72	100.00
25-29	26.99	69.45	1.88	0.45	0.69	0.54	100.00
30-34	18.03	76.60	2.67	0.73	1.51	0.46	100.00
35-39	11.41	80.95	3.67	0.99	2.55	0.43	100.00
40-44	10.69	77.49	4.20	1.92	5.29	0.41	100.00
45-49	7.57	74.77	4.76	1.99	10.46	0.45	100.00
50-54	7.74	64.99	5.93	2.63	18.14	0.56	100.00
55-59	6.94	60.30	4.81	1.98	25.27	0.71	100.00
60-64	8.05	48.91	4.77	2.17	35.64	0.46	100.00
65+	7.93	31.84	2.78	1.30	55.43	0.72	100.00
Total	44.73	46.62	1.89	0.66	5.25	0.83	100.00

Western Rural

Age	Never Married	Married	Separated	Divorced	Widowed	Not Stated	Total
10-14	94.34	2.85	0.00	0.00	0.00	0.10	100.00
15-19	59.38	38.81	0.42	0.42	0.07	0.18	100.00
20-24	32.49	63.99	1.76	1.76	0.31	0.42	100.00
25-29	17.55	77.72	2.58	2.58	0.38	1.04	100.00
30-34	12.71	80.80	2.83	2.83	0.50	2.16	100.00
35-39	9.74	81.68	3.11	3.11	1.22	2.97	100.00
40-44	10.37	80.65	3.18	3.18	0.65	4.39	100.00
45-49	7.49	75.05	5.46	5.46	2.25	9.42	100.00
50-54	8.64	67.28	4.61	4.61	1.27	17.51	100.00
55-59	8.83	60.35	5.62	5.62	1.93	22.63	100.00
60-64	10.45	53.88	6.27	6.27	0.60	28.36	100.00
65+	6.66	33.65	3.47	3.47	1.22	53.57	100.00
Total	18.76	68.24	2.50	1.26	7.89	1.35	100.00

Table A4.2 Children Ever Born and Births a year before the census by Current Age for Women Aged 10+, 1985

Bo district			
Age Group	Number of Women	Children Ever Born	Births in Past Year
10-14	11611	443	82
15-19	13232	10102	2115
20-24	10580	22814	2679
25-29	10565	37021	2439
30-34	8608	40465	1617
35-39	8000	42962	1037
40-44	6017	33815	400
45-49	5031	28812	184
50-54	4466	23904	149 (age 50+)

Bonthe District			
Age Group	Number of Women	Children Ever Born	Births in Past Year
10-14	3425	149	24
15-19	4297	3505	611
20-24	3681	8018	851
25-29	3893	12845	790
30-34	3323	14676	555
35-39	2943	15096	366
40-44	2393	12685	168
45-49	1983	10479	85
50-54	1808	9379	89 (age 50+)

Moyamba District			
Age Group	Number of Women	Children Ever Born	Births in Past Year
10-14	8589	282	48
15-19	9084	6337	1316
20-24	7588	15688	1904
25-29	8171	27201	1920
30-34	6649	29890	1211
35-39	6448	34101	877
40-44	4850	26837	367
45-49	4382	25026	211
50-54	3708	19210	159 (age 50+)

Pujehun District

Age Group	Number of Women	Children Ever Born	Births in Past Year
10-14	3852	291	43
15-19	5319	5164	854
20-24	4492	11499	1119
25-29	4682	17836	1126
30-34	4317	21682	691
35-39	3508	19843	461
40-44	2967	17502	169
45-49	2011	12284	78
50-54	2127	12253	89 (age 50+)

Sherbro Urban District

Age Group	Number of Women	Children Ever Born	Births in Past Year
10-14	503	2	1
15-19	420	158	42
20-24	239	408	51
25-29	219	631	42
30-34	217	912	40
35-39	176	924	23
40-44	152	855	9
45-49	139	774	4
50-54	125	567	1 (age 50+)

Kailahun District

Age Group	Number of Women	Children Ever Born	Births in Past Year
10-14	9287	538	78
15-19	12813	10690	1953
20-24	9880	21801	2293
25-29	10192	35068	2288
30-34	7965	36673	1421
35-39	6638	35371	876
40-44	5087	28192	358
45-49	4078	22822	157
50-54		3525	18382 203 (age 50+)

Kenema District

Age Group	Number of Women	Children Ever Born	Births in Past Year
10-14	13936	733	116
15-19	17910	13991	2475
20-24	14483	30715	3134
25-29	14765	48753	2983
30-34	11646	51835	1903
35-39	9230	47784	1106
40-44	6824	36322	420
45-49	4755	25721	198
50-54	4089	21539	204 (age 50+)

Kono District

Age Group	Number of Women	Children Ever Born	Births in Past Year
10-14	15104	404	77
15-19	16665	10087	2077
20-24	14338	28013	2946
25-29	15953	51582	3257
30-34	10950	49307	1779
35-39	8633	45670	1109
40-44	5344	30243	365
45-49	4140	23904	161
50-54	3034	14908	125 (age 50+)

Bombali District

Age Group	Number of Women	Children Ever Born	Births in Past Year
10-14	13309	488	70
15-19	13541	7880	1618
20-24	11207	20572	2239
25-29	12576	38381	2502
30-34	9462	41043	1540
35-39	8060	41143	1041
40-44	5909	32240	358
45-49	5132	28765	213
50-54	4032	22889	275 (age 50+)

Kambia District

Age Group	Number of Women	Children Ever Born	Births in Past Year
10-14	7333	319	42
15-19	9021	6223	1182
20-24	7357	14273	1430
25-29	8158	25079	1578
30-34	6668	27999	1063
35-39	5255	25478	615
40-44	4003	20406	257
45-49	3216	17498	122
50-54	2695	14092	145 (age 50+)

Koinadugu District

Age Group	Number of Women	Children Ever Born	Births in Past Year
10-14	8635	332	39
15-19	9364	4784	974
20-24	8181	12640	1258
25-29	9369	24105	1475
30-34	7088	25394	957
35-39	5364	22966	575
40-44	4317	19519	255
45-49	3001	13968	116
50-54	2550	11300	102 (age 50+)

Port Loko District

Age Group	Number of Women	Children Ever Born	Births in Past Year
10-14	14698	502	54
15-19	15749	8729	1722
20-24	13297	21264	2277
25-29	14584	37550	2464
30-34	11307	39481	1500
35-39	9757	41395	1101
40-44	7413	32796	405
45-49	6241	28229	230
50-54	4997	22053	267 (age 50+)
Total	114533.00	303680.00	10020.00

Tonkolili District

Age Group	Number of Women	Children Ever Born	Births in Past Year
10-14	10857	490	73
15-19	13019	7655	1360
20-24	9876	16710	1595
25-29	10433	27868	1701
30-34	8621	31851	1137
35-39	7102	32069	790
40-44	5502	26879	339
45-49	4156	20514	172
50-54	3761	18869	231 (age 50+)

Greater Freetown

Age Group	Number of Women	Children Ever Born	Births in Past Year
10-14	24023	228	46
15-19	22913	8086	2196
20-24	19452	27680	3619
25-29	11181	45966	3276
30-34	9423	43154	1637
35-39	6068	45329	1028
40-44	4822	31364	299
45-49	3736	26102	121
50-54	2819		

Western Rural Area

Age Group	Number of Women	Children Ever Born	Births in Past Year
10-14	2704	52	8
15-19	2654	1238	335
20-24	2358	4115	510
25-29	2181	6526	479
30-34	1701	6757	262
35-39	1428	7080	198
40-44	1047	5626	72
45-49	923	4976	50
50-54	855	4079	23 (age 50+)

## CHAPTER 5

### MORTALITY

H.B.S. KANDEH

#### 5.1. Introduction

Mortality is one of the three components responsible for changes in the size, distribution and structure of human populations, the other two being fertility and migration. From the demographic viewpoint it is relatively easier to look at than morbidity, which is the study of the prevalence of disease, as mortality is a final outcome which can be more easily recognised. The study of mortality has provided us with useful socio-economic indicators which reflect the quality of life in communities. Such indicators include (a) Expectation of Life at Birth, (b) Infant Mortality Rate, (c) Maternal Mortality Rate and (d) Cause Specific Mortality rates.

In the case of Sierra Leone the study of mortality is important since Sierra Leone has been ranked as one of the countries with very high mortality levels in the world.(1,2) Following the results of the 1974 census several efforts have been directed to reducing these untenable levels of infant, child and maternal mortality, in programmes such as EPI, MCH/FP, Growth Monitoring and Essential Drugs, all operating within the ambit of Primary Health Care.

#### 5.2. Existing Information and Literature Review

Sierra Leone's demographic picture is falling into place with the information provided by the last three censuses (1963, 1974 and 1985). The final results of the 1985 census showed a total of 3,515,812 persons. When the reported population totals for 1963 (2,180,355), 1974 (2,735,159) and 1985 (3,515,812) are compared, the resulting average annual intercensal growth rate is 1.9 per cent for 1963-1974 and 2.3 percent for 1974-1985. The age structure of the population, according to the 1974 census results, is youthful with over 40.6 percent of the population less than 15 years of age. Only 5 percent of the population is 65 years and over in age. The estimated crude birth rate for the country is 48.7 per 1000. Mortality levels are also quite high with an estimated crude death rate of 28 per 1000.(3,4,5,6,7,8,9)

High mortality conditions have been recorded for Sierra Leone since the start of the colonial era (1807) when Sierra Leone was referred to as the "White Man's Grave", because of the high fatality rate of British Colonial Officers from yellow fever .(10) Unfortunately the focus of the data has been on the Western Area where the colonial administration was based and the effects of this bias are reflected even today as fairly reliable estimates of births and deaths are only available for the Western Area. This is because up to 1983, the registration of births and deaths was only compulsory in the Western Area and 46 of the 148 chiefdoms in the provinces. A sample of the registration statistics for the Western Area is provided in Table 5.1. The estimated infant mortality rates show fluctuations from one year to the other and no definite trend is noted. This should support the view that even the statistics from the Western Area are not totally reliable.

TABLE 5.1 REGISTERED VITAL EVENTS WESTERN AREA 1983-1992

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
LIVE BIRTHS										
TOTAL	12988	13175	12391	12469	11943	12824	13298	16095	16816	10253
MALE	6455	6925	6465	6496	6072	7562	6926	8157	8474	5244
FEMALE	6533	6250	5926	5973	5871	5262	6470	8038	8426	5014
INFANT DEATHS										
TOTAL	1759	1722	1854	1874	1794	1761	1352	1608	1365	1842
MALE	957	913	894	944	902	862	713	782	685	902
FEMALE	802	809	960	930	892	899	639	826	680	940
INFANT MORTALITY RATES										
TOTAL	130.70	130.70	149.62	150.29	150.21	137.23	101.67	99.90	81.17	179.65
MALE	148.26	131.84	138.28	145.32	148.55	113.99	102.94	95.87	80.83	172.01
FEMALE	122.76	129.44	162.00	155.70	151.93	170.85	98.76	102.76	80.70	187.47

SOURCE: Sierra Leone Government, Annual Statistical Digest 1993. Central Statistics Office, Freetown, September 1993

Mortality estimates for the rest of the country were provided by small scale surveys and the analysis of hospital records up to 1974 when the census for the first time included questions on mortality thereby providing estimates for the entire country .(11,12,13)

One of the first such estimates of infant mortality was provided by R.D. Harding in 1948. He estimated an infant mortality rate of 417 per 1000 in a Kissi village in the Eastern Province based on a registration scheme. Gamble in 1961 interviewed 165 women between the ages of 17 and 30 years in a sample survey of the town of Lunsar in Northern Sierra Leone, and obtained an infant mortality rate of 171. Wilkinson, in a study of the area surrounding Segbwema in the Eastern Province used 18,000 births over the period 1956-1962 to obtain a child (0-4 years) mortality rate of 455 deaths per 1000 live births.

The 1970s produced several mortality studies which have provided estimates of mortality levels and patterns mostly for infant and child mortality. (14,15) For example Dow in a National Fertility Survey of 5952 women in 1969-1970 obtained an infant mortality rate of 206 per 1000 live births for Sierra Leone. Blacker, Dow and Makannah using the results of the 1974 pilot census carried out in 1974, which selected two enumeration areas from each district and a sample size of roughly one percent, obtained an infant mortality rate of 248 for the whole country. A survey of infant and early childhood mortality in the Western Area conducted by the Ministry of Health and the World Health Organization between 1973 and 1975 provided a crude death rate estimate of 17.6 and an infant mortality rate of 152. The 1974 census provided an estimate of 28.0 for the crude death rate and an infant mortality rate of 225 according to Okoye. Kandeh in a study of five chiefdom headquarter towns in the Bo District obtained an infant mortality rate of 155 for the town of Bo and 178 for the other four chiefdom headquarters. A National Survey conducted in 1977 by the Sierra Leone Government obtained the following under five mortality rates (i.e. the number of children dying before their fifth birthday out of 1000 children born in the same year). The Southern Province (333.5), the Eastern Province (320.6), the Northern Province (314.0) and Freetown the capital city (199.7).

Kandeh and Dow in a later study using the 1974 census results obtained an estimated infant mortality rate of 215 in 1971 for Sierra Leone. (16) The proportion of children dying before their fifth birthday was pegged at 0.3582 also for 1971. In relation to other African countries, Sierra Leone was in the category of countries with very high infant and child mortality levels. Their results further showed that infant and child mortality levels in the administrative areas of the country were in general very high but in addition showed great differences between areas. Only the Western Area had an infant mortality rate below 160 in 1971. The highest infant mortality rate was in Pujehun District (272). The pattern was the same when one looked at the proportion of children dying before their fifth birthday, with the Western Area having the lowest (263) and Pujehun District having the highest (443). Attempts at explaining the regional variation in mortality levels by the distribution of health facilities, the percentage of the population with no formal schooling and malaria endemicity failed to provide any significant results once the Western Area was excluded from this macro-level analysis. Even at the household level a battery of social, economic and environmental variables could not explain the differences in mortality levels between high and low infant mortality areas. The results merely confirmed the existence of differences in mortality levels and in the length of breastfeeding and abstinence which was longer in the low mortality areas. The conclusion was that if this was resulting in longer birth intervals for women in the low mortality areas, then these women were ensuring increased survival chances for their children especially in infancy. It is also possible that all the factors examined were making small contributions to the regional variations observed, rather than one factor explaining most of the variation. What has emerged from this long list of mortality studies is that mortality levels in Sierra Leone are very high.

Okoye examined several other differentials using the results of the 1974 Census. (1) The results showed that, as expected, males were subject to higher death rates than females at all ages. However, except during infancy and early childhood, the excess of the male death rate over the female death rate was generally small. In fact the sex differences in mortality were smallest in the female reproductive ages which suggest that high maternal mortality may be a factor in the narrowing of sex differences in mortality. With regard to the age structure of mortality, the results showed that 34 percent of the total deaths in Sierra Leone occurred to children under one year of age and 51 percent of those who die each year were under 5 years of age. The structure of mortality is of course a reflection of the mortality model selected which in this case was the "North" model. The level of mortality in the rural areas exceeded that in the urban areas (an urban area is any settlement with 2000+ inhabitants). For example the national figures for Sierra Leone showed that the probability of dying within the first two years of life in a rural area is 35 percent higher than it is in an urban area. Finally, the educational level of the mother showed a very significant relationship to the level of infant and childhood mortality. For example the probability of dying within the first two years of life decreased progressively from 0.2921 for children of mothers with no education to 0.1400 for children whose mothers had secondary or higher education, a decline of more than 50 percent.

Kandeh, in a study of the town of Bo and four other chiefdom headquarters in the Bo District also provided additional information on infant and child mortality differentials in Sierra Leone. (17) One finding was that 13.8 percent of the children whose mothers had no formal schooling died in infancy while only 6.9 percent of those whose mothers had post-secondary school education died within the same period. Another finding was that children born after very short birth intervals (6-12 months) were more likely to die in infancy than children born after long birth intervals (18-24+ months). The results also showed that tetanus was responsible for at least 30 percent of the infant deaths in the five towns studied in Bo District.

The results of the National Nutrition Survey indicated that for all of Sierra Leone more deaths were likely to occur in those families that had an undernourished child under five years (determined by being either chronically undernourished, underweight or by showing arm wasting) than in those families without an undernourished child. (18)

Information on other aspects of mortality like causes of death are largely restricted to hospital records. (19) These studies in general highlight tetanus and fever related diseases as the leading causes of infant deaths while fever related diseases again, measles and diarrhoea dominate in early childhood.

A recent study by the World Bank on adult health in developing countries again highlighted Sierra Leone with very high adult mortality conditions. (20) According to the study the probability of dying in the forty five years between 15 and 60 years was highest in Sierra Leone at over 50 percent. The average for developing countries is 25 percent for men and 20 percent for women. In the case of developed countries the figures are 12 percent and 5 percent respectively.

### 5.3 Quality of the Data

The data on children ever born etc. seems to be fairly reliable as the parities and the proportion of children dead show consistent increases with each succeeding age group. The children ever born/surviving data collected in the 1985 census was for both sexes combined. This was a departure from the 1974 census which had collected such information for male and female births separately. Also the orphanhood data collected was only in respect of mothers. In terms of other aspects such as "Not Stated cases" etc the comments already provided in section 4.3.2.1 of the previous chapter equally apply.



## 5.4. Levels

Estimates will be provided for levels of infant and child mortality on the one hand and for adult mortality on the other. Both sets of estimates will then be used to construct a life table for the country.

### 5.4.1 Infant and Child Mortality

For this we have to rely on indirect techniques because of the poor registration system nation wide. These indirect techniques transform reports by mothers on the number of children ever born, children surviving and children dead, into estimates of infant and child mortality through the use of various equations. However this is the situation in most developing countries so the results are comparable with those from other developing countries. Also several mortality analysis packages have been developed to facilitate the use of such techniques. (21,22) The results for the whole country are presented in Table 5.2 and those for the various administrative areas of the country in Table 5.4. The results show that the estimated infant mortality rate in 1984 was 194 infant deaths per 1000 live births. It shows a slight improvement over the estimate of 225 infant deaths from the results of the 1974 census (Table 5.2) The probability of dying between ages 1 and 4 is still high at 0.163 in 1984, while the probability of dying by age five is 0.327. This means that 327 children out of a 1000 children born in 1984 would die before their fifth birthday.

TABLE 5.2            A COMPARISON OF THE 1974 AND 1985 ESTIMATES OF INFANT AND CHILD MORTALITY FOR SIERRA LEONE

	IMR	1-4MR	U5MR
SIERRA LEONE 1974	0.225	0.182	0.366
SIERRA LEONE 1985	0.194	0.163	0.327

IMR= Infant Mortality Rate    1-4MR= Probability of Dying Between Ages 1 and 5  
U5MR= Probability of Dying by Age 5

The results in Table 5.3 show the various mortality scenarios that are consistent with the data from the 1985 census which is also shown in the table. The results also show that the estimated infant and child mortality levels depend on the scenario selected. Each of the model families has its underlying assumptions. For the Sierra Leone, the "NORTH" model family is usually selected because of its high early childhood (1-4 years) mortality relative to infant (0 years) mortality, a situation which is considered to be typical of Sierra Leone. In fact the 1974 mortality estimates also utilised the "NORTH" model family.

TABLE 5.3 INDIRECT ESTIMATION OF EARLY AGE MORTALITY FOR SIERRA LEONE ALL WOMEN BOTH SEXES ENUMERATION DATE: DEC 1985

AGE OF WOMAN	AVERAGE NO. CHILDREN		PROPORTION DEAD	AGE x	COALE-DEMENY MODELS (TRUSSELL EQUATIONS)							
	BORN	SURVIVING			NORTH		SOUTH		EAST		WEST	
					q(x)	t(x)	q(x)	t(x)	q(x)	t(x)	q(x)	t(x)
15-19	630	441	.300	1	.194	( 1.7)	.181	( 1.7)	.231	( 1.8)	.210	( 1.7)
20-24	1.870	1.301	.304	2	.255	( 3.3)	.271	( 3.3)	.286	( 3.4)	.278	( 3.4)
25-29	3.053	2.088	.316	3	.280	( 5.2)	.304	( 5.3)	.305	( 5.5)	.300	( 5.4)
30-34	4.203	2.774	.340	5	.327	( 7.2)	.341	( 7.5)	.338	( 7.7)	.336	( 7.6)
35-39	4.972	3.208	.355	10	.369	( 9.4)	.367	( 9.9)	.363	(10.1)	.361	( 9.8)
40-44	5.233	3.219	.385	15	.397	(11.8)	.391	(12.4)	.389	(12.7)	.388	(12.3)
45-49	5.367	3.221	.400	20	.404	(14.5)	.400	(15.3)	.400	(15.7)	.400	(15.0)
=====												
COALE-DEMENY:		NORTH		SOUTH		EAST		WEST				
-----												
AGE OF WOMAN	REFERENCE		REFERENCE		REFERENCE		REFERENCE		REFERENCE			
	DATE	q	DATE	q	DATE	q	DATE	q	DATE	q		
-----												
INFANT MORTALITY RATE: q(1)												
15-19	1984.2	.194	1984.2	.181	1984.2	.231	1984.2	.210				
20-24	1982.7	.200	1982.7	.193	1982.6	.240	1982.6	.222				
25-29	1980.8	.193	1980.6	.191	1980.5	.239	1980.6	.221				
30-34	1978.7	.195	1978.4	.195	1978.3	.248	1978.4	.227				
35-39	1976.5	.193	1976.1	.193	1975.9	.249	1976.1	.226				
40-44	1974.1	.196	1973.6	.198	1973.3	.259	1973.7	.231				
45-49	1971.5	.187	1970.6	.193	1970.3	.254	1971.0	.223				
-----												
PROBABILITY OF DYING BETWEEN AGES 1 AND 5: q <sub>41</sub>												
15-19	1984.2	.162	1984.2	.164	1984.2	.110	1984.2	.130				
20-24	1982.7	.168	1982.7	.179	1982.6	.115	1982.6	.139				
25-29	1980.8	.162	1980.6	.177	1980.5	.115	1980.6	.138				
30-34	1978.7	.163	1978.4	.182	1978.3	.120	1978.4	.142				
35-39	1976.5	.161	1976.1	.181	1975.9	.121	1976.1	.141				
40-44	1974.1	.164	1973.6	.187	1973.3	.126	1973.7	.145				
45-49	1971.5	.156	1970.6	.180	1970.3	.124	1971.0	.139				
-----												
PROBABILITY OF DYING BY AGE 5: q(5)												

15-19	1984.2	.325	1984.2	.315	1984.2	.316	1984.2	.312
20-24	1982.7	.334	1982.7	.337	1982.6	.327	1982.6	.331
25-29	1980.8	.324	1980.6	.334	1980.5	.327	1980.6	.328
30-34	1978.7	.327	1978.4	.341	1978.3	.338	1978.4	.336
35-39	1976.5	.323	1976.1	.339	1975.9	.340	1976.1	.335
40-44	1974.1	.328	1973.6	.348	1973.3	.352	1973.7	.343
45-49	1971.5	.314	1970.6	.339	1970.3	.346	1971.0	.331

TABLE 5.4 THE DISTRIBUTION OF INFANT AND CHILD  
MORTALITY INDICATORS (BOTH SEXES) BY  
ADMINISTRATIVE AREA 1985

ADMINISTRATIVE DISTRICT	IMR	1-4MR	U5MR
SIERRA LEONE	.194	.163	.327
SOUTHERN PROVINCE	.214	.181	.356
EASTERN PROVINCE	.197	.165	.330
NORTHERN PROVINCE	.175	.145	.294
WESTERN AREA	.163	.133	.274
BO DISTRICT	.207	.175	.346
BONTHE DISTRICT	.181	.150	.304
MOYAMBA DISTRICT	.215	.182	.359
PUJEHUN DISTRICT	.235	.200	.388
SHERBRO URBAN	.227	.193	.375
KAILAHUN DISTRICT	.174	.144	.292
KENEMA DISTRICT	.205	.173	.342
KONO DISTRICT	.203	.171	.340
BOMBALI DISTRICT	.171	.141	.288
KAMBIA DISTRICT	.166	.137	.281
KOINADUGU DISTRICT	.189	.158	.318
PORT LOKO DISTRICT	.170	.141	.287
TONKOLILI DISTRICT	.183	.152	.307
FREETOWN	.157	.128	.265
WESTERN RURAL	.190	.158	.318

IMR= Infant Mortality Rate 1-4MR= Probability of Dying Between Ages 1 and 5  
U5MR= Probability of Dying by Age 5

#### 5.4.2 Adult Mortality

The 1985 census only collected information on maternal orphanhood with a single question asked of all persons (is your mother alive?). This information was then used with the maternal orphanhood technique to provide a picture of female adult mortality in Sierra Leone. However the life expectancies obtained for age 20 were not consistent with the estimates obtained from the estimation of infant and child mortality. As a result both sets of results were not combined to produce a female life table for Sierra Leone. Instead a life expectancy at age 20 of 41 years for males and 43 years for females estimated from the age structure was combined with estimates of infant and child mortality obtained earlier, to produce male and female life tables for Sierra Leone (Table 5.5). The infant and child mortality estimates being available only for the two sexes combined were split for the separate sexes by analogy with model life tables.

#### 5.4.3. Life Expectancy

The results in Table 5.5 show a life expectancy at birth of 37.57 years for males and 40.26 years for females around 1980. This represents a slight improvement over the 1970 estimates provided by the 1974 census of 33.00 years for males and 36.00 years for females. When the age specific mortality rates  $M(X,N)$  derived from the life tables are applied to the age distribution for Sierra Leone in 1985, a crude death rate of 25 per 1000 is obtained. This is a slight improvement over the 1974 census estimate of 27 per 1000.

#### 5.5 Differentials

Mortality differentials that will be examined fall into the following categories:-

- a) Age Structure
- a) Educational Level of Mother
- c) Administrative Area of Residence

The results were not classified by rural/ urban residence but an insight into the nature of the urban rural differential can be observed by comparing the results of Freetown with the other administrative areas.

TABLE 5.5 COALE & DEMENY MODEL LIFE TABLE FOR THE NORTH PATTERN OF THE MALE SEX TRANSFORMED TO BE CONSISTENT WITH E(20)= 41.000, I(1)= 79100. AND I(5)= 66000. SIERRA LEONE 1985

AGE	M(X,N)	Q(X,N)	I(X)	D(X,N)	L(X,N)	S(X,N)	T(X)	E(X)	A(X,N)
0	.24303	.20900	100000.	20900.	85997.	.73542 /A/	3756668.	37.567	.330
1	.04650	.16561	79100.	13100.	281711.	.87614 /B/	3670671.	46.405	1.352
5	.00973	.04749	66000.	3135.	322164.	.96410	3388959.	51.348	2.500
10	.00480	.02373	62865.	1492.	310598.	.97604	3066796.	48.784	2.500
15	.00510	.02517	61374.	1545.	303155.	.96809	2756198.	44.908	2.596
20	.00800	.03925	59829.	2348.	293482.	.95916	2453042.	41.001	2.588
25	.00842	.04123	57481.	2370.	281496.	.95758	2159560.	37.570	2.507
30	.00898	.04394	55111.	2421.	269554.	.95347	1878064.	34.078	2.521
35	.01020	.04975	52690.	2621.	257011.	.94561	1608510.	30.528	2.544
40	.01229	.05968	50068.	2988.	243031.	.93465	1351499.	26.993	2.553
45	.01489	.07184	47081.	3382.	227150.	.91932	1108468.	23.544	2.560
50	.01903	.09095	43698.	3974.	208822.	.89701	881318.	20.168	2.567
55	.02489	.11735	39724.	4662.	187315.	.86272	672496.	16.929	2.575
60	.03502	.16140	35062.	5659.	161599.	.80889	485181.	13.838	2.577
65	.05116	.22743	29403.	6687.	130717.	.72639	323582.	11.005	2.563
70	.07890	.32980	22716.	7492.	94951.	.61241	192866.	8.490	2.513
75	.12014	.45888	15224.	6986.	58150.	.40612 /C/	97914.	6.431	2.428
80	.20717	.....	8238.	8238.	39764.	.....	39764.	4.827	4.827

COALE & DEMENY MODEL LIFE TABLE FOR THE NORTH PATTERN OF THE FEMALE SEX TRANSFORMED TO BE CONSISTENT WITH E(20)= 43.000, I(1)= 82100. AND I(5)= 68800. SIERRA LEONE 1985

AGE	M(X,N)	Q(X,N)	I(X)	D(X,N)	L(X,N)	S(X,N)	T(X)	E(X)	A(X,N)
0	.20257	.17900	100000.	17900.	88365.	.76333 /A/	4026419.	40.264	.350
1	.04535	.16200	82100.	13300.	293301.	.88032 /B/	3938054.	47.967	1.361
5	.00954	.04657	68800.	3204.	335990.	.96342	3644752.	52.976	2.500
10	.00529	.02610	65596.	1712.	323698.	.97312	3308763.	50.442	2.500
15	.00568	.02800	63884.	1789.	314996.	.97038	2985064.	46.727	2.528
20	.00640	.03152	62095.	1957.	305666.	.96611	2670068.	43.000	2.543
25	.00743	.03649	60138.	2195.	295306.	.96069	2364402.	39.316	2.547
30	.00863	.04226	57943.	2449.	283698.	.95471	2069096.	35.709	2.542
35	.00990	.04832	55495.	2682.	270849.	.94907	1785399.	32.172	2.530
40	.01099	.05349	52813.	2825.	257054.	.94437	1514549.	28.678	2.518
45	.01204	.05847	49988.	2923.	242754.	.93526	1257495.	25.156	2.541
50	.01508	.07273	47065.	3423.	227038.	.91626	1014741.	21.560	2.579
55	.02041	.09729	43642.	4246.	208025.	.88346	787703.	18.049	2.601
60	.03001	.13998	39396.	5515.	183782.	.82978	579677.	14.714	2.606
65	.04592	.20669	33882.	7003.	152499.	.74886	395895.	11.685	2.586
70	.07161	.30424	26878.	8177.	114201.	.64093	243396.	9.055	2.531
75	.10895	.42641	18701.	7974.	73195.	.43346 /C/	129195.	6.908	2.453
80	.19155	.....	10727.	10727.	56001.	.....	56001.	5.221	5.221

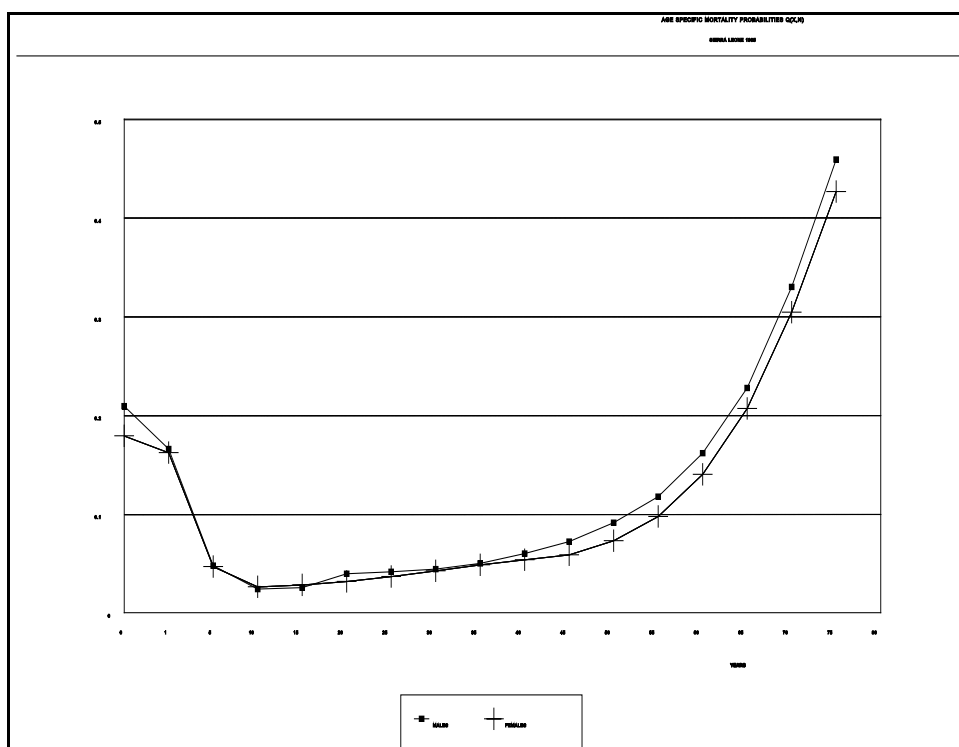
/A/ VALUE GIVEN IS FOR SURVIVORSHIP OF 5 COHORTS OF BIRTH TO AGE GROUP 0-4 = L(0,5)/500000

/B/ VALUE GIVEN IS FOR S(0,5)=L(5,5)/L(0,5)

/C/ VALUE GIVEN IS S( 75+,5)=T( 80)/T( 75)

### 5.5.1 Age Structure

Figure 5.1 shows the age pattern of mortality i.e. the probability of dying within specific age intervals  $Q(X,N)$  for males and females. The mortality structure is U shaped with high early childhood mortality followed by a decline to age 10 and then a steady increase towards the older ages. The situation is still one wherein over fifty percent of all deaths occur to children less than five years of age because of the youthful age structure. However it should be kept in mind that this structure is also a reflection of the mortality model selected as best representing the mortality structure for Sierra Leone, which is the "North" model.



### 5.5.2 Mother's Level of Completed Schooling

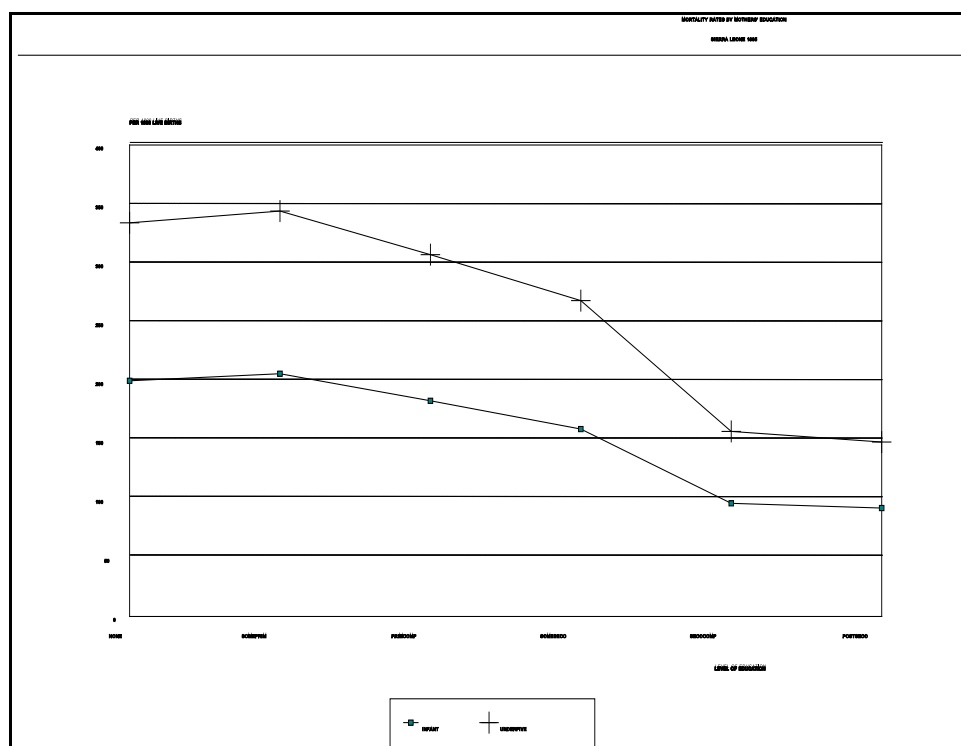
This differential is being considered only for early child hood mortality. The importance of mother's education in improving the survival chances of their children is shown by the results in Table 5.6, with women with no education having an infant mortality rate of 200 while those who completed Primary and completed Secondary had infant mortality rates of 183 and 96 indicating declines of about 10% and 50% respectively. Figure 5.2 illustrates the situation more clearly.

TABLE 5.6: A COMPARISON OF THE 1985 ESTIMATES OF INFANT AND CHILD MORTALITY FOR SIERRA LEONE BY MOTHER'S LEVEL OF COMPLETED SCHOOLING

MOTHER'S LEVEL OF SCHOOLING	IMR	1-4MR	U5MR
NO EDUCATION	.200	.168	.334
SOME PRIMARY	.206	.173	.344
COMPLETED PRIMARY	.183	.152	.307
SOME SECONDARY	.159	.130	.268
COMPLETED SECONDARY	.096	.067	.157
POST SECONDARY	.092	.063	.148
ALL WOMEN	.194	.163	.327

POST SECONDARY= Technical/Vocational/ Teachers College/University

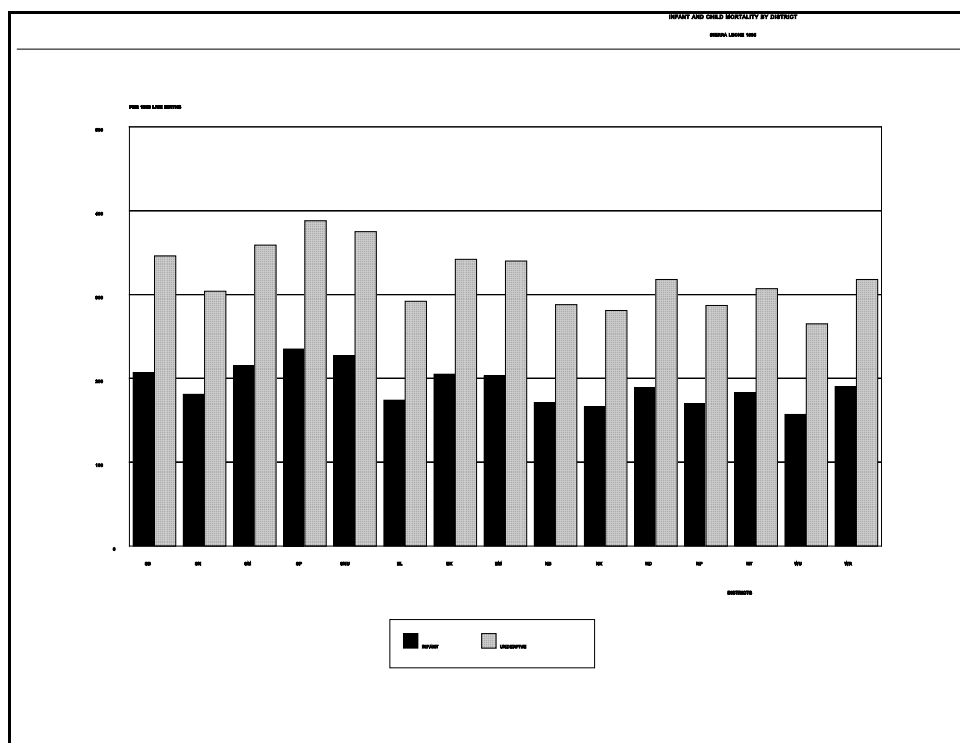
As is being emphasized now globally the key to the improvement of the welfare of mothers and children lies in education and the improvement of the status of women. When one looks at the level of completed schooling for women in the country, one sees that close to 80 percent (77.29%) of women have not received any formal schooling (Table 7.12)



### 5.5.3 Administrative Districts

The 1974 census results for the first time enabled the estimation of mortality levels for the entire country. Previously most estimates referred to only the Western Area where the vital registration system was fairly reliable. The 1974 results in general showed high mortality levels in the Southern and Eastern Provinces and relatively lower mortality in the Northern Province and the Western Area. At the district level Pujehun district had the highest mortality levels while Freetown had the lowest mortality levels.

The 1985 census results also show a similar pattern for early childhood mortality. (Table 5.4 and Figure 5.4). At the district level Pujehun continues to have the highest infant mortality rate at 235 while Freetown has the lowest at 157. On the whole the districts in the Northern Province (175) have relatively lower infant mortality rates compared to the districts in the Southern (214) and Eastern Provinces (197).



#### KEY TO DISTRICTS

(SB=Bo; SM=Moyamba; SP=Pujehun; SN=Bonthe; SNU=Sherbro Urban; EL=Kailahun; EK=Kenema; EM=Kono; NB=Bombali; NK=Kambia; ND=Koinadugu; NP=Port Loko; NT=Tonkolili; WU=Freetown; WR=Western Rural)

#### 5.6. Discussion and Policy Implications

As has been mentioned in the introduction, the estimation of mortality levels will have significant implications for policy in terms of providing information on the trends in mortality since the 1974 census which first put the national picture into international focus. Mortality levels at the administrative levels will indicate the impact of various health programmes within the areas. It will also help programmes to chart new directions that they will have to follow in their plans of operation.

#### 5.7. Future Prospects

The prospects for mortality decline in early childhood ages are promising if the Expanded Programme in Immunisation (EPI) levels achieved in 1990 are sustained and nutrition and family planning programmes improved. According to an evaluation of the EPI programme carried out in 1991, at least 70 percent coverage was achieved for all the common childhood diseases. (23) Maternal mortality also needs to be more seriously addressed and trends monitored. There needs to be more serious attention also paid to the issue of adult health especially because of the disastrous consequences for most families of the untimely death of fathers and mothers. It is estimated that 27 percent of all deaths in developing countries occur to adults 15 - 59 years of age and 72 percent of these deaths are preventable. (11) Programmes for child monitoring and growth should also be encouraged as nutrition is an important factor in child mortality since those who survive infancy as a result of improvements in immunisation should not be exposed to the debilitating consequences of malnutrition.



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TABLE A5.1 THE DISTRIBUTION OF AVERAGE NUMBER OF CHILDREN SURVIVING  
(BOTH SEXES) BY ADMINISTRATIVE AREA 1985

ADMINISTRATIVE DISTRICT	15-19	20-24	25-29	30-34	35-39	40-44	45-49
SIERRA LEONE	0.441	1.301	2.088	2.774	3.208	3.219	3.221
SOUTHERN PROVINCE	0.507	1.423	2.220	2.881	3.241	3.212	3.210
EASTERN PROVINCE	0.498	1.406	2.200	2.895	3.307	3.282	3.261
NORTHERN PROVINCE	0.423	1.216	1.925	2.563	2.988	3.023	3.035
WESTERN AREA	0.294	1.159	2.128	3.000	3.640	3.825	3.857
BO DISTRICT	0.499	1.421	2.230	2.968	3.305	3.231	3.250
BONTHE DISTRICT	0.560	1.466	2.173	2.821	3.223	3.185	3.130
MOYAMBA DISTRICT	0.467	1.399	2.194	2.873	3.271	3.278	3.277
PUJEHUN DISTRICT	0.573	1.446	2.133	2.762	3.042	3.072	3.039
SHERBRO URBAN	0.264	1.163	2.041	2.931	3.511	3.553	3.273
KAILAHUN DISTRICT	0.571	1.477	2.275	2.985	3.384	3.382	3.356
KENEMA DISTRICT	0.505	1.385	2.119	2.741	3.159	3.028	3.004
KONO DISTRICT	0.434	1.378	2.226	2.993	3.405	3.512	3.464
BOMBALI DISTRICT	0.439	1.353	2.101	2.966	3.385	3.474	3.458
KAMBIA DISTRICT	0.501	1.356	2.099	2.750	3.139	3.135	3.259
KOINADUGU DISTRICT	0.363	1.073	1.743	2.354	2.711	2.752	2.757
PORT LOKO DISTRICT	0.403	1.145	1.800	2.366	2.804	2.798	2.760
TONKOLILI DISTRICT	0.418	1.168	1.816	2.408	2.890	2.974	2.952
FREETOWN	0.287	1.141	2.126	3.032	3.671	3.863	3.912
WESTERN RURAL	0.359	1.309	2.143	2.790	3.429	3.603	3.570

TABLE A5.2 THE DISTRIBUTION OF PROPORTION OF CHILDREN DEAD  
(BOTH SEXES) BY ADMINISTRATIVE AREA 1985

ADMINISTRATIVE DISTRICT	15-19	20-24	25-29	30-34	35-39	40-44	45-49
SIERRA LEONE	0.300	0.304	0.316	0.340	0.355	0.385	0.400
SOUTHERN PROVINCE	0.351	0.353	0.360	0.381	0.395	0.426	0.438
EASTERN PROVINCE	0.322	0.324	0.335	0.358	0.371	0.402	0.416
NORTHERN PROVINCE	0.272	0.290	0.306	0.333	0.349	0.378	0.394
WESTERN AREA	0.195	0.205	0.214	0.226	0.246	0.264	0.287
BO DISTRICT	0.347	0.341	0.364	0.369	0.385	0.425	0.433
BONTHE DISTRICT	0.314	0.327	0.342	0.361	0.372	0.399	0.408
MOYAMBA DISTRICT	0.331	0.323	0.341	0.361	0.382	0.408	0.426
PUJEHUN DISTRICT	0.410	0.435	0.440	0.450	0.462	0.479	0.502
SHERBRO URBAN	0.298	0.319	0.271	0.303	0.331	0.368	0.412
KAILAHUN DISTRICT	0.315	0.331	0.339	0.352	0.365	0.390	0.400
KENEMA DISTRICT	0.353	0.347	0.358	0.384	0.390	0.431	0.445
KONO DISTRICT	0.283	0.295	0.312	0.335	0.356	0.379	0.400
BOMBALI DISTRICT	0.246	0.263	0.285	0.316	0.337	0.363	0.383
KAMBIA DISTRICT	0.274	0.301	0.317	0.345	0.353	0.385	0.401
KOINADUGU DISTRICT	0.290	0.306	0.323	0.343	0.367	0.391	0.408
PORT LOKO DISTRICT	0.273	0.284	0.301	0.322	0.339	0.368	0.390
TONKOLILI DISTRICT	0.289	0.310	0.320	0.348	0.360	0.391	0.402
FREETOWN	0.187	0.198	0.205	0.215	0.237	0.253	0.277
WESTERN RURAL	0.230	0.250	0.284	0.298	0.308	0.329	0.338

TABLE A5.3 THE DISTRIBUTION OF PROPORTION OF WOMEN WITH MOTHER ALIVE BY AGE AND ADMINISTRATIVE AREA 1985

ADMINISTRATIVE DISTRICT	15-19	20-24	25-29	30-34	35-39	40-44	45-49
SIERRA LEONE	0.888	0.822	0.748	0.636	0.543	0.411	0.332
SOUTHERN PROVINCE	0.887	0.833	0.764	0.661	0.574	0.441	0.356
EASTERN PROVINCE	0.883	0.812	0.741	0.637	0.544	0.413	0.336
NORTHERN PROVINCE	0.881	0.804	0.725	0.600	0.503	0.365	0.300
WESTERN AREA	0.915	0.868	0.802	0.713	0.616	0.511	0.390
BO DISTRICT	0.895	0.841	0.771	0.666	0.574	0.424	0.342
BONTHE DISTRICT	0.885	0.833	0.765	0.658	0.585	0.445	0.386
MOYAMBA DISTRICT	0.878	0.821	0.751	0.654	0.558	0.427	0.352
PUJEHUN DISTRICT	0.885	0.830	0.768	0.664	0.595	0.453	0.377
SHERBRO URBAN	0.887	0.849	0.799	0.668	0.594	0.487	0.285
KAILAHUN DISTRICT	0.905	0.848	0.785	0.682	0.566	0.444	0.358
KENEMA DISTRICT	0.887	0.814	0.743	0.635	0.546	0.409	0.333
KONO DISTRICT	0.861	0.785	0.711	0.609	0.523	0.387	0.317
BOMBALI DISTRICT	0.882	0.797	0.723	0.589	0.486	0.364	0.295
KAMBIA DISTRICT	0.881	0.819	0.745	0.624	0.527	0.386	0.314
KOINADUGU DISTRICT	0.846	0.750	0.661	0.530	0.429	0.297	0.244
PORT LOKO DISTRICT	0.893	0.827	0.746	0.620	0.529	0.374	0.303
TONKOLILI DISTRICT	0.891	0.814	0.743	0.623	0.525	0.390	0.333
FREETOWN	0.917	0.869	0.805	0.720	0.623	0.512	0.389
WESTERN RURAL	0.904	0.851	0.774	0.668	0.567	0.505	0.394

TABLE A5.4 THE DISTRIBUTION OF THE TOTAL POPULATION BY AGE SEX AND MATERNAL ORPHANHOOD STATUS SIERRA LEONE 1985

PROPORTION NOT ORPHANED		
AGE	MALES	FEMALES
0 - 4	0.9866	0.9844
5 - 9	0.9656	0.9633
10 - 14	0.9379	0.9404
15 - 19	0.9005	0.8880
20 - 24	0.8502	0.8219
25 - 29	0.7820	0.7476
30 - 34	0.6875	0.6362
35 - 39	0.6043	0.5434
40 - 44	0.4746	0.4105
45 - 49	0.3954	0.3323
50 - 54	0.2954	0.2400
55 - 59	0.2441	0.1919
60 - 64	0.1825	0.1417
65 - 69	0.1488	0.1172
70 - 74	0.1157	0.0907
75 - 79	0.1022	0.0792
80+	0.0792	0.0676
NOT STATED	0.4885	0.4783
TOTAL	0.7490	0.7344

TABLE A5.5 ORPHANHOOD ESTIMATES OF ADULT FEMALE MORTALITY FOR SIERRA LEONE

DATE OF SURVEY = DEC 1985  
 MEAN AGE OF CHILDBEARING = 26.00  
 CHILDREN EVER BORN:  
   AGES 15-20 = 0.630  
   AGES 20-25 = 1.870  
   AGES 25-30 = 3.053

COALE-DEMENY MODELS (HILL-TRUSSELL EQUATIONS)

AGE GROUP	PROP: X	AGE X	PROB:	DATE	LIFE EXPECTANCIES AT AGE 20			
					WEST	NORTH	EAST	SOUTH
15 - 20	0.886	45	0.8747	1976	45.8	46.6	45.0	45.5
20 - 25	0.820	50	0.8088	1973	44.1	44.7	43.3	43.4
25 - 30	0.746	55	0.7353	1971	43.3	43.5	42.4	42.2
30 - 35	0.635	60	0.6221	1970	41.4	41.4	40.8	40.1
35 - 40	0.542	65	0.5245	1969	41.6	41.3	41.3	40.6
40 - 45	0.409	70	0.3782	1968	40.2	40.1	40.8	40.0
45 - 50	0.331	75	0.2905	XXXX	42.2	42.1	43.4	42.8

PROP: = PROPORTION NOT ORPHANED  
 PROB: = PROBABILITY OF SURVIVING FROM AGE 25 TO AGE X

## POPULATION DISTRIBUTION, URBANISATION AND MIGRATION

I.M. SESAY

6.1 Population Distribution

The term "population distribution" may be used to refer to the scatter or spread of human beings over the geographic subdivisions of a country. With the growing awareness that population distribution and regional development are interrelated, "studies on spatially related population phenomena which are vital for planning and management" have assumed prominence [Sesay, 1993(a), 1]. Since mid-1976, the governments of sub-Saharan African countries have been expressing dissatisfaction with the distribution of population within their national borders (United Nations Economic Commission for Africa, 1983).

6.1.1 - Population Distribution by Administrative Units

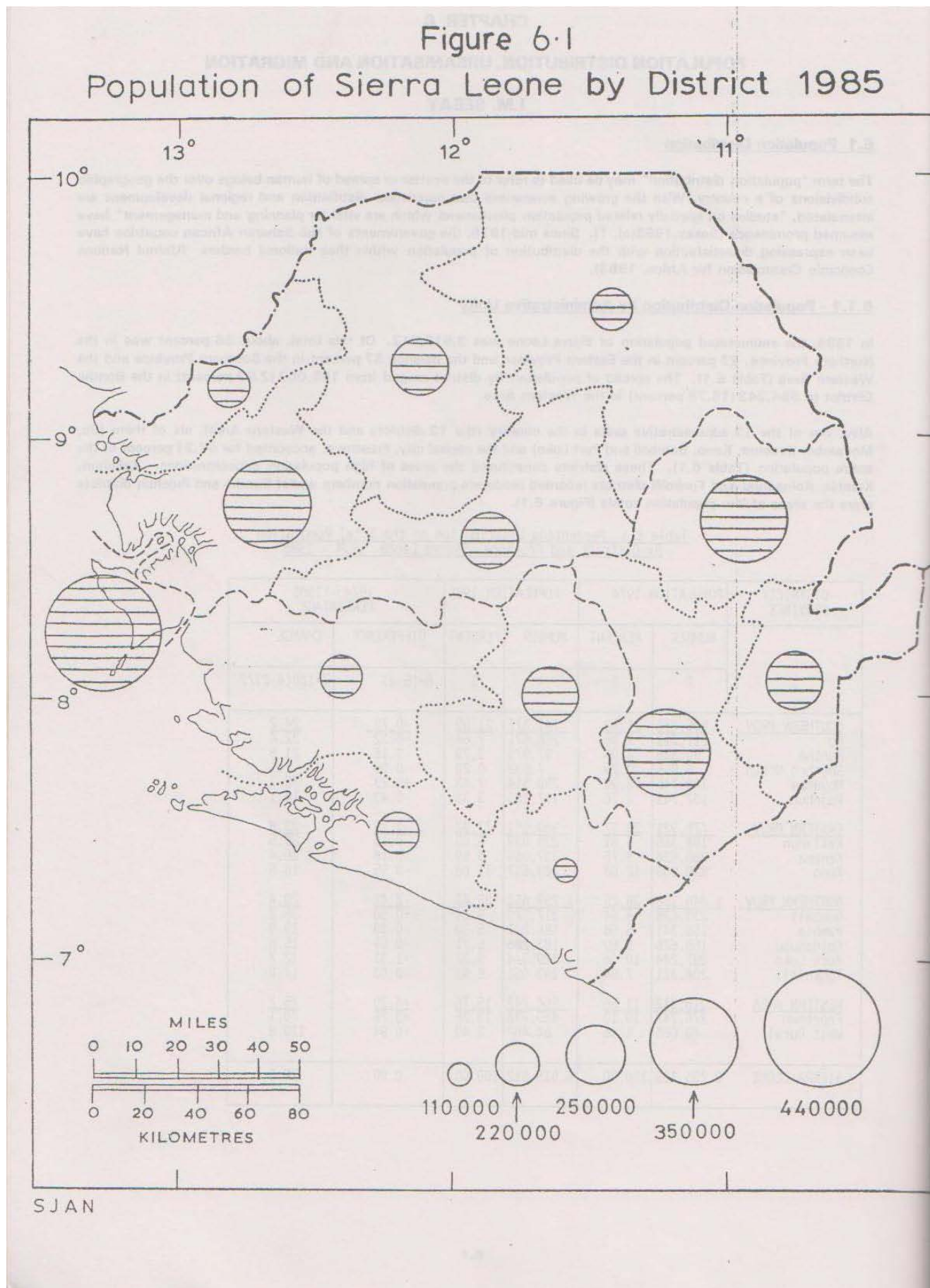
In 1985, the enumerated population of Sierra Leone was 3,515,812. Of this total, about 36 percent was in the Northern Province, 27 percent in the Eastern Province and the balance 37 percent in the Southern Province and the Western Area (Table 6.1). The spread of population by district ranged from 105,007 (2.99 percent) in the Bonthe District to 554,243 (15.76 percent) in the Western Area.

Also, out of the 13 administrative units in the country (the 12 districts and the Western Area), six of them (Bo, Moyamba, Kenema, Kono, Bombali and Port Loko) and the capital city, Freetown, accounted for 67.21 percent of the entire population (Table 6.1). These districts constituted the areas of high population concentrations. Kailahun, Kambia, Koinadugu and Tonkolili districts recorded moderate population numbers whilst Bonthe and Pujehun districts were the areas of low population totals (Figure 6.1).

Table 6.1 Percentage Distribution of the Total Population  
By District and Province: Sierra Leone, 1974 - 1985

DISTRICT/ PROVINCE	POPULATION 1974		POPULATION 1985		1974 - 1985	
	NUMBER	PERCENT	NUMBER	PERCENT	DIFFERENCE	CHANGE
1	2	3	4	5	6=(5-3)	7=100(4-2)/2
<b>SOUTHERN PROV.</b>	<b>596,758</b>	<b>21.82</b>	<b>741,377</b>	<b>21.09</b>	<b>-0.73</b>	<b>24.2</b>
Bo	217,711	7.96	268,671	7.64	-0.32	32.4
Bonthe	80,806	2.95	97,975	2.79	-0.16	21.5
Sherbro Urban	6,955	0.25	7,032	0.20	-0.05	1.1
Moyamba	188,745	6.90	250,514	7.13	+0.23	32.7
Pujehun	102,741	3.76	117,185	3.33	-0.43	14.1
<b>EASTERN PROV.</b>	<b>775,931</b>	<b>28.37</b>	<b>960,551</b>	<b>27.32</b>	<b>-1.05</b>	<b>23.8</b>
Kailahun	186,365	6.81	233,839	6.65	-0.16	29.6
Kenema	266,636	9.75	337,055	9.59	-0.16	26.4
Kono	328,930	12.03	389,657	11.08	-0.95	18.5
<b>NORTHERN PROV.</b>	<b>1,046,158</b>	<b>38.25</b>	<b>1,259,651</b>	<b>35.83</b>	<b>-2.42</b>	<b>20.4</b>
Bombali	233,626	8.54	317,729	9.04	+0.50	35.2
Kambia	155,341	5.68	186,231	5.30	-0.38	19.9
Koinadugu	158,626	5.80	183,286	5.21	-0.59	15.6
Port Loko	292,244	10.68	329,344	9.37	-1.31	12.7
Tonkolili	206,321	7.54	243,051	6.91	-0.63	17.8
<b>WESTERN AREA</b>	<b>316,312</b>	<b>11.56</b>	<b>554,243</b>	<b>15.76</b>	<b>+4.20</b>	<b>75.2</b>
Freetown	276,247	10.10	469,776	13.36	+3.26	70.1
West Rural	40,065	1.46	84,467	2.40	+0.94	110.8
<b>SIERRA LEONE</b>	<b>2,735,159</b>	<b>100.00</b>	<b>3,515,812</b>	<b>100.00</b>	<b>0.00</b>	<b>28.5</b>

Figure 6.1



But the assumably static concept of "population distribution" becomes more meaningful in scope when "population redistribution" is considered. The latter relates to the changes in the proportional share of a country's population in fixed areal units, and has an element of dynamism over time. The two main aspects of population redistribution in Sierra Leone discussed hereunder concern the difference between the relative percentage distribution by district in the intercensal period 1974-1985 and the percentage change in population for each district (columns 6 and 7, respectively, of Table 6.1).

Furthermore in terms of the relative percentage differences, the Western Area recorded a positive balance of 4.2 percent but each of the provinces actually experienced a decline in the proportions of population that they held. The greatest decline was in the Northern Province (-2.42 percent), followed by the Eastern Province (-1.05 percent) and the Southern Province (-0.73 percent).

When these differences are analyzed by districts, it will be revealed that with the exception of Moyamba and Bombali, each district registered a drop in the relative proportion. Although each proportionate change is small, it is important to reckon that the drops in the Kono and Port Loko districts were very substantial, compared with the levels observed for other districts.

The more apparent index of population redistribution (the percentage change in the population of the administrative units) shows that each district had an absolute increase in its population (column 7, Table 6.1 and Figure 6.3). Consistent with the information in column 6, the Western Area experienced the largest percentage change; followed by Moyamba and Bombali districts. Elsewhere, the changes were generally moderate with Port Loko, Pujehun and Koinadugu districts experiencing very small additions to their populations during the intercensal period.

### 6.1.2 - Population Distribution by Density

"Population density" denotes the man-land relationship expressed statistically as the total population divided by the land area occupied by that population. It is the simple geographic concept of population concentration usually used.

By 1985, the population density of Sierra Leone was 49 persons per square Kilometre (p.p.sq.Km.). This density was exceeded only in the Western Area (995 p.p.sq.km.) and Eastern Province (62 p.p.sq.Km.), whilst the corresponding figures were 38 and 35 for the Southern Province and the Northern Province respectively (Table 6.2). The highest density was recorded for the city district of Freetown (36,137 p.p.sq.km.) and the lowest was in koinadugu district (15 p.p.sq.km.). In addition, the districts with population densities above the national density included those of the Eastern Province and the Western Area. Elsewhere, only the Sherbro Urban and Bo districts in the Southern Province, and Port Loko and Kambia districts in the Northern Province had population densities in excess of 49. The average density in the rest of the districts was about 30 p.p.sq.km. (Table 6.2). Figures 6.2 and 6.3 bring out the changes in density over 1974 to 1985.

TABLE 6.2: POPULATION DENSITIES BY ADMINISTRATIVE SUBDIVISIONS:  
SIERRA LEONE, 1974 - 1985

PROVINCE/ DISTRICT	AREA	POPULATION		POPULATION DENSITY		ABSOLUTE DENSITY	
	(sq.km)		(persons per sq.km)	CHANGE			
	1974	1985	1974	1985	(1974-1985)		
NORTHERN PROVINCE		35,936	1,046,158	1,259,641	29	35	6
Bombali District	7,985	233,626	317,729	29	40	11	
Kambia District	3,108	155,341	186,231	50	60	10	
Koinadugu District	12,121	158,626	183,286	13	15	2	
Port Loko District	5,719	292,244	329,344	51	58	7	
Tonkolili District	7,003	206,321	243,051	29	35	6	
SOUTHERN PROVINCE		19,694	596,758	741,377	30	38	8
Bo District	5,219	217,711	268,671	42	52	10	
Bonthe District	3,458	80,606	97,975	23	28	5	
Moyamba District	6,902	188,745	250,514	27	36	9	
Pujehun District	4,105	102,741	117,185	25	28	3	
Sherbro Urban District	10	6,955	7,032	695	703	8	
Bonthe & Sherbro District	3,468	87,561	105,107	25	30	5	
EASTERN PROVINCE		15,553	775,931	960,551	50	62	12
Kailahun District	3,859	180,365	233,839	47	61	14	
Kenema District	6,053	266,636	337,055	44	56	12	
Kono District	5,641	328,930	389,657	58	69	11	
WESTERN AREA		557	316,312	554,243	568	995	427
Freetown	13	276,247	469,776	21,250	36,137	14,887	
Western Rural Area	544	40,065	84,467	74	152	78	
SIERRA LEONE	71,740	2,735,159	3,515,812	38	49	11	

In addition, the distribution of densities by district revealed areal differentiations (Figure 6.2). There were two areas of very dense concentrations:

- (a) North Western Sector including the Western Area, Port Loko and Kambia districts, with average densities at a staggering 371 p.p. sq. km; largely influenced by that metropolitan Freetown.
- (b) the Eastern Province and Bo district. with average densities of 60 p.p.sq.km.

Between these two high density areas was a north-south divide of moderate to low population densities. Koinadugu district to the North, and Bonthe and Pujehun districts to the South recorded particularly low densities of not more than 30 p.p.sq.km. The rest of the districts (Bombali, Tonkolili and Moyamba) had density figures between 35 and 40.

Further in Table 6.2, the absolute population density change in the 1974-1985 intercensal period is considered. The figures reveal that all districts experienced an increase in the level of population concentration; resulting in an average addition of 11 (eleven) more persons per square Kilometre for the whole country. However, this mean was attained only in the Western Area, the Eastern Province and Bombali district. The greatest density change occurred in Freetown, an increase of 14,887 p.p.sq.km., and the lowest was in Koinadugu and Pujehun districts. Kambia and Bo districts also recorded significant increases in population density.

### 6.1.3 - Factors affecting Population Distribution

The distribution of population in Sierra Leone is largely affected by physical factors, upon which may be superimposed the complementarity of socio-economic influences. The mountainous areas of the north-east which constitute most of Koinadugu district, and the southern coastal swamplands and mangrove vegetations of Pujehun and Bonthe districts are the outer limits to human habitation. Their population totals and densities are the lowest in these areas of the country. This emphasizes not only the dearth of communication networks and social facilities, but also the lack of mineral and agricultural wealth which are known to attract large numbers of people.

The vast majority of the population is found on the low-lying coastal and interior plains or lowland regions. These areas have ample amounts of good agricultural soils that are well-fed with riverine water, sufficient annual rainfall, economic deposits of exploitable minerals and a moderate amount of social infrastructure. Population densities are generally moderate to high, with peak areas in the north-west and east of the country.

In the north-western sector of very dense population concentration, there could be identified two sets of factors. Firstly, the Western Area is a case in point. It has the seaport and capital, Freetown, which "... is the only urban system in Sierra Leone with a population greater than 100,000. ... It is the economic nerve centre and industrial hub of the nation; the most important administrative centrepiece; the most cosmopolitan urban system, the best endowed in terms of social infrastructure" (Sesay, 1992, 4-5). Secondly, in Port Loko and Kambia districts are extensive areas of fertile swamplands under rice (the staple food) cultivation. Moreover, both districts were the centre of operation of the defunct Sierra Leone Iron Ore Mining Company (DELCO) and could boast of social infrastructure and amenities higher than the average for the nation.

The dense population concentration of the east resulted because the districts are highly diamondiferous and they also possess valuable cash crops such as coffee and cocoa. In addition, it could also be because of the availability of palm products and fertile lands for upland and swamp rice cultivation which create job opportunities and provide food and other items of consumption.

It is of interest to discuss some salient points about population redistribution in the 1974 to 1985 intercensal period. Declining agricultural output due to high costs of farm inputs and low prices of cash crops on the World Markets encouraged the flight of people from the villages to the towns. What was more was that even the mining sector suffered a decline in output. The Delco mines closed down leading to the out-migration of people from Port Loko district. The multiplier effect of this on north-western Sierra Leone was tremendous. It led to mass migrations to the Western Area and, particularly, Freetown. Also, the diamond industry in Kono district was waning, thus reducing the 'attractiveness' of the district.



Figure 6.2

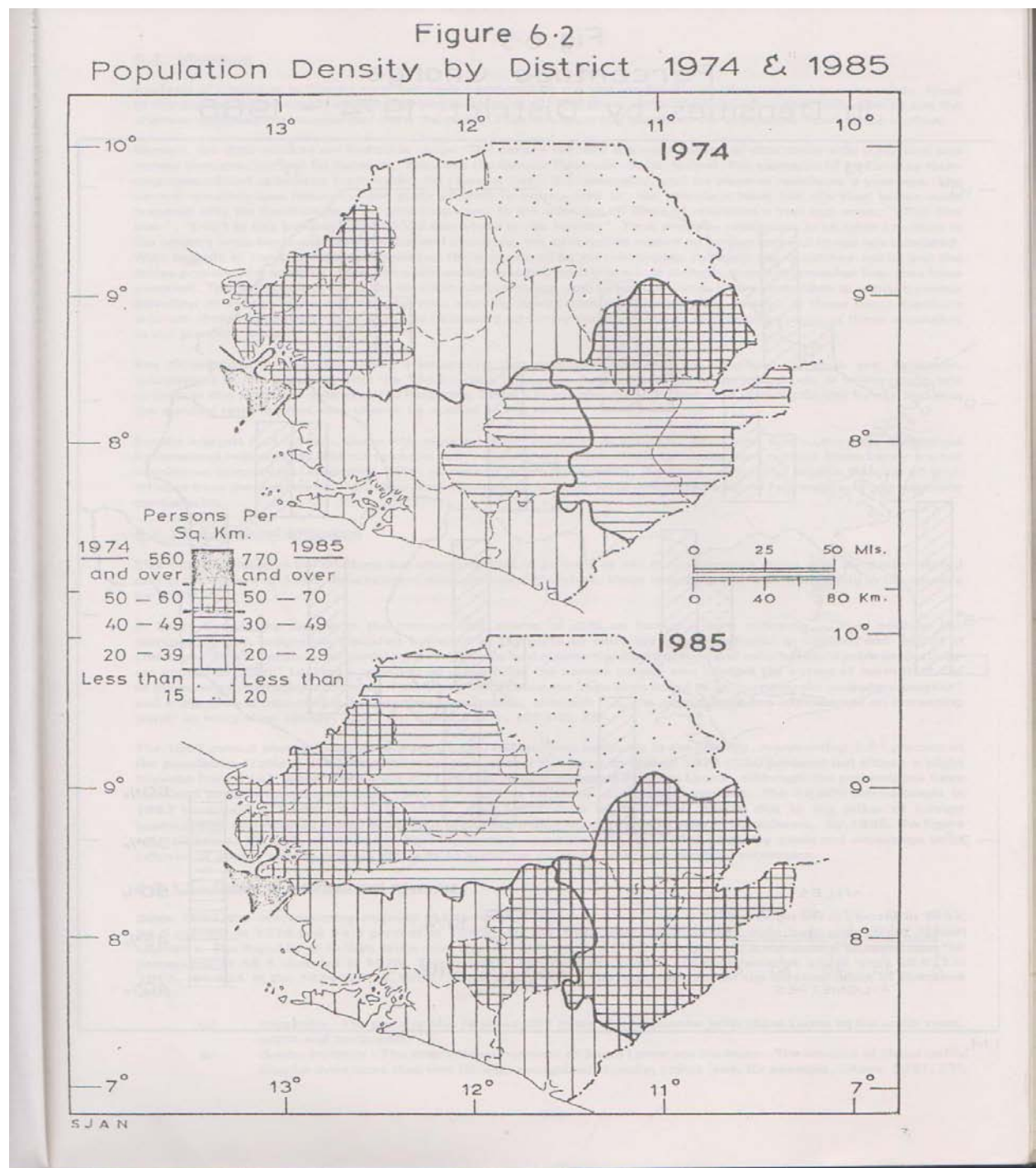
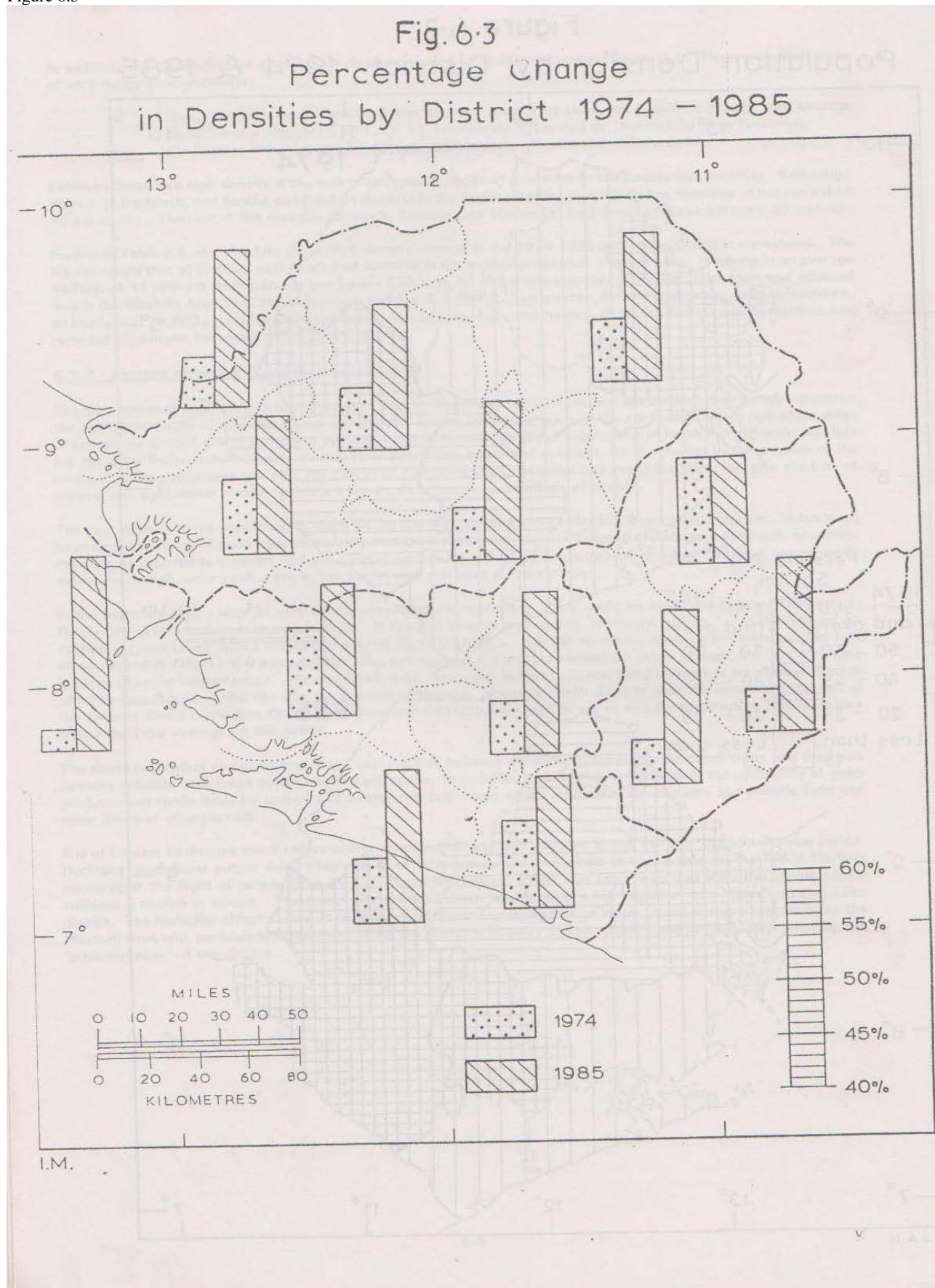


Figure 6.3



## 6.2 Migration

Analysis of migration in Sierra Leone has been hampered by the non availability of adequate and accurate data. Most of the data are either wholly deficient or non-existent at all. Therefore, rather than moulding data collection to suit the ultimate analysis, the reverse has been the norm. Thus the level and depth of the analysis is most times shallow.

Moreso, the data sources are limited in scope. The census remains the main source of data since vital statistical and survey data are few and far between. But even the census has much to be desired. For example, in 1985, only three migration-related questions were asked: (a) place of birth; (b) nationality, and (c) place of residence a year ago. The census questionnaire requested the place of birth to be reported at the chiefdom level, but the final tables were prepared only for the districts. Precoded responses to the question on place of residence a year ago were: "0000 Not born", "0001 In this building" and "0002 Elsewhere in this locality". Thus previous residences in all other localities in the country were inadvertently excluded and therefore, the information was of no further use and hence not tabulated. With regards to the tabulation programme, there seems to be no relationship between the questions asked and the tables prepared for analysis. Since data processing was not geared towards analysis, much information loss may have occurred. This is especially so as the de facto census design was used, with no in-built mechanism to capture people travelling on census night and other persons working (away from home) during the census, or those usual members who are absent on census night. It will be necessary for future census planners to take cognisance of these anomalies at the planning stage.

Sex differentials in migration make it imperative that migration statistics be computed for each sex. However, calculations of net migration from the 1985 census cannot be done by sex, given the magnitude of misreporting and omissions due to loss of data after the fieldwork. Since it is not clear how the lost data was distributed by age and sex, the survival ratio method also cannot be applied to the data.

For the analysis that follows, those who reported their nationality as countries other than Sierra Leone are considered international migrants; as distinct from the native population. (Thus, Sierra Leoneans born outside Sierra Leone are not considered international migrants). With respect to internal migration, therefore, all natives whose districts of birth differed from the districts in which they were enumerated in 1985 were considered internal migrants; and non-migrants contrariwise.

### 6.2.1 International Migration

This section relates to the numbers and characteristics of persons of non-Sierra Leonean origin who were enumerated during the census of 1985. International migrants were, therefore, those non-nationals who were living in the country by 1985.

In Sierra Leone, the census is the conventional source of data on foreign - born nationals. Other sources like immigration and emigration statistics collected at the ports of entry are wholly deficient in content and limited in coverage. This is because the borders are very porous and substantial illegal entries and exits of inestimable proportions are known to occur. Lacking a question on emigration, the census cannot also capture the extent of movement out of the country to all other countries. However, Sierra Leoneans have been noted to be "... generally sedentary peoples" and emigration is expected to be less than immigration; although "... the past decade has experienced an increasing trend" in emigration (Sesay, 1993 (a), 5 and Sesay, 1993(b), 25).

The 1985 census showed that there were 98,860 foreign-born nationals in the country, representing 2.81 percent of the population (Table 6.3). This percentage was almost the same as that of 1974 (2.90 percent) but shows a slight increase from 1963, when there were 2.71 percent foreign nationals in Sierra Leone. Although the percentages have remained virtually unchanged since 1963, the absolute numbers have been increasing. The 52,609 non-nationals in 1963 increased to reach 93,825 in 1974. This tremendous increase was mainly due to the influx of foreign businessmen and migrant labour interested in the expanding economy soon after independence. By 1985, the figure rose slightly to 98,860, an indication that the waning economic prospects of the country could not encourage large influxes of people whose primary aim was to converge on areas with very healthy economies.

#### 6.2.1.1 - Origin of international migrants

Since 1963, the overwhelming majority of international migrants have been of African origin (87.2 percent in 1963, 84.5 percent in 1974 and 94.8 percent in 1985). Of the 1985 total, 94.3 percent were from other West African countries. The Republic of Guinea alone contributed 77.04 percent (76,165 migrants), a substantial increase over the percentage of 58.6 recorded in 1974. This increase was also recorded in absolute numbers which were 30,671 in 1963, 44,504 in the 1974 and 76,165 in 1985 (Table 6.3). The main reasons for the massive influx of Guineans were:

- (a) Proximity - The country shares about 397 miles of land boarder with Sierra Leone to the north-west, north and north-east;
- (b) Border Porosity - The international boarders of Sierra Leone are too loose. The amount of illegal traffic may be even more than that through recognized crossing points (see, for example, Okoye 1981, 22);
- (c) Ethnic Identities - The colonial legacy of international boundaries completely disregards ethnic homelands. Thus, Susus, Kissis, Foulahs and Madingos are ethnic groups on both sides of the border and this facilitates easy movement of such tribesmen in and out of the country;
- (d) Differential Economic Prospects in Guinea and Sierra Leone - With a 'closed' economy from the sixties to the eighties, the more 'open door' policy of the Sierra Leone government and greater prospects of economic prosperity were the stimuli that induced large numbers of Guinean nationals to take up residence in Sierra Leone.
- (e) The Sierra Leonean Hospitality - The Sierra Leonean is very accommodating to foreign nationals and given (a) to (c) above, the country presented a haven to tens of thousands of Guinean economic and political refugees.

**TABLE 6.3 - DISTRIBUTION OF NON-CITIZENS BY SEX  
AND COUNTRY OF ORIGIN/NATIONALITY**

COUNTRY OF ORIGIN NATIONALITY				MALE	FEMALE	TOTAL
Benin	09	160	269			
Burkina Faso	23	13	36			
Cape Verde	4	2	6			
Gambia	2,999	2,377	5,376			
Ghana	916	425	1,341			
Guinea	5,955	30,210	76,165			
Ivory Coast	47	29	76			
Liberia	2,374	2,226	4,600			
Mali	1,135	868	2,003			
Mauritania	112	34	146			
Niger	138	28	166			
Nigeria	1,413	757	2,170			
Guinea Bissau	17	8	25			
Senegal	508	248	756			
Togo	31	14	45			
TOTAL WEST AFRICA	5,781	37,399	93,180			
TOTAL NORTH AFRICA	45	31	76			
TOTAL CENTRAL AFRICA	55	41	96			
TOTAL EAST AFRICA	72	47	119			
TOTAL SOUTH AFRICA	58	188	246			
France	-	-	-			
West Germany	82	63	145			
U.S.S.R.	28	52	80			
United Kingdom	379	275	654			
Rest of Europe	200	155	355			
TOTAL EUROPE & U.S.S.R.	689	545	1,234			
Canada	17	22	39			
U.S.A.	275	253	528			
South America	14	49	63			
TOTAL N. AND S. AMERICA	306	324	630			
Peoples R. of China	282	7	289			
India	256	162	418			
Japan	4	4	8			
Korea (North)	7	1	8			
Korea (South)	10	6	16			
Lebanon	1,213	1,041	2,254			
Rest of Asia	161	109	270			
TOTAL ASIA	1,933	1,330	3,263			
Oceania	12	4	16			
TOTAL	58,951	39,909	98,860			

Of the international migrants of non-African origins, the Lebanese continued to be the largest group. In 1963, they constituted 5.2 percent and by 1974, it was 5.4 percent. However, by 1985 it was 2.3 percent. In terms of figures, they were 3,102, 4,289 and 2,254 in 1963, 1974 and 1985 respectively. This trend bespoke of the rising economic prospects in the sixties and seventies, and the declines in the eighties; for the Lebanese are mainly economic migrants.

It is important to reckon with the declining numbers and proportions of nationals from the United Kingdom. Soon after independence, the 1963 census showed that there were 2,360 such nationals in the country, representing 4.0 percent of the population. In 1974, it was 1,070 (1.4 percent) and by 1985, it declined to 554 (0.7 percent). In the sixties, the high proportion of United Kingdom nationals was "... mainly due to the fact that even after Sierra Leone's political independence (in 1961), the United Kingdom still maintain(ed) strong economic links with its former colony" (Okoye, 1981, 24). The very low percentage of 1974 and 1985 were probably due to two factors:

- (a) The acquisition of republican status and an executive Sierra Leonean president meant that the United Kingdom was of little political relevance to Sierra Leone, and
- (b) the declining economic prospects of the country, which began in the mid-seventies, discouraged British economic interests in the country and most of their business concerns subsequently wound up.

In Table 6.3, it is shown that Gambians, Ghanaians, Liberians, Nigerians and Malians are the major groups of immigrants after Guineans. With the exception of the latter, these were generally English-speaking and shared some commonality in lingua franca. All other nationals represent less than 1.0 percent of the foreign-born population.

#### 6.2.1.2 Destination of international migrants

Information on the distribution of non-citizens by district of residence in 1985 is shown in Table 6.4. According to the table, slightly over half of all immigrants were in Freetown (the city) and Kono district. However, Kenema and Kailahun districts collectively made up secondary nodes of convergence of the immigrants, accounting for about a quarter of them. This meant that 74.4 percent of all foreign-born nationals in the country were in the Eastern Province and Freetown. This concentration, therefore, suggests that the international migrants had a strong economic motive for entering the country because these were areas which coincided with the economic nerve centres of the country. Elsewhere, the concentration of foreign nationals was slight, except for the 6.22 and 4.75 percent in Bo and Koinadugu districts respectively.

**TABLE 6.4: DISTRIBUTION OF NON-CITIZENS BY SEX AND  
DISTRICT OF RESIDENCE: SIERRA LEONE, 1985**

DISTRICT OF RESIDENCE	SEX RATIO	MALE	FEMALE	PERCENTAGE TOTAL	PERCENTAGE 1985	PERCENTAGE 1974
SOUTHERN PROVINCE	173.8	7,190	4,136	11,326	11.46	10.0
Bo	174.4	3,907	2,240	6,147	6.22	4.8
Bonthe	201.9	539	267	806	0.82	
Sherbro	191.1	86	45	131	0.13	1.0
Moyamba	187.7	1,348	718	2,066	2.09	2.3
Pujehun	151.3	1,310	866	2,176	2.20	1.9
EASTERN PROVINCE	143.7	28,482	19,818	48,300	48.86	45.9
Kailahun	114.6	5,282	4,611	9,893	10.01	8.2
Kenema	172.7	8,819	5,107	13,926	14.09	11.7
Kono	142.3	14,381	10,100	24,481	24.76	26.0
NORTHERN PROVINCE	134.9	7,032	5,211	12,243	12.38	15.6
Bombali	129.5	1,669	1,289	2,958	2.99	2.6
Kambia	107.3	1,005	937	1,942	1.97	1.3
Koinadugu	121.3	2,576	2,124	4,700	4.75	8.3
Port Loko	203.9	883	433	1,316	1.33	2.0
Tonkolili	210.0	899	428	1,327	1.34	1.4
WESTERN AREA	151.2	16,247	10,744	26,991	27.30	28.5
Freetown	151.1	15,193	10,057	25,250	25.54	
Western Rural	153.4	1,054	687	1,741	1.76	28.5
SIERRA LEONE	147.7	58,951	39,909	98,860	100.00	100.00



Between the censuses of 1974 and 1985, the Western Area and the districts of Bonthe, Moyamba, Kono, Koinadugu and Port Loko experienced slight decreases in the percentages of resident non-citizens. A close observation of Table 6.4 depicts that the main gains were made in Kenema, Kailahun and Bo districts (in order of importance); probably at the expense of the 'loosing' districts. The underlying motive for the redistribution of foreign population may have been to move into districts with brighter economic opportunities, in an era of waning economic prospects in the country.

### 6.2.1.3 - Sex-age distribution of foreign-born nationals

In terms of sex, there were more male than female immigrants in 1985; an overall sex ratio of 147.7. Analysing sex characteristics by origins of foreign-born nationals, Table 6.3 shows that except for Benin, Southern Africa, former U.S.S.R., Canada and the South American region, males were more than females for all other countries of origin. This situation contrasted with that of the native population with an overall sex ratio of 97.45 in 1985, and this figure was exceeded only in the Western Area and Kenema and Kono districts.

Table 6.4 showing the distribution of non-citizens by sex and district of residence in 1985, indicates that, there was a preponderance of males over females in each district. The overall sex ratio of 147.7 ranged from 134.9 in the Northern Province to 173.8 in the Southern Province. The highest sex ratios were recorded in the districts of Tonkolili, Port Loko, Bonthe, Moyamba, Pujehun, Bo and Kenema. The sex ratio of aliens of the Western Area, generally, is the lowest and this may be due to the out-migrating of male aliens to the agricultural and mineral rich areas of the country. This could also be due to more family type of migrants in the capital city, more entrepreneurs in outlying areas who are generally male, who are ready to migrate to areas with fewer amenities for education, social services and type of activities that these migrants engage themselves in.

Further analysis by age (Table 6.5), shows that there was a female predominance in the age bracket 0-24. At ages 25 and over, however, there were more males than females in each age group. Also, about 60 percent of the foreign-born population were aged 15-44, with an overly surplus of males over females (55.4 percent). This meant that the immigrants were mainly teenagers and young adults, compared with the native population with a very high proportion of children. Figure 6.4 clearly shows the narrow base of the pyramid with concentration at young adult ages.

Translating the age distribution of the foreign nationals into an index of economic dependency brings out some interesting results. The age dependency ratio (populations 0-14 plus 65 and over years of age divided by population 15-64 years old) was 36.7, meaning that every 100 foreign nationals of working age (15-64 years) was to care for an average of 37 children and old age men. The corresponding dependency ratio of the native population was 89.4 in 1985. Thus, the immigrants had a more favourable age distribution than the citizens. In terms of sex, the age dependency ratio of females of foreign nationality was 44.0 and the males registered 32.2. The corresponding statistics for the natives were 83.5 and 96.0 respectively. Analysis by sex clearly shows that among aliens even though the dependency ratio is low, it is higher for females than males. This may be due to the fact that most of the males are entrepreneurs and females may be the family members of the migrant alien males.

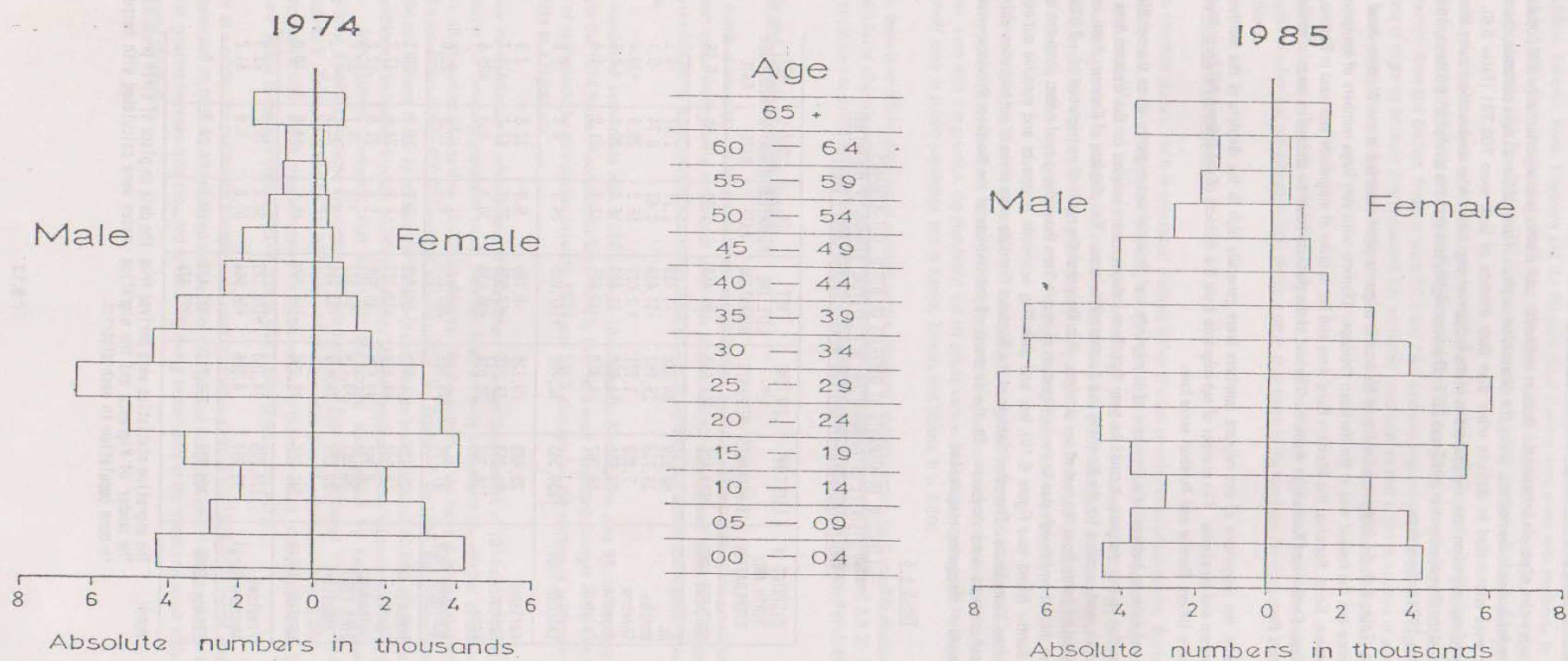
**TABLE 6.5: FOREIGN NATIONALS BY AGE AND SEX: 1985**

AGE	MALE	FEMALE	TOTAL	PERCENT
0 - 4	4,595	4,344	8,939	9.1
5 - 14	6,623	6,770	13,393	13.4
15 - 24	8,402	10,728	19,130	19.4
25 - 34	14,103	9,921	24,024	24.3
35 - 44	11,589	4,287	15,876	16.1
45 - 54	7,010	1,821	8,831	8.9
55 - 64	3,497	960	4,457	4.5
65 - 74	1,800	558	2,358	2.4
75+	1,332	520	1,852	1.9
<b>TOTAL</b>	<b>58,951</b>	<b>39,909</b>	<b>98,860</b>	<b>100.0</b>
<b>PERCENT</b>	<b>59.6%</b>	<b>40.4%</b>	<b>100.0%</b>	

Note = Distributed Pro-rata for N/S Cases.

Figure 6.4

Figure 6.4  
Age-Sex Pyramids of Foreign Nationals  
in Sierra Leone 1974 & 1985



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## 6.2.2. - Measures of Lifetime Internal Migration

The movement of people between the districts and within each district is an important aspect of population distribution and redistribution in the country. Using the information on place of birth of Sierra Leone nationals, the number of people who were enumerated in districts other than their districts of birth were 706,731 (Table 6.6). Therefore, the interregional migration rate, the proportion of the indigenous population who were resident away from their district of birth, at the time of census in 1985 was 20.7. This was slightly less than the level of 21.6 (Okoye, 1981,40) estimated for the 1974 census data.

From Table 6.6, the highest numbers of lifetime in migrants were recorded in the Western Area and the Eastern Province and the lowest was in the Northern Province. Districts with very large numbers of immigrants in 1985 were Freetown, Kono, Kenema, the Western Rural Area and Bo; in order of magnitude and least in Bonthe, Sherbro Urban, Pujehun, Kambia and Koinadugu districts. The rest of the districts could be classed as areas of moderate levels of in-migrant flow.

Broadly, the magnitude of out-migrant numbers were generally high in the districts of the Northern Province, Bo, Freetown and Moyamba. The number of out-migrants from the districts of the Eastern Province, Western Rural Area, Sherbro Urban, Bonthe and Pujehun were low.

The net balance between the numbers of in-migrants and those of out-migrants gives the net lifetime migration. According to this measure, it could be seen that these balances were positive for the Western Area and the Eastern Province, and negative for the Northern and Southern Provinces. The districts of Kenema, Kono and Western Area received migrants from the rest of the districts. It is likely that the net lifetime migration of +2,079 for the Sherbro Urban district was mainly due to the in-migration of people from the outlying rural areas; given the isolated nature of the Bonthe Island (see Figure 6.10), low and dwindling economic prospects and massive out-migration towards mainland Sierra Leone. The other districts of the Southern Province were areas of out-migration although the figures for out-migrants were moderate. On the contrary, all the districts of the Northern Province were net senders of migrants of staggering magnitudes.

TABLE 6.6

### LIFETIME IN-MIGRANTS BY DISTRICT OF BIRTH, OUT-MIGRANTS BY DISTRICT OF ENUMERATION, NET LIFETIME STREAMS OF MIGRATION AND INTERDISTRICT MIGRATION RATES : SIERRA LEONE, 1985.

DISTRICT OF BIRTH AND ENUMERATION	LIFETIME IN-MIGRANTS	LIFETIME OUT- MIGRANTS	NET LIFETIME MIGRANTS	IN- MIGRATION RATE	OUT- MIGRATION RATE	NET MIGRATION RATE
SOUTHERN PROV.	133,425	166,893	-33,468	3.90	4.88	-0.98
Bo	60,619	64,038	-3,419	1.77	1.87	-0.1
Bonthe	14,738	25,152	-10,414	0.43	0.74	-0.3
Sherbro	3,850	1,771	+2,079	56.3	25.9	+30.4
Moyamba	39,951	51,000	-11,049	16.4	20.9	-4.5
Pujehun	14,267	24,932	-10,665	12.5	21.9	-9.4
EASTERN PROV.	230,385	82,480	+147,905	24.7	8.8	15.8
Kailahun	22,428	29,128	-6,700	9.9	12.8	2.9
Kenema	91,253	33,278	+57,975	27.9	10.2	+17.7
Kono	116,704	20,074	+96,630	30.8	5.3	+25.5
NORTHERN PROV.	97,396	378,622	-281,226	8.0	30.9	-23.0
Bombali	25,023	111,772	-86,749	8.1	36.2	-28.1
Kambia	12,504	44,526	-32,022	6.9	24.6	-17.7
Koinadugu	8,991	49,579	-40,588	5.0	27.8	-22.2
Port Loko	30,351	98,274	-67,923	9.5	30.7	-22.8
Tonkolili	20,527	74,471	-53,944	8.7	31.5	
WESTERN AREAS	245,525	78,736	+166,789	45.5	14.6	40.0
Freetown	174,275	74,150	+100,125	38.2	16.2	21.9
Western Rural	71,250	4,586	+66,664	86.8	5.6	81.2
SIERRA LEONE	706,731	706,731	-323,473	20.7	20.7	0.0
		+323,473				

Note: The migration statistics were derived from the data on place of birth presented in Table A6.4. The number of Migrants and the migration rates were calculated with respect to the total in-born population in each district.

If these aggregate migrant figures are translated into rates of migration (the number of migrants per 100 in-born population of each district), much more meaningful analysis would result. According to Table 6.6, Sherbro Urban, Moyamba, Pujehun, Kenema, Kono, Freetown and the Western Rural districts were areas with moderate to high in-migration rates in 1985. The corresponding rates of for the other districts were low. In addition, the rates of out-migration were moderate to high for all district except for Bo, Bonthe, Kono and the



Western Rural districts.

Of greater significance is the analysis of the net migration rates (defined as the excess or deficit of in-migrants per 100 population born in each district) Table 6.6 further shows that the excess of migrants as a percent of the populations born in the Western Area and Eastern Province were 40.0 and 15.8 percents respectively. These two regions were the net receivers of migrants because they possessed key economic opportunities that acted as sources of attraction. The Northern Province registered a deficit of 23.0 percent and the Southern Province experienced a minimal deficit of 0.98 percent.

At the district level, the net migration rates follow the pattern of the net lifetime migration figures discussed above. However, in terms of rates, net out-migration from districts other than those in the Northern Province were either very low or insignificant.

### 6.2.3. - Definition of Urban Centres

In the literature on urban studies, the first conceptual problem is that of what constitutes an urban centre. Sociologists consider an urban area as one with people showing considerable attributes or ways of life which include social heterogeneity and services such as hospitals, banks, public buildings, pipe-borne water, electricity, etc. Economists rather consider urban centres to be places which have a certain minimum of the economically active population engaged in non-agricultural activities. Further, demographers usually use population numbers and densities to describe urban areas. By this definition, urban areas are places with a minimum population number or density.

With this diversity in definitions, there is the problem of international comparability between researchers and national practices. Demographers have, therefore, adhered to the practice of using minimum population bases to define urban areas. However, even with this practice, the population cut-off points vary widely amongst countries. In Nigeria and Ghana, the cut-off point is 5,000 population and in Kenya, Zambia and Liberia, it is 2,000.

In Sierra Leone, there is no official definition of an urban centre. However, at each census, the Central Statistics Office has maintained a list of all settlements with a population of 2,000 and over (see Tables A6.1, A6.2 and A6.3). Hence, it has become customary to define as urban all settlements with a population equal to or larger than the threshold figure of 2,000.

### 6.2.4 - Levels and Trends of Urban Growth

The levels and trends of urban growth denote the tempo of urbanization, by giving a clear picture of the extent to which people have been concentrating in the towns over time. This process would be considered under three subthemes - the changes in the number of urban units by size, trends in the growth of the urban population and regional differences in urbanization.

By 1985, the number of settlements with 2,000 or more inhabitants in Sierra Leone was 98; an increase of 23 settlements over the 1974 figure. According to Sesay (1989, 15), there were significant changes in the distribution of the number of settlements by size classes between 1974 and 1985, through "... the shifting of settlements from a lower size class to a higher one".

Table 6.7, gives the distribution of urban centres of Sierra Leone between the censuses of 1974 and 1985. It can be seen that whatever the threshold population used, there has been a steady increase in the number of urban units, especially those urban centres of less than 20,000 inhabitants. At the bottom of the table, it is clear that only one settlement had a population of over 100,000 and that was the capital city, Freetown. By 1985, Koidu-New Sembehun was joined by Bo and Kenema towns to increase the number of settlements in the size class 50,000 - 99,999 to three. With no other settlement increasing to reach 20,000 population, Makeni remained the only urban centre in the 20,000 - 49,999 class. Also, Lunsar, Yengema, Port Loko and Magburaka were joined by Kabala/Yogomaia and Pandebu/Tonkpombu I and II to increase the number of urban centres of population between 10,000 and 19,999 to 6 by 1985 (Table 6.7, Table A6.2 and A6.3). Moreover, 14 of the settlements of population sizes 2,000 - 4,999 in 1974 grew to reach 5,000 - 9,999, thus increasing the urban centres in the latter to 25. At the same time, 21 new settlements were added to the size class 2,000 - 4,999 to give a total of 62 (Table 6.7).

For the country as a whole, the percentage change in the number of urban units in the 1974-1985 period was 30.7. Medium sized towns of 20,000 - 49,999 recorded a decrease of 66.7 percent due to the loss of Kenema and Bo towns. Furthermore, the greatest increase were recorded of fastest growing settlements at the lower and upper ends of the scale of settlement distribution.

Figure 6.5



TABLE 6.7 - DISTRIBUTION OF LOCALITIES OF 2,000 OR MORE

## PERSONS, SIERRA LEONE 1974-1985

LOCALITY SIZE	NUMBER OF LOCALITIES		PERCENTAGE CHANGE	PERCENTAGE OF TOTAL POPULATION			PERCENTAGE DIFFERENCE
	1974	1985		1974	1985	1974-1985	
2,000- 4,999	55	62	+12.0	6.6	5.2	-1.4	
5,000- 9,999	11	25	+127.3	2.6	4.9	+2.3	
10,000-19,999	4	6	+50.0	1.9	1.8	-0.1	
20,000-49,999	3	1	-66.7	3.6	1.4	-2.2	
50,000-99,999	1	3	+200.0	2.8	5.5	+2.7	
100,000 & Over	1	1	+ 0.0	10.1	13.4	+3.3	
Total	75	98	30.7	27.6	32.2	+4.6	

Source: Sesay, I.M. - 'Table 2.1 - Distribution of Localities of 2,000 or more Person, 1963-1985' Urban Growth in Sierra Leone : Trends and some Demographic Aspects, M.A. Thesis held at the Faculty of Social Studies, University of Ghana, Legon, September 1989: 16.

The trend in the growth of the urban population showed a rapid rate of increase. In 1974, 756,126 persons were enumerated in 75 urban centres. By 1985, the figure was 1,133,773 inhabitants living in 98 settlements (See Tables A6.2 and A6.3). The average size of the urban centre of 10,082 inhabitants in 1974 increased to 11,569 in 1985. According to Table 6.7, the percentage of persons living in towns of 2,000 and over population increased from 27.6 to 32.2 within the intercensal period; an increase of 4.6 percentage points. Also, by 1985, there were significant increases in the populations of urban centres of 5,000 inhabitants and more, and for settlements of 5,000 - 9,999 persons. The decrease in the percentage of population in the settlements of the size class 2,000 - 4,999 could be attributable to the fact that some of its largest settlements increased in size to reach 5,000 population, whereas most of the villages that were reclassified in 1985 as urban centre hardly had more than 3,000 people (see, for example, Table A6.3, settlement numbers 57-98 (i.e., 43 localities) with populations less than 3,000). It is interesting to note that although the number of towns in the 10,000 - 19,999 class increased from four to six, the population did not experience a corresponding increase. In fact, there was a drop in relative proportion by 0.1 percent.

At the upper end of the scale of the size of locality, the city of Freetown, with a population of 469,776 in 1985, increased its percentage of the total population from 10.1 and 13.4. This difference of 3.3 percentage points represents the largest gains that was added to the population of any one urban centre. In addition, the city's population was growing at an average rate of 4.95 percent per annum in the 1974-1985 intercensal period. According to Sesay (1992:5), "this rapid growth resulted because of the primacy of Freetown. It is the economic nerve centre and industrial hub of the nation; the most important administrative centrepiece; the most cosmopolitan urban system, the receptacle of socialization and culture, and the greatest endowed in terms of social infrastructure."

The trends in the growth of the urban population have been measured by a number of parameters. According to Table 6.8, the scale of urbanization (defined as the extent to which settlements are becoming urbanized) was 0.9953 in 1985, about 32.4 percent increase from the 1974 level. However, the scale of population concentrated at the upper end of the scale of the size of locality was higher at 1.3399. Although the percentage change of the latter was less than that of the scale of urbanization, the absolute figures since 1974 reveal that the urban areas had been holding population out of proportion to their numbers.

Further in Table 6.8, it is revealed that whilst the intercensal percentage change of the population of the four largest urban centres was 57.1, that of the city alone was 70.1. This means that most of the change in the 'big four' was contributed to by Freetown. In addition, the index of primacy (defined as the percentage of the population of a country's four largest cities that is contained in the largest city) for the 1985 census data was 70.7, an increase of 8.3 percentage points over the primacy level of 1974. The increasing trend in the primacy of the city would surely have serious repercussions on the socio-economic development of the country as a whole.

Also the percentage change in the urban population for the 1974-1985 intercensal period (50.7) is significantly higher than that of the rural, or total population of the country. Though the corresponding figure for the percentage urban is moderate (+17.3), that for the table year (+30.4) is quite substantial. In addition, the location of the table values for the urban populations of 1974 and 1985 on the logistic curve depict that Sierra Leone is now at the stage of rapid urban growth (Table 6.8). More importantly, there was an increase of 2.05 table years of urbanisation per calendar year during the intercensal period.

The level and trends in urban growth can also be analyzed at the district level. According to Table 6.9, which shows the degree of urbanization by districts for the 1974-1985 intercensal period, the percentage of persons living in small towns (2,000 - 4,999 population) was small and declining whilst that of medium and large towns (5,000 and over inhabitants) was increasing steadily. With the exception of Kailahun and Bo districts, there were significant decreases in the percentage of the populations living in small towns for the rest of the districts. But this was mainly because population was concentrating at the upper end of the scale of urbanization. Virtually all the districts recorded marked increases in the percentage of persons in settlements of 5,000 and over population. The most significant areas of rapid urbanization were the Western Area, Kono and Kenema districts.

Table 6.8 - Parameters of Urban Growth : Sierra Leone.

1974 -1985				
URBAN PARAMETER	1974	1985	PERCENTAGE CHANGE	
Scale of Urbanization(1)	0.752	0.9953	+32.4	
Scale of Population (1) Concentration	1.0616	1.3399	+26.2	
Population of Four Largest(2) Urban Centres	422,922	664,491	+57.1	
Population of Largest City(2)	276,247	469,776	70.1	
Primacy Rate(2)	65.3	70.7	+8.3	
Total Population (2)	2,735,159	3,515,812	+28.5	
Rural Population (2)	1,983,033	2,382,039	+20.1	
Urban Population (2)	752,126	1,133,773	+50.7	
Percentage Urban (2)	27.4984	32.2478	+17.3	
Table Year (3)	-96.9	-74.3	+30.4	

Source (1) Calculated  
(2) Calculated from 1974 and 1985 census figures  
(3) Read from table of logistic curve

However, between 1974 and 1985, the level of urbanization as expressed by the percentage of persons in settlements of at least 2,000 population was on the increase for the nation and its geographic subdivisions. Kono and Moyamba districts registered significant decreases probably due to the declines in the diamond mining industry in the former and the generally inhospitable economic climate of the latter which encourages out-migration.

The pattern of urbanization corresponds with the pattern of population distribution and density by 1985. The most urbanized areas were the Western Area and the Eastern Province, with an extension into Bo district. Elsewhere, the level of urbanization, though rising, is either moderate or considerably low as in Moyamba and Pujehun districts. Thus, there seemed to be a lot of correlation between absolute population numbers, population densities and levels of urbanization with levels of economic prospects and natural resource endowment in the respective districts (compare the information in Table 6.9 with those in Tables 6.1 and 6.2).

TABLE 6.9 - DEGREE OF URBANIZATION BY DISTRICT :

SIERRA LEONE, 1974 - 1985

PERCENT OF DISTRICT'S POPULATION IN TOWNS									
DISTRICT	2,000 - 4,999		5,000 AND OVER		2,000 AND OVER				
	1974	1985	1974	1985	1974	1985			
SIERRA LEONE	7		5	21	27	28	32		
KAILAHUN		11		13	8	13	19	26	
KENEMA		13		7	12	25	25	32	
KONO		10		7	35	34	45	40	
BO		5		10	18	22	23	32	
BONTHE *				5	4	7	12	12	16
MOYAMBA				7	0	3	3	10	3
PUJEHUN				5	0	0	7	5	7
BOMBALI				2	0	12	17	14	17
KAMBIA				8	8	11	16	16	19
KOINADUGU				6	4	8	11	11	12
PORT LOKO				3	6	11	12	12	17
TONKOLILI				5	6	8	10	10	14
WESTERN AREAS				4	1	87	88	91	89

SOURCE : Sesay, I.M. - 'Table 2.12 - Degree of Urbanization by District : 1963-1985', Urban Growth in Sierra Leone : Trends and some Demographic Aspects, M.A (Population Studies) thesis submitted to the Faculty of Social Sciences, University of Ghana, Legon, September, 1989 : p.35.

\* Including Sherbro Urban District.

#### 6.2.5 - Demographic Components of Urban Growth

This section examines the main contributing components of the growth that was observed in the population of settlements of 2,000 and over by 1985. According to Sesay (1989, 36), "the change in the size of urban areas from one census to another consists of:

- net-migration to the urban areas;
- the natural increase of the population in the area classified as urban at the first census;
- the net effect of reclassification and declassification of areas designated as urban at the second census;
- the addition and subtraction of population on account of the intercensal changes in the boundaries of urban agglomerations."

Between 1963 and 1974, whilst the total population grew at an annual rate of 1.94 percent, the urban population increased annually by 15.5 percent. In the 1974-1985 censal period, the former experienced a yearly rate of growth of 2.28 percent and the latter 3.73 percent. The excess from the rate of the urban areas has been attributed to rural-urban migration (Sesay, 1989, 38). The figures, however, show a decreasing rate of urban growth and a concomitant but slight increase in the growth of the total population.

In applying the urban growth decomposition method, Sesay (1990, 285) realised that though urbanward migration accounted for 70.1 percent of the growth in the urban population between 1963 and 1974, there was a decrease in the trend as the corresponding figure for the 1974-1985 period was 43.5 percent. Thus, the contribution of natural increase increased from 29.9 percent in the period 1963-1974 to 56.5 percent during the 1974-1985 period. Therefore, although migration used to be the major contributor to urban growth, its influence was decreasing. The methodology assumes that natural growth is the same for all areas and the extra urban growth is due to migration.

In this scenario, settlements of 20,000-49,999 population experienced the highest proportions of increase due to urbanward migration. In-migration was also important in the increase of towns of 50,000 and over population and settlements of 5,000-9,999. In the case of Freetown, the city, the contribution of urbanward migration dropped from 68.3 percent in the 1963-1974 period to 59.1 in the 1974-1985 period. Due to stepwise migration, small towns of 2,000- 4,999 population and 10,000-19,999 inhabitants were collecting areas of net out-migration during the last intercensal period. Further with the exception of medium sized towns (of 20,000-49,999 inhabitants) and small towns (of 5,000-9,999 population), there were significant increases in the quantum of contribution of natural increase to the growth of the urban areas. The most important rises in the proportion of natural increase were of settlements of 2,000-4,999 and 10,000-19,999 inhabitants. Freetown experienced an increase in the proportion of natural increase from 13.7 percent during 1963-1974 to 40.9 percent in the 1974-1985 period.

According to Sesay (1993, 24), the likely explanation for this dramatic decline in the proportion of rural to urban migration were two-fold:

- "(a) the natural growth rate of the urban population was on the increase and
- (b) rural fertility regimes were transferred to the urban areas, through the mass movement of marriageable youths from the villages to the towns, a process called 'rustication' of the urban milieu."

Thus, if this trend continues, it is likely that by the year 2,000, the percentage contribution of natural increase to urban growth in Sierra Leone would be higher than that of rural-urban migration. This conclusion stems from the observation that "the majority of these migrants are rural peoples with very high procreative tendencies. In the short run, their fertility behaviour increases the growth rate of the (urban areas) until the urban realities of economic and social pressures should force them to adopt a small family size pattern" (Sesay, 1992, 5).

### 6.3 - Summary and Conclusions

This paper has demonstrated that spatial studies are now very important for development planning and management. Population numbers and densities are heavily skewed in favour of the Eastern Province and Bo district, and the Western Area and Port Loko and Kambia districts. Incidentally, the most heavily populated areas coincide with the economic heartlands of the country.

Between 1974 and 1985, the Western Area gained population at the expense of the provinces. Nearly all the districts experienced a drop in the proportions of their populations and this drop was highest for Kono and Port Loko districts. This may have been because of the declining fortunes in the diamond mining industry in the former and the closure of the iron ore mining company in the latter. However, each district actually experienced an absolute increase in its population, the most significant percentage changes being in the Western Area, Moyamba and Bombali districts.

The population density of 49 persons per square kilometres in 1985 was exceeded only by the Western Area (995) and the Eastern Province (62). The capital city, Freetown, recorded the highest density (36,137 p.p.sq.km.) and the lowest was in Koinadugu district (15 p.p.sq.km.). Alongside the increase in absolute population numbers, each district recorded an increase in population density in the 1974-1985 censal period. The national average increase of 11 persons per square Kilometre was attained only in the Western Area, the Eastern Province and Bombali district.

The factors influencing population distribution were seen to be largely physical factors, natural resource endowments, prospects of economic undertakings and social infrastructure. In this scenario, low-lying districts with ample natural resources and good roads and social services are likely to be more densely peopled.

There were 98,860 foreign-born nationals in the country by 1985; about 2.81 percent of the total population. The overwhelming majority of non-citizens (about 95 percent) were of African origin; 77.04 percent came from neighbouring Guinea alone. This massive influx of Guinean nationals was conditioned by geographic proximity, border porosity, cross border ethnic affinities, differential economic prospects between Guinea and Sierra Leone and the Sierra Leonean hospitality.

The largest group of non-African nationals were the Lebanese. They constituted 2.3 percent of foreign-born nationals in 1985, a drop from the 5.4 percent recorded in 1974. These, together with some West European immigrants, registered absolute declines in numbers probably due to waning prospects in the economy of the country.

As 74.4 percent of all foreign national were enumerated in the Eastern Province and Freetown, the motive for immigration may have been economic because these areas were the economic nerve centres of the country. Between 1974 and 1985, there were some stepwise migrations of the foreign-born population directed towards the districts of Kenema, Kailahun and Bo, which exhibited brighter economic opportunities at the time. With an overall sex ratio of 147.7, there were far more male than female immigrants in Sierra Leone. This preponderance of males was recorded for each district.

The interregional migration rate in 1985 was 20.7, slightly less than 21.6 recorded in 1974. The highest numbers of lifetime in-migrants were recorded in the Western Area and the Eastern Province, whilst out-migration was highest in the Northern Province. This scenario largely influenced and reflected the net migration rates.

By 1985, there were 101 urban centres with a population of 1,133,773 in Sierra Leone. Between 1974 and 1985, there were increases in the percentage of urban centres by size classes; especially those urban centres of less than 20,000 inhabitants. Freetown has been the only urban centre with more than 100,000 population and the greatest increases in urban populations occurred in settlements of more than 20,000 inhabitants. The primacy of the city was seen in the fact that it had over 70 percent of the population of the four largest cities. With a population of 469,776, and an annual rate growth of 4.95 percent, there would be serious repercussions on the development of the country if steps are not taken to redress this imbalance. In addition, urbanization seemed to have a high level of correlation with absolute population numbers, population densities, economic prospects and levels of natural resource endowment in the country.

The urban population has been growing at rates faster than the total population, though the rates for the former have been declining. Also, urbanward migration which contributed 70.1 percent of the urban growth between 1963 and 1974 declined to 43.5 percent in the 1974-1985 censal period. This meant that natural increase had assumed greater prominence in the increase in population of urban areas by 1985. However, rural-urban migration was very important in the growth of settlements of 20,000 inhabitants and over, whereas natural increase dominated the growth of small urban areas of less than 20,000 population.

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TABLE A6.1 RANK ORDER FOR SIERRA LEONE, URBAN LOCALITIES (TOWNS AND CITIES) POPULATION AND PERCENTAGE OF TOTAL POPULATION, 1963

R A N K	LOCALITY 1963	NUMBER OF PERSONS	% OF TOTAL POPUL ATION	R A N K	LOCALITY 1963	NUMBER OF PERSONS	% OF TOTAL POPUL ATION
1.	Freetown	127,917	5.87	31.	Rotifunk	3,520	0.16
2.	Bo	26,613	1.22	32.	Fomaya	3,385	0.16
3.	Kenema	13,246	0.61	33.	Waterloo	3,215	0.15
4.	Kissy	13,143	0.60	34.	Panguma	3,100	0.14
5.	Makeni	12,304	0.56	35.	Sukudu	3,097	0.14
6.	Lunsar	12,132	0.56	36.	Hastings	3,022	0.14
7.	Koidu	11,706	0.54	37.	Tumbodu	2,955	0.14
8.	Yengema	7,313	0.34	38.	Largo	2,945	0.13
9.	Wilberforce	6,950	0.32	39.	Yamandu	2,910	0.13
10.	Magburaka	6,371	0.29	40.	Mattru	2,909	0.13
11.	Segbwema	6,258	0.29	41.	Hangha	2,895	0.13
12.	Bonthe	6,230	0.29	42.	Gondama	2,861	0.13
13.	Jaiama	6,064	0.28	43.	Tombo	2,837	0.13
14.	Port Loko	5,809	0.27	44.	Baoma-Baoma	2,725	0.12
15.	Yormandu	5,469	0.25	45.	Pendembu	2,696	0.12
16.	Kailahun	5,419	0.25	46.	Koidu-Tankoro	2,603	0.12
17.	Barma	5,280	0.24	47.	Kasiri	2,585	0.12
18.	Blama	5,073	0.23	48.	Foindu	2,559	0.12
19.	Wellington	4,958	0.23	49.	Seidu	2,509	0.12
20.	Peyima	4,625	0.21	50.	Masingbi	2,425	0.11
21.	Kabala	4,610	0.21	51.	Mano	2,286	0.10
22.	Moyamba	4,564	0.21	52.	Gerehun	2,266	0.10
23.	Murray Town	4,395	0.20	53.	Gandorhun	2,207	0.10
24.	Boajibu	4,334	0.20	54.	Lungi	2,170	0.10
25.	Rokupr	4,151	0.19	55.	Koidu-Kissi-Teng	2,130	0.10
26.	Pepel	3,793	0.17	56.	Alikalia	2,118	0.10
27.	Kambia	3,700	0.17	57.	Kukuna	2,038	0.10
28.	Jaiama	3,616	0.17	58.	Goderich	2,034	0.10
29.	Mambolo	3,595	0.16	59.	Pujehun	2,034	0.10
30.	Kamakwie	3,572	0.16	60.	Lumley	2,015	0.10



TABLE A6.2 RANK ORDER FOR SIERRA LEONE, URBAN LOCALITIES (TOWNS AND CITIES) POPULATION AND PERCENTAGE OF TOTAL POPULATION, 1974

R A N K	LOCALITY 1974	NUMBER OF PERSONS	% OF TOTAL POPUL ATION	R A N K	LOCALITY 1974	NUMBER OF PERSONS	% OF TOTAL POPUL ATION
1	Freetown	276,247	10.10	39	Goderich	3,836	0.14
2.	Koidu/New Sembehun	75,846	2.77	40.	Jaiama Nimikoro	3,861	0.14
3.	Bo	39,371	1.44	41.	Masabendu	3,680	0.13
4.	Kenema	31,458	1.15	42.	Baoma	3,590	0.13
5.	Makeni	26,781	0.98	43.	Largo	3,330	0.12
6.	Lunsar	16,723	0.61	44	Pandebu	3,309	0.12
7.	Yengema	14,793	0.54	45.	Kasiri	3,281	0.12
8.	Port Loko	10,500	0.38	46.	Mokanji	3,209	0.12
9.	Magburaka	10,347	0.38	47.	Kukuna	3,038	0.11
10.	Kabala	7,847	0.29	48.	Taiama	2,867	0.10
11.	Yormandu	7,488	0.27	49.	Gandorhun	2,858	0.10
12.	Kailahun	7,184	0.26	50.	Pujehun	2,802	0.10
13.	Segbwema	6,915	0.25	51.	Daru	2,726	0.10
14.	Moyamba	6,425	0.23	52.	Yele	2,719	0.10
15.	Bonthe	6,398	0.23	53.	Blama	2,662	0.10
16.	Rokupr	5,780	0.21	54.	Hastings	2,572	0.09
17.	Kambia	5,740	0.21	55.	Hangha	2,567	0.09
18.	Motema	5,501	0.20	56.	Kayima	2,547	0.09
19.	Jaiama-Sewafe	5,367	0.20	57.	Yogomaia	2,488	0.09
20.	Peyima	5,354	0.20	58.	Giehun	2,463	0.09
21.	Koindu	4,956	0.18	59.	Sumbuya	2,441	0.09
22.	Kamakwie	4,837	0.18	60.	Buedu	2,396	0.09
23.	Lungi	4,796	0.18	61.	Yonibana	2,378	0.09
24.	Masingbi	4,755	0.17	62.	Mano	2,347	0.09
25.	Blama	4,743	0.17	63.	Gberia Fotumba	2,335	0.09
26.	Tefeya	4,731	0.17	64.	Manowa	2,328	0.09
27.	Bumpeh	4,707	0.17	65.	Bomi	2,308	0.08
28.	Rotifunk	4,700	0.17	66.	Labour Camp	2,306	0.08
29.	Tokpombu	4,647	0.17	67.	Tombo	2,254	0.08
30.	Tombodu	4,641	0.17	68.	Yeliboya	2,217	0.08
31.	Panguma	4,559	0.17	69.	Bindi	2,214	0.08

R A N K	LOCALITY 1974	NUMBER OF PERSONS	% OF TOTAL POPUL ATION	R A N K	LOCALITY 1974	NUMBER OF PERSONS	% OF TOTAL POPUL ATION
32.	Pepel	4,547	0.17	70.	Kpetewoma	2,165	0.08
33.	Seidu	4,514	0.17	71.	Potoru	2,093	0.08
34.	Waterloo	4,276	0.16	72.	Alikalia	2,074	0.08
35.	Pendembu	4,270	0.16	73.	Serabu	2,064	0.08
36.	Boajibu	4,135	0.15	74.	Bendu	2,037	0.07
37.	Mambolo	3,937	0.14	75.	Bumpeh	2,021	0.07
38.	Mattru	3,891	0.14				

TABLE A6.3 RANK ORDER FOR SIERRA LEONE, URBAN LOCALITIES (TOWNS AND CITIES) POPULATION AND PERCENTAGE OF TOTAL POPULATION, 1985

R A N K	LOCALITY 1985	NUMBER OF PERSONS	% OF TOTAL POPUL ATION	R A N K	LOCALITY 1985	NUMBER OF PERSONS	% OF TOTAL POPUL ATION
1.	Freetown	469,776	13.36	49.	Kassiri	3,419	0.10
2.	Koidu/New Sembehun	82,474	2.35	50.	Hangha	3,417	0.10
3.	Bo	59,768	1.70	51.	Largo	3,329	0.10
4.	Kenema	52,473	1.49	52.	Ngiehun	3,280	0.10
5.	Makeni	40,038	1.39	53.	Pepel	3,193	0.10
6.	Lunsar	16,073	0.46	54.	Peyima	3,119	0.09
7.	Port Loko	15,248	0.43	55.	Yeliboya	3,034	0.09
8.	Kabala/Yogomaia	13,923	0.40	56.	Tombo Walla	3,004	0.09
9.	Yengema	12,938	0.37	57.	Simbakoro	2,899	0.08
10.	Magburaka	11,006	0.31	58.	Mamboma	2,894	0.08
11.	Pandebu/Tokpombu	10,944	0.31	59.	Foindu	2,857	0.08
12.	Waterloo	9,878	0.28	60.	Gorahun	2,790	0.08
13.	Kailahun	9,054	0.26	61.	Nyandehun/Mendegelema	2,786	0.08
14.	Rokupr	8,283	0.24	62.	Manowa	2,709	0.08
15.	Segbwema	8,267	0.24	63.	Lowoma	2,667	0.08
16.	Koindu	8,238	0.23	64.	Bomi	2,660	0.08
17.	Kambia	7,631	0.22	65.	Kpetewoma	2,659	0.08
18.	Bumpeh	7,556	0.21	66.	Masoyila	2,618	0.07

R A N K	LOCALITY 1985	NUMBER OF PERSONS	% OF TOTAL POPUL ATION	R A N K	LOCALITY 1985	NUMBER OF PERSONS	% OF TOTAL POPUL ATION
19.	Mile 91	7,210	0.21	67.	Seidu	2,586	0.07
20.	Bonthe	7,210	0.21	68.	Koribondo	2,569	0.07
21.	Goderich	6,886	0.20	69.	Hastings	2,561	0.07
22.	Moyamba	6,483	0.18	70.	Wuima	2,519	0.07
23.	Motema	6,312	0.18	71.	Yonibana	2,490	0.07
24.	Kamakwie	6,287	0.18	72.	Bindi	2,473	0.07
25.	Yormandu	6,208	0.17	73.	Sawkta	2,470	0.07
26.	Mattru	5,804	0.17	74.	Makali	2,463	0.07
27.	Pendembu	5,644	0.16	75.	Alikalia	2,434	0.07
28.	Blama	5,559	0.16	76.	Potoru	2,404	0.07
29.	Pangumau	5,435	0.15	77.	Masa-Bendu	2,400	0.07
30.	Lungi	5,319	0.15	78.	Tongola	2,383	0.07
31.	Jaiama-Sewafe	5,249	0.15	79.	Serabu	2,371	0.07
32.	Gandorhun	5,199	0.15	80.	Gberia Fotombu	2,354	0.07
33.	Barma	5,138	0.15	81.	Yele	2,342	0.07
34.	Kukuna	5,085	0.14	82.	Zimmi	2,335	0.07
35.	Boajibuu	5,039	0.14	83.	Gerihun	2,286	0.07
36.	Jaiama-Nimikoro	5,038	0.14	84.	Baoma	2,254	0.06
37.	Bunumbu	4,728	0.13	85.	Bumbuna	2,235	0.06
38.	Tombo	4,618	0.13	86.	Masiaka	2,233	0.06
39.	Mambolo	4,388	0.12	87.	Nemeseidu	2,223	0.06
40.	Masingbi	4,382	0.12	88.	Konakridie	2,221	0.06
41.	Yamandu	4,101	0.12	89.	Mange	2,212	0.06
42.	Tefeya/Labour Camp	4,086	0.12	90.	Mobai	2,212	0.06
43.	Sumbuya	3,936	0.11	91.	Kayima	2,169	0.06
44.	Tintanfore	3,907	0.11	92.	Mogbemo	2,159	0.06
45.	Pujehun	3,859	0.11	93.	Ndoyogbo	2,156	0.06
46.	Tomboru	3,847	0.11	94.	Bumpe	2,152	0.06
47.	Daru	3,830	0.11	95.	Baiima	2,098	0.06
48.	Buedu	3,479	0.10	96.	Jojoima	2,016	0.06
				97.	Gbeworbu	2,007	0.06
				98.	Moriba Town	2,005	0.06

TABLE A6.4 - NATIVE BORN POPULATION CLASSIFIED BY DISTRICT OF BIRTH AND DISTRICT OF ENUMERATION, SIERRA LEONE, 1985

	DISTRICT OF BIRTH														
DISTRICT OF	BO	BONTHE	SHERBRO	MOYAMBA	PUJEHUN	KAILAHUN	KENEMA	KONO	BOMBALI	KAMBIA	KOINADUGU	PORT LOKO	TONKOLILI	FREETOWN	AREA TOTAL
BO	200,498	6,954	290	10,624	6,959	2,565	7,091	1,444	7,555	1,313	1,705	4,428	5,985	3,606	100 : 261,117
BONTHE	4,795	80,481	623	3,859	1,745	335	817	177	460	143	97	620	303	729	35 : 95,219
SHERBRO	404	2,267	2,983	373	223	59	92	26	67	17	10	46	35	225	6 : 6,833
MOYAMBA	8,262	4,286	201	203,519	1,434	1,250	2,609	909	2,629	752	406	5,191	7,534	4,182	306 : 243,470
PUJEHUN	4,850	2,510	41	1,131	99,622	598	2,855	231	534	138	195	284	323	554	23 : 113,889
KAILAHUN	3,816	554	10	1,529	1,166	204,835	6,608	2,069	1,716	425	606	825	1,539	1,481	84 : 227,263
KENEMA	15,641	2,503	100	8,541	7,860	12,251	236,325	4,351	12,191	2,751	5,263	6,954	8,962	3,654	231 : 327,578
KONO	6,371	599	36	3,013	1,138	4,818	4,750	261,996	24,191	5,072	27,996	12,426	21,058	4,938	298 : 378,700
BOMBALI	1,428	245	12	766	207	373	798	1,148	283,772	2,196	2,054	5,974	6,385	3,293	144 : 308,795
KAMBIA	514	83	-	233	78	87	175	154	2,096	168,489	226	6,652	554	1,596	56 : 180,993
KOINADUGU	799	52	1	165	52	81	203	782	2,468	319	169,142	347	3,052	597	73 : 178,133
PORT LOKO	1,044	255	5	1,954	160	396	543	643	7,101	7,397	1,124	289,730	4,913	4,451	365 : 320,081
TONKOLILI	1,124	174	16	1,444	97	218	490	871	6,470	823	1,362	5,644	215,692	1,676	118 : 236,219
FREETOWN	13,523	4,058	391	13,355	3,397	5,493	5,500	6,522	38,568	20,992	7,544	40,779	11,406	282,295	2,747 : 456,570
WEST: RURAL	1,467	612	45	4,013	416	604	747	747	5,726	2,188	991	8,104	2,422	43,168	10,842 : 82,092
TOTAL	264,536	105,633	4,754	254,519	124,554	233,963	269,603	282,070	395,544	213,015	218,721	388,004	290,163	356,445	15,428 : 3,416,952

## CHAPTER 7.

### EDUCATION AND LITERACY

S.K. KROMAH

#### 7.1 Introduction

This chapter presents an analysis of data on education obtained in the Sierra Leone census of 1985. The analysis is prefaced with a conceptual distinction between education and literacy and a description of the country's education system. A description of educational initiatives relevant to an understanding of the data is also provided. The chapter is concluded with a statement of implications for policy and planning.

#### 7.2 Education And Literacy.

Education and literacy are related but are different concepts. Education refers mainly to the acquisition of knowledge (traditional or scientific) while literacy refers specifically to the acquisition of the ability to read and write in a given language. In its sophisticated form literacy includes numeracy which is the ability to perform simple mathematical operations.

The significance of education and literacy in population studies is based on several assumptions which link levels of education and literacy to certain social and economic activities within a given population. For example, it is popularly held that the efficient operations of a modern economy depend largely on the knowledge, skills and experience of all workers. It is claimed that as technology advances more occupations will require higher levels of education and literacy or specialized training. Thus the level of education and literacy in a country provides an indication of its capacity for technological development and innovation.

Education and Literacy are also linked to social activities and outcomes such as family life, health and fertility, and to agricultural productivity. In countries like Sierra Leone where decisions about marriage and child birth are influenced by cultural and economic factors, education plays a role by influencing people's reactions to cultural expectations and dictates. School attendance for example, keeps a substantial number of women out of marriage while the demand for higher education and better jobs tends to defer marriage for both men and women. Such decisions affect the fertility characteristics of a population. In the sphere of agriculture, studies (World Bank 1985) have shown that literate adults adopt improved practices more readily than the illiterates. Thus the levels of educational attainment and literacy are indicative of a country's readiness for agricultural innovations. For these and other reasons the educational characteristics of a given population are considered important.

Education and Literacy first featured in a census of Sierra Leone in 1931. That year they were explored under (i) ability to speak English i.e. "pidgin" of the West Coast, (ii) ability to read, (iii) ability to write, and (iv) standard of education. The analysts found it difficult to determine literacy in terms of functional as opposed to non-functional, and to relate it to the level of education, especially among native Sierra Leoneans.

The census of 1963 was more specific about literacy. It asked, "can this person read and write any language?" The report of this census noted that there was a tendency in the data toward an upward bias resulting from (a) prestige reasons and (b) because ability to read and write could have been narrowly understood in terms of a necessary distinction between functional and non-functional literacy. The 1974 census did not do any better. According to previous censuses, therefore, it has proved difficult to determine literacy levels with a high degree of confidence. As a result the tendency has been to infer literacy from levels of school attendance and educational attainment. This practice continued in the 1985 census.

The 1985 census probed education under two broad headings:-

(1 ) School attendance, that is , Whether the person: (a) had never attended school (b) was still at school, and (c) had left school and (2) Educational Attainment, that is the highest class attained (a) primary (b) secondary and (c) post-secondary.

There was no specific question on literacy for any of the languages in the country. Furthermore education was probed only in terms of institution based education, that is education obtained in schools, institutes and colleges. Thus on the basis of the 1985 census, education is conceived of in formal, institutional terms only.

#### 7.3 Existing Information and Literature Review

At Independence in 1961, Sierra Leone inherited an education system patterned after the British at the time. Many of its schools were of the grammar school type and primary education was essentially designed to provide a foundation for secondary education which in turn served a similar function for Universities and colleges. As many pupils dropped out of school before the secondary state was reached, the education they received was of little service to them or to their communities.

Since independence however, Sierra Leone has attempted to reform its education to render it more responsive to its developmental goals. In the National Development Plan of 1974/75 - 1978/79 the objectives of education were identified as follows:-

1. to accelerate the expansion of primary education and especially related teacher education;
2. to make the contents of education in all sub-sectors more relevant to the economic and social needs of the country;

3. to raise the levels of literacy, both through the primary and out-of-school education.

The plan mentioned above specifically emphasized the expansion of primary education facilities especially in the rural areas as a move towards the goals of universal primary education. For the first time, it conceived of primary education as an end in itself rather than as a means solely for secondary education.

The acceleration of primary education (objective 1 above) is a formidable undertaking but an understandable one. In a society where 85% of the adults are believed to be illiterate the need for initiatives which will hold illiteracy rates constant or reduce them significantly cannot be overemphasized.

In addition to providing more school places, other notable strategies included the following:

1. The Bunumbu Project.

Between 1974 and 1985 the Government of Sierra Leone with the financial support of UNDP, IDA and ADB and the technical assistance of UNESCO undertook a pilot rural education project at one of its Teacher Training Colleges, namely Bunumbu Teachers' College. The main objectives of the project were:-

- (i) to prepare and implement a new primary curriculum suitable for rural areas and;
- (ii) to develop parallel adult education activities geared towards community development;

Since 1985, a dissemination phase of this project, still supported by UNDP and UNESCO has been directed from the Institute of Education. It aims at disseminating the results of the Bunumbu Project to the other four Primary Teachers' Colleges and, through them, to about 90 primary schools throughout the country.

2. Third Sierra Leone/IDA Education Project:

This project is intended to assist in the dissemination of the Bunumbu Project described above. The project finances the construction of classrooms (500 classrooms to accommodate 22,000 pupils) and staff houses in the rural areas around four implementing primary teachers colleges. The disbursement of the funds to this project has been halted owing to problems between the Government and World Bank.

3. Textbook Task Force;

To address the shortage of textbooks and other essential learning materials in primary schools the Sierra Leone Government set up, with the assistance of the IDA and the British Overseas Development Administration (UK/ODA) a textbook task force which procures the textbook to be co-published by the Ministry of Education and MacMillan/Evans of UK and arranges their storage and distribution around the country. The books are then loaned to pupils at rates intended to replace the books after every three years.

4. Action Plan For Basic Education:

In 1989 the Government adopted a National Plan for Basic Education for all by the year 2000. The Plan states the following as its goal:

- (a) to eliminate the source of illiteracy and the lack of basic education by increasing enrolment: Stemming regression and dropout rates.
- (b) to provide opportunities for those who did not receive basic education as well as those who dropped out of the formal system.
- (c) To help those who achieve basic education to retain it and to continue to use it in their personal, social and national lives for further development of themselves, their communities and their country.

A review of all these initiatives reveals an understanding of strategies required to solve the country's educational problems. The performance of its institutions however, tells a different story. The output of all the sectors of education is seriously undermined by underfinancing due to serious problems in the country's economy.

## 7.4 The Education System

1. Administration and Management:

The administration of the educational system is organized at three levels: central, regional and district. The Ministry of Education operates a central office in Freetown with a Minister of Education (and deputies), a Permanent Secretary who heads the administrative division and a Chief Education Officer who heads the professional wing of education for the whole country. The major divisions of the Ministry are (a) Primary Education, (b) Secondary Education, (c) Teacher Education, (d) Technical and Science Education and, (e) Planning. Each of these divisions is headed by a Principal Education Officer (PEO).

Outside the Western Area the Ministry operates a regional office in each of the three provincial capitals. Each office is headed by a Regional Principal Education Officer (RPEO) who oversees both primary and secondary schools in that province. At the district level education is overseen by Inspectors of Schools who organise supervisors and collate reports for transmission to headquarters. The day to day links with schools especially primary schools, is the responsibility of supervisors of schools and teacher supervisors. These personnel

are allocated schools on zonal basis.

The administration of individual schools and colleges is through Educational Authorities for primary schools, Boards of Governors for secondary schools and College Councils for Colleges. The establishment of provincial offices was an attempt to decentralize the administration of education in Sierra Leone in order to enhance the inspection of schools and the supervision of teaching.

Financial and logistic constraints have prevented these offices from playing very meaningful roles in educational practice in their respective province.

## 2. The School System:

During the 1974 - 1985 period the education system of Sierra Leone continued to have (1) a 7 year primary cycle, (2) a 5-year secondary cycle and, (3) a 3-5 year post secondary cycle. The system has since been restructured into a 6-3-3-4 one, that is 6 years basic primary education, 3 years middle school, 3 years senior secondary, and 4 years post-secondary. The school year remains the same which is three terms running from September to July. The length of the academic year varies for each level of education viz: 200 teaching days for primary; 192 for secondary; and 182 for colleges and university.

Pupils enrol in class 1 at various ages beginning at 5+. At the end of class 7 those who pass the Selective Entrance Examination (SEE) enter the secondary cycle. A good number repeat the class while others drop out of the educational system altogether.

Most primary schools are managed by religious denominations. A few are privately run while others are run by local administrative councils. Schools which were managed by district councils are now directly controlled by Government.

Secondary admission starts at around age 11+. After 5 successful years, students take the West African School Certificate or General Certificate of Education. After this examination some go on to the tertiary phase, a few go to sixth form for two additional years of secondary education, some repeat and others leave school.

Tertiary education is pursued in Training Colleges, Universities and Technical Institutes in programmes ranging from 3 to 5 years.

## 3. Technical and Vocational Education

The Ministry of Education runs Trade Centres at Kissy (near Freetown), Kenema in the Eastern province and Magburaka in the Northern province. These Centres which cater for pupils who have completed Form 3 offer craft level courses in carpentry and joinery, bricklaying and concreting, plumbing, painting and decorating, cabinet making, engineering and craft practice. It also runs a Technical Institute in Freetown for pupils who have completed Form 5 and have passed a few subjects. This institute offers 2-year technical level courses in building and civil engineering, electrical and mechanical engineering, telecommunications and motor vehicles. One-year general engineering and construction courses are also available.

In the area of business education the Technical Institute in Freetown offers courses leading to certificates and diplomas in accounting and economics (2-years), business studies (1-year), office studies (1-year), certificate of private secretaries (1-year), shorthand - typing (1-year) and secretarial studies (2-years).

In addition to these training schemes the Opportunities Industrialization Centre (OIC) offers vocational training in the areas of secretarial arts, auto-mechanics, tailoring and carpentry to secondary school dropouts at Makeni in the North, Bo in the South and Kenema in the East.

## 4. Teacher Training

Primary teacher training is done at four primary teachers colleges at two levels of training: the Teachers Certificate (TC) and Higher Teachers Certificate (HTC). These three year courses are designed for secondary school graduates with three and four 'O' level passes respectively.

Secondary teacher training is done at the Milton Margai Teachers College in Freetown at the University which offers a three year HTC course for teaching at the lower secondary level. The University also trains teachers at the Bachelors (BA Ed) and Postgraduate diploma (BA Dip Ed) levels, at the Njala University College and Fourah Bay College respectively.

## 7.5 Efficiency of the System

Studies of school attendance have concluded that considerable wastage occurs at the primary and secondary levels. This wastage occurs in two ways: from drop-out and from grade repetition. In the "Access to Education" study done by the Institute of Education in 1979, results showed the following rates of repetition in the primary classes:

Class	1	2	3	4	5	6	7
Repetition rate%	20	13	14	13	12	11	12

Drop-out over one cycle was estimated as 34% of Class 1 totals. The study also determined that 66.3% of these dropped from classes 1 and 2.

The same study arrived at the following estimates for the secondary level:

Form	1	2	3	4	5
Repetition rate %	16	16	16	18	11

Drop-out for one cycle was determined as 44% of Form 1 entrants with the greater proportions of it occurring in Forms 1 (34.38%) and Form 2 (20.68%) respectively making a total of 55%. (Source: Sector Review and Access Study).

## 7.6 Quality of the 1985 Census.

The census provided information on patterns of participation in the school system and levels of educational attainment. From the data on attendance it is possible to determine enrolment levels for the population aged 5+ for the sexes and administrative regions.

From the data on attainment it is possible to determine: 1. levels attained in education; 2. levels at which drop-out is most significant; 3. levels of literacy and 4. differences in literacy levels by sex and administrative districts.

There is a serious shortcoming in the 1985 data, however, with regard to education and literacy. Education was probed purely in terms of institution based education. It did not cover non-formal education such as was offered by non-governmental organizations (NGOs) around the country. Also, there was no specific question on literacy. Yet it is common knowledge that functional literacy exists in varying measures in the indigenous languages as well as in Arabic, English and French. As a result, literacy in this chapter will be restricted to literacy in English which is the medium of instruction in all formal educational institutions and is acquired mainly in such environments. Furthermore, as there was no direct probe for literacy it will be estimated from school attendance and educational attainment data.

Some errors also were evident in the data on current class enrolment. In the Northern Province a significant number of 5 year olds were recorded in all the primary grades (classes 1 to 7). Given the pattern of attendance for the country and the particularly low levels of school attendance for this Province this observation is clearly anomalous. All age 5 enrolment has therefore been computed under Class 1 enrolment.

There is also evidence of under-counting in the various levels. For example, the total number observed for university education was 1,410 persons. The figures recorded in the Statistics Digest of the Central Statistics Office and confirmed from University sources were 2395: a difference of 985 for this level. The magnitude of similar such anomalies in the data cannot be easily determined. No adjustments have, therefore, been made in the analysis to accommodate such discrepancies.

## 7.7. School Attendance

The data on attendance at educational institutions in Sierra Leone in 1985 yield information on the total proportion of the population participating in the country's education. The data have been analyzed to focus on specific age - sex groups, primary and secondary enrolment, and attendance at post secondary institutions.

### 1. General Enrolment:

Table 7.1 presenting details of school attendance for the population in Sierra Leone aged 5+ in 1985 by sex and by districts gives the overall statistical picture of school attendance for the 1985 year. The following observations may be derived from this table.

In 1985, 70.83% of people resident in Sierra Leone aged 5+ had never been to school. 15.86% were still at school while 13.30% had left school. The corresponding figures for males were 64.15%, 19.48% and 16.37 and for females they were 77.33%, 12.34% and 10.33% respectively. There is therefore a predominance of people ( more female than male ) who had never been to school in the country which indicates low enrolment rates and attendant high illiteracy levels. Tables 7.2 gives corresponding details for citizens yielding similar results.

Table 7.3 showing the distribution of the Sierra Leone population aged 5-29 years by school attendance for the country and the districts indicates that throughout the country the percentage of the school going population actually attending educational institutions is very low: 29.79% for both sexes; 29.94% for males, and 20.62% for females. Except for Freetown and the Western Area the picture is dismal for all the provincial districts with percentages ranging from 10.63% to 49.78% for both sexes, 15.39% to 66.10% for males, and 6.49% to 41.41% for females. The worst picture appears consistently in the Koinadugu District. The overall picture that emerges from this table is that although the level of attendance is generally low for the entire country, it is particularly low in all the districts of the Northern Province and critically so in the Koinadugu District.

### 2. Age -sex specific enrolment:

Age specific enrolment refers to the proportion of the population of a given age enrolled in school. Table 7.4 gives the single year of age enrolment by sex and province. It can be noted that the enrolment rates are very low especially for females, at young ages and in the Northern Province. The highest rate is reached only by age 11 even though education is supposed to start at age 6 or even earlier. Apparently, children are sent to school only at a very late age and that too only around half of the children ( 58% for male and 48% for females ) are found in the school in the country at the age 11. After age 16 or 17, there is a drastic fall in enrolment so that by age 24, only 7% of males and 1% of females are still in school. Western area has the highest enrolment rates at all ages and sex groups, but even there, the highest rate attained at age 11 is only 88% for male and 77% for females. At younger ages, even in Western Area the rates are quite low and after age 16 or 17 the rates steadily fall and reach a low 5% for males and 2% for female. It can be noted that at the older ages the male rate in Western Area is even lower than that for the country - perhaps due to better opportunities for jobs.

In 1974 the enrolment rates for ages 5-9, 10-14, 15-19 and 20-24 were respectively: .28, .40, .26, and .08 for males and .22, .29, .09 and .01 for females, In 1985 these rates as given in table 7.4 are : .37, .53, .39 and .14 for males and .31, .41, .17 and .03 for females. These clearly indicate that females improved much faster than males, older ages gained more than younger ages.



TABLE 7.1 POPULATION AGED 5+ BY SEX AND SCHOOL ATTENDANCE: SIERRA LEONE AND THE DISTRICTS  
CITIZENS AND NON - CITIZENS

DISTRICT	BOTH SEXES				MALE				FEMALE				TOTAL
	NEVER	STILL	LEFT	TOTAL	NEVER	STILL	LEFT	TOTAL	NEVER	STILL	LEFT	TOTAL	
	%	%	%	%	%	%	%	%	%	%	%	%	
BO	67.38	17.84	14.78	222501	60.07	21.74	18.19	108821	74.38	14.10	11.52	113680	
BONTHE	61.09	19.56	19.35	55045	69.90	14.44	15.66	41092	35.15	34.65	30.20	13953	
MOYAMBA	74.05	13.54	12.41	167384	67.19	16.70	16.11	79949	80.32	10.65	9.03	87435	
PUJEHUN	77.97	12.09	9.94	93284	72.38	15.18	12.45	44393	83.04	9.28	7.67	48891	
KAILAHUN	70.71	17.26	12.03	195138	61.42	23.09	15.49	94375	79.41	11.80	8.79	100763	
KENEMA	71.40	15.68	12.92	279548	64.94	18.86	16.19	143452	78.21	12.33	9.46	136096	
KONO	73.77	15.06	11.17	270225	68.51	17.67	13.82	143467	79.71	12.12	8.17	126758	
BOMBALI	76.64	15.53	7.84	224451	69.18	20.89	9.93	105325	83.23	10.78	5.99	119126	
KAMBIA	83.56	10.95	5.49	145091	76.20	16.20	7.60	68091	90.08	6.30	3.63	77000	
KOINADUGU	89.07	6.60	4.32	150190	84.62	9.37	6.01	70849	93.04	4.14	2.82	79341	
PORT LOKO	81.87	10.73	7.40	265805	75.82	14.53	9.65	125872	87.32	7.32	5.37	139933	
TONKOLILI	79.92	11.38	8.71	202148	74.13	14.66	11.22	98064	85.37	8.28	6.34	104084	
FREETOWN	35.61	30.28	34.11	325849	30.54	31.91	37.55	168160	41.01	28.54	30.45	157689	
W/AREA RURAL	50.91	23.82	25.28	47838	44.55	27.03	28.42	24421	57.53	20.46	22.00	23417	
SOUTHERN	72.34	14.74	12.92	564967	65.61	18.11	16.28	274255	78.68	11.56	9.76	290712	
EASTERN	72.08	15.87	12.05	744911	65.42	19.46	15.12	381294	79.06	12.11	8.83	363617	
NORTH	81.63	11.36	7.02	987685	75.36	15.45	9.19	468201	87.27	7.67	5.06	519484	
WESTERN	37.57	29.45	32.98	373687	32.32	31.29	36.39	192581	43.15	27.50	29.35	181106	
SIERRA LEONE	70.83	15.86	13.30	2671250	64.15	19.48	16.37	1316331	77.33	12.34	10.33	1354919	

TABLE 7.2 POPULATION AGED 5+ BY SEX AND SCHOOL ATTENDANCE: SIERRA LEONE AND THE DISTRICTS  
CITIZENS

DISTRICT	BOTH SEXES				MALE			FEMALE			TOTAL
	NEVER	STILL	LEFT	TOTAL	NEVER	STILL	LEFT	NEVER	STILL	LEFT	
BO	67.19	17.98	14.83	216987	59.60	22.05	18.35	105247	74.34	14.14	111740
BONTHE	74.64	12.77	12.58	83708	69.37	14.71	15.92	40028	79.47	11.00	43680
MOYAMBA	74.09	13.55	12.36	165551	67.15	16.78	16.07	78739	80.38	10.62	86812
PUJEHUN	77.89	12.15	9.96	91345	72.12	15.37	12.51	43211	83.06	9.27	48134
KAILAHUN	69.94	17.78	12.27	186256	60.25	23.91	15.84	89622	78.92	12.11	96634
KENEMA	70.88	16.05	13.07	266945	63.93	19.52	16.56	135316	78.02	12.49	131629
KONO	72.71	15.82	11.46	248261	66.93	18.76	14.31	130367	79.11	12.58	117894
BOMBALI	76.53	15.64	7.82	221764	68.95	21.11	9.94	103799	83.2	10.84	117965

KAMBIA	83.50	11.03	5.46	143300	76.11	16.35	7.55	67164	90.03	6.34	3.63	76136
KOINADUGU	88.96	6.75	4.29	145696	84.40	9.62	5.97	68383	92.99	4.21	2.79	77313
PORT LOKO	81.89	10.75	7.36	264599	75.78	14.59	9.63	125059	87.36	7.31	5.33	139540
TONKOLILI	80.01	11.39	8.60	200940	74.24	14.71	11.05	97234	85.43	8.28	6.29	103706
FREETOWN	33.54	31.56	34.90	303469	27.64	33.69	38.67	154553	39.67	29.35	30.99	148916
W/AREA RURAL	49.95	24.42	25.63	46312	43.07	27.98	28.95	23448	57.00	20.77	22.23	22864
SOUTHERN	72.11	14.93	12.96	557591	65.31	18.32	16.37	267225	78.37	11.81	9.83	290366
EASTERN	71.28	16.43	12.29	701462	64.10	20.35	15.55	355305	78.64	12.42	8.94	346157
NORTH	81.58	11.44	7.40	976299	75.25	15.60	9.15	461639	87.26	7.71	5.04	514660
WESTERN	35.71	30.62	33.67	349781	29.67	32.94	37.39	178001	41.97	28.21	29.82	171780
SIERRA LEONE	70.54	16.14	13.32	2585133	63.58	19.96	16.46	1262170	77.17	12.50	10.33	1322963

TABLE 7.3  
POPULATION AGED 5-29 YEARS BY SEX AND SCHOOL ATTENDANCE FOR  
SIERRA LEONE AND THE DISTRICTS  
CITIZENS

DISTRICT	SEX	TOTAL	ATTENDING	NOT ATTENDING
BO	BOTH SEXES	122812	38671	84141
	MALES	59069	22954	36115
	FEMALES	63743	15717	48026
BONTHE	BOTH SEXES	44887	10610	34277
	MALES	21479	5842	16063
	FEMALES	23408	4768	18640
MOYAMBA	BOTH SEXES	90595	22239	68356
	MALES	43361	13072	30289
	FEMALES	47234	9167	38067
PUJEHUN	BOTH SEXES	42728	11324	31408
	MALES	23705	6876	16829
	FEMALES	19023	4448	14575
KAILAHUN	BOTH SEXES	110762	32831	77931
	MALES	53215	21186	32029
	FEMALES	57547	11645	45902
KENEMA	BOTH SEXES	227332	40508	186824
	MALES	149656	24161	125495
	FEMALES	77676	16347	61329
KONO	BOTH SEXES	158926	39025	119901
	MALES	78955	24263	54692
	FEMALES	79971	14762	65209
BOMBALI	BOTH SEXES	139234	34488	104746
	MALES	66906	21762	45144
	FEMALES	72319	12726	59593
KAMBIA	BOTH SEXES	86999	15641	71358
	MALES	41562	10837	30725
	FEMALES	45437	4804	40633
KOINADUGU	BOTH SEXES	90744	9650	81094
	MALES	42352	6517	35835
	FEMALES	48292	3133	45259
PORT LOKO	BOTH SEXES	160019	27413	132606
	MALES	76627	17286	59341
	FEMALES	83392	10127	73265
TONKOLILI	BOTH SEXES	119926	22663	97263
	MALES	60230	14121	46109
	FEMALES	59696	8542	51154
FREETOWN	BOTH SEXES	207837	95319	112518
	MALES	102685	51774	50911
	FEMALES	105152	43545	61607
WESTERN RURAL	BOTH SEXES	28567	14220	14347
	MALES	14399	9518	4881
	FEMALES	14168	4702	9466
SOUTHERN	BOTH SEXES	301013	82844	218604
	MALES	147614	48744	99296
	FEMALES	153399	34100	119308
EASTERN	BOTH SEXES	497020	112364	384656
	MALES	281826	69610	212216
	FEMALES	215194	42754	172440
NORTHERN	BOTH SEXES	340021	54471	285550
	MALES	287677	70523	217154
	FEMALES	309136	39332	269904
WESTERN	BOTH SEXES	236404	109539	126865
	MALES	117084	61292	55792
	FEMALES	119320	48247	71073
SIERRA LEONE	BOTH SEXES	1374467	409441	965030
	MALES	834201	250169	584458
	FEMALES	797049	164433	632725

Table 7.4. Enrolment by single year of age by sex, Sierra Leone by Province, 1985.

Age	Sierra Leone		Southern Province		Eastern Province		Northern Province		Western Area	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
5	.21	.18	.22	.22	.23	.20	.13	.10	.40	.36
6	.34	.29	.33	.32	.36	.29	.23	.18	.71	.65
7	.42	.34	.39	.37	.44	.34	.29	.21	.82	.71
8	.45	.37	.43	.39	.49	.37	.32	.24	.84	.74
9	.48	.39	.45	.40	.53	.40	.34	.25	.86	.75
5 - 9	.37	.31	.36	.33	.40	.31	.25	.19	.72	.63
10	.48	.39	.47	.42	.53	.39	.34	.24	.84	.72
11	.58	.48	.56	.49	.62	.47	.43	.31	.88	.77
12	.53	.41	.51	.43	.57	.42	.39	.26	.83	.71
13	.57	.43	.55	.45	.59	.41	.42	.29	.84	.70
14	.53	.37	.51	.38	.58	.37	.39	.23	.80	.66
10-14	.53	.41	.51	.43	.57	.41	.39	.28	.84	.71
15	.40	.22	.40	.26	.43	.20	.29	.13	.69	.55
16	.45	.22	.44	.22	.48	.18	.34	.13	.67	.50
17	.43	.18	.44	.19	.45	.14	.33	.11	.60	.41
18	.32	.10	.32	.09	.34	.09	.26	.06	.47	.27
19	.34	.10	.36	.10	.36	.09	.28	.06	.39	.20
15-19	.39	.17	.39	.17	.41	.14	.31	.10	.57	.39
20	.17	.04	.19	.04	.20	.03	.13	.02	.24	.10
21	.20	.04	.21	.04	.22	.04	.19	.03	.18	.06
22	.13	.02	.15	.03	.15	.02	.11	.02	.12	.03
23	.10	.02	.11	.02	.13	.02	.10	.02	.08	.03
24	.07	.01	.08	.01	.09	.01	.06	.01	.05	.02
20-24	.14	.03	.16	.03	.17	.03	.12	.02	.14	.05

### 7.8 Enrolment by Level:

Table 7.5 gives the number of children in broad age groups by sex, districts and by level of school attended which clearly shows that a substantial number of overage ( aged 12-16 for primary and 20-25 for secondary ) children are found in the primary and secondary stages. This suggests that a significant percentage of the school going population finish the levels much later than expected. This may be due to late starts, too many repetitions in the grades or both.

TABLE 7.5  
GRADE-AGE-SEX SPECIFIC ENROLMENT RATE  
(AGED 5 - 25 ) BY DISTRICT - 1985

DISTRICTS	M A L E S				F E M A L E				B O T H S E X E S			
	PRIMARY	SECONDARY			PRIMARY	SECONDARY			PRIMARY	SECONDARY		
	5-11	12-16	12-19	20-25	5-11	12-16	12-19	20-25	5-11	12-16	12-19	20-25
BO	10413	5762	4338	1825	9119	3364	2402	388	19532	9126	6740	2213
BONTHE	2750	1442	982	320	2809	1044	604	106	5559	2486	1586	426
MOYAMBA	6622	3427	2293	674	5517	2113	1369	144	12139	5540	3662	818
PUJEHUN	3501	1647	977	439	2985	833	545	66	6486	2480	1522	505
KAILAHUN	10436	5060	3795	1834	7533	2431	1404	245	17969	7491	5199	2079
KENEMA	13234	6782	4332	1764	10451	3443	2128	323	23685	10225	6460	2087
KONO	11380	6334	4619	1934	8635	3704	2006	322	20015	10038	6625	2256
BOMBALI	10122	5590	4249	1528	7534	2836	1902	278	17656	8426	6151	1806
KAMBIA	5560	2918	1624	589	3014	1119	538	89	8574	4037	2162	678
KOINADUGU	3144	1640	1154	408	1874	739	444	66	5018	2379	1598	474
PORT LOKO	9447	4409	3240	803	6332	2212	1359	174	15779	6621	4599	977
TONKOLILI	6911	2917	2994	1053	5241	1589	1443	169	12152	4506	4437	1222
FREETOWN	25583	9291	13668	2706	23898	7437	10913	956	49481	16728	24581	3662
W/AREA RL.	3579	1540	1188	203	2911	932	808	66	6490	2472	1996	269
SIERRA LEONE	122682	58759	49453	16080	97853	33796	27865	3392	220535	92555	77318	19472
%	67.62	32.38	75.46	24.54	74.33	25.67	89.15	10.85	70.44	29.56	79.88	20.12

# 1. Primary:

Tables 7.6 presents the distribution of Sierra Leonean citizens aged 5+ by sex, district and primary class for 1985. The table shows that enrolment at the primary level is pyramidal. For the whole country 103,115 people or 32.62% of primary enrolment are in Class 1. Enrolment tapers down from around 30% to about 3% or to a tenth or even less from class 1 to class 7. This pattern is the same for both sexes ( more pronounced for female ) and in all districts ( especially in the Northern Province ). The pattern supports the earlier observation that consistently a high percentage of people who start primary education do not complete it. This brings forward the huge wastage in education whereby even the small proportion of children who enter primary 1 do not proceed at least to primary 4 or higher to enable them acquire the basic minimum literacy and other proficiencies required by a modern state. Out of a total population of 609563 ( male: 310517, female: 299046) aged 5 to 11 only 223015 ( male: 124211, female: 98804) were in school, mostly at the primary level. The total number of children reported to be in primary 1 to 7 is 316158 ( 181413 male and 134745 female ) which implies that many children aged 12 -19 or even higher ages were also in the primary level accounting for 93143 children = around 30%.

TABLE 7.6

## SIERRA LEONE CITIZENS AGED 5+ ATTENDING PRIMARY SCHOOL BY SEX AND CURRENT CLASS

MALE								
	CLASS 1	CLASS 2	CLASS 3	CLASS 4	CLASS 5	CLASS 6	CLASS 7	TOTAL
DISTRICT								
BO	34.31	16.06	14.27	12.21	10.09	9.86	3.21	16119
BONTHE	38.12	15.49	12.79	12.21	9.06	9.13	3.19	4292
MOYAMBA	31.37	17.43	14.77	13.02	10.02	9.66	3.73	10049
PUJEHUN	38.91	18.24	13.19	11.62	8.02	8.16	1.86	5148
KAILAHUN	33.61	16.83	14.00	12.85	9.47	9.39	3.85	15496
KENEMA	34.60	17.36	14.98	11.81	9.10	8.91	3.24	20016
KONO	30.63	17.93	15.39	13.28	9.27	9.50	4.00	17642
BOMBALI	28.63	17.18	16.00	14.61	10.36	9.76	3.47	15712
KAMBIA	31.19	17.88	15.51	13.92	9.59	9.84	2.08	8478
KOINADUGU	36.68	15.99	13.84	12.67	8.72	9.32	2.78	4784
PORT LOKO	30.90	16.82	16.09	14.05	9.32	9.09	3.73	13856
TONKOLILI	32.52	16.94	15.44	12.48	9.62	10.39	2.61	9828
FREETOWN	26.16	16.63	15.54	14.33	12.02	11.25	4.07	34874
W/AREA RURAL	30.81	16.25	15.04	13.52	10.82	8.85	4.71	5119
SOUTHERN	34.60	16.69	14.08	12.35	9.65	9.47	3.16	35608
EASTERN	32.99	17.39	14.83	12.60	9.26	9.24	3.67	53154
NORTHERN	31.10	17.05	15.64	13.78	9.67	9.67	3.09	52658
WESTERN	26.76	16.58	15.47	14.23	11.86	10.94	4.16	39993
SIERRA LEONE	31.38	16.98	15.06	13.25	10.03	9.79	3.51	181413

FEMALE								
DISTRICT								
BO	30.71	13.67	10.75	29.31	7.36	6.04	2.17	15586
BONTHE	42.56	15.83	12.28	10.28	9.91	6.98	2.15	3853
MOYAMBA	34.52	17.56	15.19	12.40	9.25	8.73	2.35	7630
PUJEHUN	48.27	17.13	11.45	8.83	6.50	6.02	1.81	3818
KAILAHUN	38.74	17.08	14.74	11.50	7.89	7.43	2.63	9967
KENEMA	39.51	17.90	14.18	11.03	7.87	7.05	2.46	13894
KONO	36.30	18.19	15.32	11.78	8.26	7.26	2.90	12329
BOMBALI	33.52	17.89	16.90	13.34	9.45	6.54	2.36	10370
KAMBIA	36.61	19.94	14.23	12.19	7.82	7.50	1.72	4133
KOINADUGU	39.27	16.53	15.92	11.90	8.11	6.85	1.42	2613
PORT LOKO	36.40	17.58	15.51	11.95	8.51	7.17	2.88	8544
TONKOLILI	36.60	18.18	14.44	11.93	8.49	8.55	1.80	6830
FREETOWN	27.28	16.41	15.75	14.23	12.25	10.47	3.62	31335
W/AREA RURAL	33.33	17.59	14.99	11.76	10.28	8.17	3.88	3843
SOUTHERN	35.30	15.33	12.12	20.23	8.04	6.82	2.17	30887
EASTERN	38.20	17.77	14.72	11.41	8.00	7.23	2.66	36190
NORTHERN	35.78	18.02	15.60	12.42	8.69	7.28	2.22	32490
WESTERN	27.94	16.54	15.67	13.96	12.03	10.22	3.64	35178
SIERRA LEONE	34.27	16.95	14.58	14.34	9.23	7.93	2.70	134745

## 2. Secondary:

Table 7.7 shows a similar structure for secondary enrolment where the majority of students are in Form 1 ( around a third ) and only around 1% are in Form 6. The attrition rate is quite drastic especially for females and emphasises the huge wastage rates, possibly from drop-out and frequent repetition. Out of the 66223 males and 31790 females enrolled in secondary schools, only 621 males and 178 females are reported in Form 6.

The secondary level had 77472 children aged 12 -19 and 19478 aged 20 and over out of the total 98016 secondary level children which implies that around 20% of the secondary level children are much above the expected age.

TABLE 7.7

### SIERRA LEONEAN CITIZENS AGED 5+ ATTENDING SECONDARY SCHOOL BY SEX AND CURRENT FORM MALE

	FORM 1	FORM 2	FORM 3	FORM 4	FORM 5	FORM 6	TOTAL
DISTRICT							
BO	34.35	19.60	17.34	18.08	8.62	2.02	6195
BONTHE	42.81	18.58	20.34	13.53	4.51	0.23	1308
MOYAMBA	40.38	22.27	19.18	13.91	3.96	0.30	2977
PUJEHUN	44.63	23.62	17.11	11.03	3.47	0.14	1414
KAILAHUN	38.50	20.96	19.95	15.75	4.52	0.32	5663
KENEMA	37.48	20.98	18.62	16.06	6.36	0.51	6116
KONO	40.90	19.50	19.03	15.43	4.54	0.59	6579
BOMBALI	40.72	16.86	19.09	16.35	6.33	0.47	5926
KAMBIA	42.47	21.90	20.49	11.72	3.12	0.31	2279
KOINADUGU	40.63	20.44	17.99	14.92	5.77	0.25	1595
PORT LOKO	41.43	22.36	19.09	11.70	4.67	0.75	4154
TONKOLILI	39.56	21.79	18.47	13.39	6.19	0.60	4153
FREETOWN	35.88	20.33	17.81	15.91	8.30	1.78	16466
W/AREA RURAL	39.84	21.39	20.03	13.81	4.51	0.43	1398
SOUTHERN	38.01	20.63	18.10	15.70	6.39	1.17	11894
EASTERN	39.02	20.44	19.18	15.51	5.07	0.47	18358
NORTHERN	40.83	20.20	19.03	13.90	5.46	0.52	18107
WESTERN	36.19	20.41	17.98	15.74	8.00	1.67	17864
SIERRA LEONE	38.57	20.40	18.62	15.23	6.23	0.94	66223

	FEMALE						
DISTRICT							
BO	44.45	20.83	17.16	12.49	4.67	0.39	2803
BONTHE	49.94	21.71	14.55	11.04	2.51	0.25	797
MOYAMBA	48.12	22.19	16.39	11.06	2.17	0.07	1519
PUJEHUN	50.00	22.96	16.29	8.14	2.61	0.00	614
KAILAHUN	50.42	21.65	14.96	10.55	2.23	0.18	1658
KENEMA	48.50	20.98	15.37	11.91	3.01	0.24	2460
KONO	51.41	19.44	15.96	9.43	3.47	0.29	2418
BOMBALI	47.88	19.46	16.06	12.36	4.15	0.09	2266
KAMBIA	50.70	23.33	15.86	7.47	2.33	0.31	643
KOINADUGU	56.12	17.51	14.31	8.47	3.39	0.19	531
PORT LOKO	48.77	20.56	16.64	10.44	3.35	0.25	1581
TONKOLILI	46.26	24.48	15.74	10.95	2.27	0.30	1671
FREETOWN	41.94	20.04	16.99	13.81	6.12	1.09	11945
W/AREA RURAL	47.40	23.64	14.59	12.10	1.81	0.45	884
SOUTHERN	46.78	21.54	16.50	11.44	3.49	0.24	5733
EASTERN	50.06	20.58	15.48	9.74	2.73	0.22	6536
NORTHERN	48.61	21.19	15.96	10.77	3.26	0.21	6692
WESTERN	42.32	20.29	16.83	13.70	5.82	1.04	12829
SIERRA LEONE	46.04	20.76	16.31	12.05	4.28	0.56	31790

## 3. Tertiary:

Tertiary ( Higher) education refers to all educational programmes offered in institutions beyond the secondary level. In the 1985 census higher education institutions were categorized into university, teachers colleges, and vocational/technical institutions. Higher education accounts for only 5866 persons or 1.4% of the total enrolment rate for Sierra Leone. Males were almost twice as many as females and most of them were in technical/vocational schools. Also males were proportionately more represented at the University and females at the training institutions. (Table 7.8).

(According to other sources the figures were 11,465 for primary, 95557 for Secondary, 2,619 for Technical 3,086 for Teacher Training, and 2,395 for University institutions. Source: Central Statistics Office 1989)

In the Western Area university education dominates the other two categories. In the Eastern Province the distribution tends to be even. Vocational/technical education seems to be dominant at the national level and in the Northern and Southern Provinces. Between the sexes the percentage of enrolment for females in vocational/ technical institutions is higher than that for males.



TABLE 7.8 SIERRA LEONE CITIZENS AGED 5+ ATTENDING HIGHER INSTITUTIONS BY SEX AND TYPE: SIERRA LEONE AND THE DISTRICTS

DISTRICT	BOTH SEXES			MALE				FEMALE				TOTAL
	UNIVERSITY TRS COL. TECH/VOC.			TOTAL UNIVERSITY TRS COL. TECH/VOC.				TOTAL UNIVERSITY TRS COL. TECH/VOC.				
	%	%	%									
BO	9.28	17.73	72.98	1314	13.08	18.31	68.62	803	3.33	16.83	79.84	511
BONTHE	6.10	11.50	82.39	426	7.19	11.87	80.94	278	4.05	10.81	85.14	148
MOYAMBA	45.65	33.91	20.43	230	50.60	32.74	16.67	168	32.26	37.10	30.65	62
PUJEHUN	27.27	37.50	35.23	88	31.67	36.67	31.67	60	17.86	39.29	42.86	28
KAILAHUN	19.93	51.60	28.47	281	20.57	54.07	25.36	209	18.06	44.44	37.50	72
KENEMA	26.73	30.19	43.08	318	25.94	33.05	41.00	239	29.11	21.52	49.37	79
KONO	35.27	30.48	34.25	292	37.09	32.39	30.52	213	30.38	25.32	44.30	79
BOMBALI	21.77	51.44	26.79	418	24.09	50.00	25.91	274	17.36	54.17	28.47	144
KAMBIA	16.48	9.89	73.63	273	13.57	9.95	76.47	221	28.85	9.62	61.54	52
KOINADUGU	9.81	6.65	83.54	316	9.90	6.93	83.17	202	9.65	6.14	84.21	114
PORT LOKO	29.08	25.54	45.38	368	36.48	28.33	35.19	233	16.30	20.74	62.96	135
TONKOLILI	23.33	36.48	40.20	403	23.58	36.48	39.94	318	22.35	36.47	41.18	85
FREETOWN	45.69	24.47	29.84	1079	50.00	21.05	28.95	684	38.23	30.38	31.39	395
W/AREA RURAL	46.67	16.67	36.67	60	60.98	12.20	26.83	41	15.79	26.32	57.89	19
SOUTHERN	13.46	19.10	67.44	2058	17.49	19.63	62.87	1309	6.41	18.16	75.43	749
EASTERN	27.38	37.04	35.58	891	27.84	39.49	32.68	661	26.09	30.00	43.91	230
NORTH	20.70	28.35	50.96	1778	16.83	28.45	49.44	1248	12.64	28.11	54.53	530
WESTERN	45.74	24.06	30.20	1139	50.62	20.55	28.83	725	37.20	30.19	32.61	414
SIERRA LEONE	24.04	25.59	50.38	5866	26.78	25.92	47.30	3943	18.41	24.91	56.68	1923

TABLE 7.9 PERCENTAGE CHANGE IN SIERRA LEONE CITIZENSHIP AGED 05 TO 29 YEARS ATTENDING SCHOOL BY AGE, SEX AND DISTRICT (1974 -1985)

DISTRICT	ALL AGES		05 - 09		10 - 14		15 - 19		20 - 24		25 - 29	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
S/LEONE	51.2	71.5	43.4	53.4	38.5	72.4	73.0	120.9	66.7	118.7	108	53.8
DISTRICT												
BO	53.4	76.9	37.6	50.3	-7.3	76.4	123.3	177	114.8	181.4	714.2	18.5
BONTHE	43.4	67.5	36.3	46.1	34.6	61.1	67.8	162.3	48.2	237.9	53.5	42.1
BONTHE R	50.6	78.1	41.9	57.8	35.4	69.0	88.5	178.8	63.8	385.7	55.6	140
S/URBAN	17.5	39.7	14.0	10.8	31.3	41.2	7.0	128.1	4.0	100	42.9	-66.7
MOYAMBA	38.1	79.4	40.3	57.6	32.6	98.1	66.6	105.2	-1.8	17.7	-26.1	-11.9
PUJEHUN	64.5	89.5	81.4	87.4	52.4	70.7	57.4	138.5	44.6	245.5	132.1	93.3
KAILAHUN	57.5	122.3	61.7	111.9	2.5	117.7	150.6	163.3	83.3	213.7	-2.7	247.4

KENEMA	87.9	110.4	80.1	88.1	90.7	121.6	103.9	191.2	75.6	160.4	59.9	11.1
KONO	49.3	79.0	40.9	60.7	49.7	91.2	56.7	112.5	63.3	92.4	56.9	3.5
BOMBALI	87.6	154.4	68.0	94.8	114.6	152.5	58.8	152.5	162.2	220.9	146.6	1916.9
KAMBIA	114.4	148.3	97.9	119.4	108.5	144.3	153.4	310.2	124.1	286.4	163	125
KOINADUGU	66.4	109.0	50.6	75.5	64.2	107.3	93.5	289.8	56.0	76.5	197.3	25
PORT LOKO	51.3	58.2	35.8	46.5	51.7	55.0	75.4	113.6	90.9	162.3	104.9	82.1
TONKOLILI	41.0	63.5	28.5	41.4	13.4	64.4	26.1	165.1	384.5	168.4	97.4	48.6
W/AREA	33.0	46.8	31.7	32.9	27.6	62.8	58.9	77.5	-0.49	-5.9	53.9	154.4
FREETOWN	30.2	45.6	27.4	29.8	21.9	59.7	58.7	84.7	-0.1	-2.1	74.3	157.1
W/AREA R	68.1	60.0	71.6	64.4	82.6	99.1	61.7	-21.9	-6.2	-44.6	-37.9	133.3

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## 7.9 Changes in Attendance

The analysis determined changes in net enrolment for the age groups 5-19 and 5 - 29 years for Sierra Leone and the Districts. Table 7.9 gives the percentage increases in educational attendance between 1974 and 1985 for Sierra Leonean citizens and the districts for the age range 5 to 29. Table 7.10 gives the corresponding overall changes within the age range 5 to 19 . It should be remembered that a significant number of people aged 25 years and over were observed to be still in the school system. From the two tables the following observations may be made.

There was an overall change in attendance of 67.0% for both sexes during the period 1974 to 1985 for those aged 5 - 19 . For males there was a change of 61.4% while for females it was 75.6% . When the range was increased from 5 to 19 to 5-29 the percentage change for males dropped to 51.2% while that for females dropped to 71.5. As the age group 5 to 19 covers the effective primary age, most of these changes may be said to have occurred at the primary level. For males the most significant increases occurred in the age groups 15 to 19 and 25 to 29 which recorded 73.0% and 108.0% respectively. The least changes occurred in the 10 to 14 group which was 38.5%. For females the highest changes were in the age groups 15 to 19 years and 20 to 25 years which recorded 120.9% and 118.7% respectively. The least change occurred in the 5 to 9 and 25 to 29 groups with 53.4% and 53.8% respectively. On the whole increases for females were consistently higher in the age group between 5 and 24 years. Between age 25 and 29 the increase for males was higher. The higher increase for females and at specific ages also reflect the fact that these groups had lower rates at the base period, 1974 and scope for improvement was higher. Gains in attendance were recorded in all the districts of the country with the most spectacular changes occurring in the Northern Province especially in the Bombali and Kambia Districts where the significant changes in this Province of 109.2% and 119% respectively occurred. Kenema and Kailahun Districts in the Eastern Province experienced changes above 75% . Among males the most impressive changes occurred in Kambia (109.9%) and Bombali (99%) Districts with changes reaching 109.9% and 99% respectively. Among females the levels of change were very high in all the districts. Changes ranged from 51% in the Moyamba District to 143.1% in Kambia District. The most significant changes occurred in the Northern Province especially in Kambia and Bombali which registered levels of 128.3% and 128.3% respectively. Koinadugu also experienced a high level of change in this Province with 104.1%.

The high percentage changes in attendance indicate changes in attitude to formal education in the country generally. There is a corresponding change in attitude to the education of women; a breakdown of traditional barriers to education. Some of these changes could also be attributed to the activities of NGOs in the country especially in the Northern Province which experienced an increase in NGO rural development focus during the period. Improvements in infrastructure may also have increased access to school in this region.

TABLE 7.10  
PERCENTAGE CHANGE IN POPULATION AGED 05 TO 19 YEARS ATTENDING  
SCHOOL BY SEX AND DISTRICT (1974 TO 1985)

	DISTRICT BOTH SEXES	MALE	FEMALE
S/LEONE	67	61.4	75.6
DISTRICTS			
BO	67.3	62.2	74.9
BONTHE	51.2	41.6	64.3
BONTHE R	58.7	48.4	73.9
SHERBRO U	27.4	17.1	38.5
MOYAMBA	45.9	42.4	51
PUJEHUN	73	62.9	89.1
KAILAHUN	90.4	75.6	121.4
KENEMA	96.2	87.7	110.7
KONO	61.2	50.2	81.8
BOMBALI	109.2	99	128.3
KAMBIA	119.3	109.9	128.3
KOINADUGU	76.6	65.1	104.1
PORT LOKO	56.7	49	62.3
TONKOLILI	45	36.8	59.9
W/AREA	52.4	51.5	53.6
FREETOWN	49.6	48.3	51.1
W/AREA R	81.5	82.1	80.7

## 7.10 Educational Attainment

Educational attainment measures levels of formal education reached by the Sierra Leone population. It is determined for the population aged 5+ which was assumed to be the minimum school going age for the 1985 academic year. The data provide information on the proportion of the population who have completed or not completed primary, secondary or post-secondary education.

The level of education attained by the population in Sierra Leone is on the whole very low. For males 63.79% have had no formal education at all, 21.05% have received some primary education ( with 1.87% who completed that level), 13.72% have received some secondary education ( with 9.87% having completed the level) and 1.43% have received post-secondary education (Table 7.11). The corresponding figures for females are : None: 77.29%; some primary : 15.36 ( with 1.17% completing the level ), some secondary: 6.89% ( with 1.49% completing that level ) and post secondary ( higher education ) : 0.46%. In absolute numbers out of the total male citizen population of around 1.26 million aged 5 years and above .81 million had no education, .27 million had some primary ( with .02 million completing primary) ;.17 million with some secondary ( with .05 million having completed that level ) and .02 million have post secondary education. The corresponding numbers for females are: Total female citizens aged 5+ = 1.32 million; no education = 1.02 millions ( with .02 million having completed that level ); some secondary : .09 million ( with .02 million having completed that level) and post secondary : .01 million.

In 1974 out of a total male population of 1.15 million aged 5 and above, 76.3% had no education, 14.6% had some primary, 8.1% had some secondary and 1% had post secondary education, the corresponding figures for females out of a total of 1.15 million were : 86.3% no education, 9.7% some primary, 7.6% some secondary and .4% post secondary education. Thus we can note that there has been quite significant fall in the proportion who had no education especially among males but in the primary and secondary levels the improvements were higher among females.

## 7.11 Literacy in English

Literacy refers to the ability to read and write in a given language. Functional literacy refers to the ability to use literacy skills in one's social, civic and occupational life. From the 1985 data it is possible to determine levels of literacy in English for the Sierra Leone population by assuming that those who have completed a certain level in the school are literate. Given the high rate of dropout in the primary grades and the fact that English is encountered only in school all persons who have not completed primary education may be regarded as illiterate. Literacy therefore is computed from data on all those who have completed primary education, which shows that among the citizens 83% of males and 91.5% of females aged 5 and above in Sierra Leone in 1985 were illiterate. This puts the literacy level for the whole country at 12.7% ( 17% for male and 8.6% for females ). Illiteracy is consistently high in all the administrative districts outside the Western Area with levels in excess of 80% in all the districts. Illiteracy is highest in the Northern Province where all the districts show levels above 90%. The total picture for the whole country is therefore dismal. Illiteracy levels are high for males in the whole country and above 80% in each of the provincial districts. It is however down to 58.9% in the Western Area whereas for females it exceeds 90% for the country and in all the districts. Again the worst districts are Kambia and Koinadugu with 97.7%. The level drops to 68.7% in the Western Area.

Explanations for low literacy rates include:

1. Lack of access to schools (80% of people live in rural areas and schools are located in urban areas.)
2. the medium of instruction is English while the majority of the people speak different ethnic languages.
3. curriculum geared toward linking grade levels i.e. primary to secondary, secondary to post secondary.

## 7.12 Differentials

### Provincial Differences

The tables show considerable differences between the Western Area and the three provinces. Levels of attendance, achievement and literacy are on the whole higher in the Western Area than in any of the provinces. Of the four major administrative regions the North shows the least levels of attendance, attainment and literacy in English. This leads to the conclusion that education has remained relatively unattractive in this particular province. The main reasons for this have been given as the influence of Islam in the region. To this may be added cultural and economic factors.

TABLE 7.11

POPULATION AGED 5+ BY CITIZENSHIP, SEX AND EDUCATIONAL ATTAINMENT  
CITIZENS

	PRIMARY		SECONDARY					
	NONE	INCOMPLETE	COMPLETE	INCOMPLETE	COMPLETE	HIGHER	TOTAL	
DISTRICT	MALE							
BO	59.98	22.18	2.66	40.55	3.41	1.64	105247	
BONTHE	70.01	16.62	2.44	7.52	2.28	1.13	40028	
MOYAMBA	67.25	18.87	2.05	7.52	2.55	1.75	78739	
PUJEHUN	72.21	17.52	1.12	6.73	1.72	0.70	43211	
KAILAHUN	60.36	23.49	1.92	10.32	2.58	1.33	89622	
KENEMA	64.09	20.64	1.83	9.41	3.05	0.98	135316	
KONO	67.07	18.38	1.58	10.14	2.06	0.77	130367	
BOMBALI	69.13	18.30	1.27	7.77	2.44	1.08	103799	
KAMBIA	76.40	15.74	0.60	5.08	1.23	0.94	67164	
KOINADUGU	84.61	8.85	0.40	3.38	1.55	1.22	68383	
PORT LOKO	75.93	14.56	1.14	5.83	1.91	0.61	125059	
TONKOLILI	74.37	14.31	0.97	7.26	2.08	1.01	97234	
FREETOWN	27.79	27.45	3.94	22.78	14.18	3.87	154553	
W/AREA RURAL	43.26	28.30	4.69	15.29	6.72	1.74	23448	
SOUTHERN	65.60	19.62	2.20	20.40	2.71	1.45	267225	
EASTERN	64.24	20.53	1.76	9.53	2.47	0.95	355305	
NORTHERN	75.43	14.68	0.94	6.10	1.92	0.94	461639	
WESTERN	29.82	27.56	4.04	21.80	13.19	3.59	178001	
SIERRA LEONE	63.79	19.18	1.87	9.87	3.85	1.43	1262170	
DISTRICT	FEMALE							
BO	74.66	16.93	1.51	5.42	1.00	0.48	111740	
BONTHE	79.82	14.10	1.18	4.09	0.58	0.23	43680	
MOYAMBA	80.42	13.69	1.04	3.87	0.56	0.41	86812	
PUJEHUN	83.10	12.84	0.69	2.94	0.31	0.13	48134	
KAILAHUN	78.98	15.76	0.95	3.72	0.44	0.15	96634	
KENEMA	78.07	15.61	1.05	4.37	0.67	0.23	131629	
KONO	79.18	14.79	0.89	4.50	0.46	0.18	117894	
BOMBALI	83.30	11.69	0.73	3.45	0.55	0.27	117965	
KAMBIA	90.11	7.81	0.29	1.53	0.16	0.10	76136	
KOINADUGU	93.14	4.76	0.16	1.16	0.23	0.54	77313	
PORT LOKO	87.42	8.98	0.65	2.44	0.36	0.14	139540	
TONKOLILI	85.51	10.22	0.55	3.15	0.37	0.20	103706	
FREETOWN	39.78	26.44	3.44	19.40	8.92	2.02	148916	
W/AREA RURAL	57.13	24.00	3.99	11.16	3.11	0.61	22864	
SOUTHERN	78.56	14.86	1.18	4.34	0.69	0.36	290366	
EASTERN	78.70	15.37	0.97	3.99	0.51	0.18	346157	
NORTHERN	87.35	9.05	0.52	2.49	0.36	0.24	514660	
WESTERN	42.09	26.11	3.51	18.31	8.14	1.83	171780	
SIERRA LEONE	77.29	14.19	1.17	5.40	1.49	0.46	1322963	

TABLE 7.12

SIERRA LEONE CITIZENS WHO HAVE LEFT SCHOOL  
BY SEX AND EDUCATIONAL ATTAINMENT  
MALE

	PRIMARY		SECONDARY			
	INCOMPLETE	COMPLETE	INCOMPLETE	COMPLETE	HIGHER	TOTAL
DISTRICT						
BO	39.39	11.56	26.46	15.19	7.40	19285
BONTHE	38.94	13.38	27.91	13.55	6.22	6358
MOYAMBA	40.91	9.87	24.38	15.01	9.83	12637
PUJEHUN	46.57	7.20	28.53	12.89	4.81	5399
KAILAHUN	43.07	7.97	27.26	14.49	7.21	14157
KENEMA	38.09	8.26	31.73	16.77	5.14	22369
KONO	37.72	7.34	37.74	12.69	4.52	18645
BOMBALI	37.18	7.65	25.28	21.04	8.86	10312
KAMBIA	44.65	4.59	24.43	15.05	11.27	5067
KOINADUGU	34.16	3.50	20.16	23.79	18.39	4085
PORT LOKO	40.62	7.77	28.39	18.26	4.96	12035
TONKOLILI	40.49	6.45	29.94	16.39	6.73	10743
FREETOWN	14.72	7.85	34.27	34.15	9.02	59707
W/AREA RURAL	25.78	12.77	33.49	22.39	5.57	6786
SOUTHERN	40.65	10.80	26.33	14.61	7.61	43679
EASTERN	39.24	7.87	32.62	15.92	5.87	55171
NORTHERN	39.61	6.61	26.75	18.61	8.42	42242
WESTERN	15.85	8.35	34.19	32.95	8.66	66493
SIERRA LEONE	32.13	8.38	30.60	21.35	7.54	207585

DISTRICT	FEMALE					
BO	52.37	10.49	26.43	7.64	3.07	12860
BONTHE	57.46	10.54	24.52	5.60	1.88	4160
MOYAMBA	56.68	9.37	24.07	5.83	4.05	7809
PUJEHUN	65.95	7.14	22.17	3.60	1.14	3689
KAILAHUN	63.87	7.61	22.95	4.46	1.10	8662
KENEMA	55.86	8.41	27.15	6.52	2.06	12480
KONO	55.95	7.10	30.63	4.67	1.65	9791
BOMBALI	52.45	8.86	27.74	7.91	3.04	7029
KAMBIA	68.46	5.81	19.86	3.76	2.12	2761
KOINADUGU	51.65	4.28	18.31	7.63	18.13	2159
PORT LOKO	57.21	9.07	25.60	6.11	2.02	7437
TONKOLILI	59.94	6.87	25.55	5.28	2.35	6520
FREETOWN	19.67	8.70	38.74	27.07	5.82	46112
W/AREA RURAL	35.23	15.09	33.41	13.70	2.58	5081
SOUTHERN	56.05	9.76	24.96	6.32	2.91	28518
EASTERN	58.13	7.77	27.08	5.66	1.76	30933
NORTHERN	57.34	7.71	24.95	6.27	3.73	25906
WESTERN	21.22	9.33	38.21	25.74	5.50	51193
SIERRA LEONE	43.71	8.76	30.40	13.37	3.75	136550

#### Sex Differences

In all the districts and consistently so, a higher percentage of men attend school than women. They also stay longer in school than women and consequently achieve literacy more than women. Differences occur between the sexes with respect to educational attainment. On the whole the percentage of males who receive education is higher than that of females; the percentage of males who complete the various stages of education is also higher than that of females. For example, 35.65% of the male population aged 5+ have received formal education, 16.86% at the primary level and above. In contrast 22.62% of females aged 5+ have received any formal education and only 6.23% have primary-plus education. Dropout is also higher among females (16.39) than males (14.06%) respectively among primary, and 7.51% (males) and 5.39% (females) respectively among secondary.

#### Citizenship

In the tables showing the gross attendance rate for citizens and non citizens there is a noticeable difference in patterns of attendance, attainment and literacy between citizens and non-citizens. A lower percentage of non-citizens participate in the educational system than citizens. The highest percentage of non-citizens not attending educational institutions occurs in the North and the East. As these are the

border provinces it could be assumed that this is due to the pattern of migration in these provinces. It seems that most of the adults entering Sierra Leone from neighbouring countries have never been to school.

In the age group 5 to 29 years, however, a higher percentage of non-citizens participate in education than citizens. As in the case of other observations in education the Western Area presents the brightest picture in this area. Noticeably a higher percentage of females among the non-citizens attend school than citizens. This suggests that younger immigrants have greater access to education than their Sierra Leonean counterparts.

### 7.13 Future Prospects

The preceding analysis of the 1985 census data comprising (a) determination of levels (b) comparisons with 1963 and 1974 data, and, (c) projections based on salient assumptions suggest the following trends in education and literacy for the population of Sierra Leone.

1. Low rates of participation in education
2. Low levels of educational attainment and literacy in English
3. Spatial and gender differences in patterns of education
4. Overall growth in total attendance
5. Increases in female attendance and attainment

Prospects for Enrolment:

#### Rate Of Attendance

The analysis showed a low rate of growth in gross and net enrolment for the population aged 5+. The same observation was made on the 1963 and 1974 data. Reasons traditionally proffered include historical, cultural, accessibility/facilities and costs. These reasons remain as efficacious as before. In addition one might add or underscore the worsening economic situation, the low employment of educated youth etc as factors which have tended to erode confidence in education traditionally regarded as the surest means to a decent job. As these factors will continue to influence the education enterprise in Sierra Leone rates of attendance in relation to the total population will continue to be relatively low.

#### Female Attendance

The analysis showed spectacular increases in the attendance at school of females aged 5+ in the population. More striking is the fact that the increases were most impressive in the Northern Province and in districts historically not receptive to the education of women. This has been attributed to many factors including (a) increasing general awareness (b) changes in parental attitudes to the education of women (c) the impact of rural development agencies during the decade. The indications are that this trend will continue. This picture however, is marred by the fact that although female attendance has increased in numbers the percentage of women taking advantage of educational facilities is still very small. This trend is likely to continue.

#### Prospects for Literacy in English

Literacy levels determined in this analysis are for English, the dominant language in the educational system. Although literacy obtains in other languages, literacy in English is by far the most widespread and reliable. The literacy level 12.7% given for English in this analysis cannot, therefore, be far from the absolute level.

Literacy is constrained by its restriction to English which is a foreign language in a multilingual society, and by its limitation to formal education. The low level of participation in the latter constrains the growth of literacy in Sierra Leone. Trends therefore suggest that as long as the schools are relied upon as the major means of acquiring literacy the rate of growth in literacy will be slow; very slow.

### 7.14 Conclusions and Implications

The analysis of the data on education for the 1985 census has focused on patterns of attendance, educational attainment and literacy in English for the population aged 5+ years. The analysis on attendance led to the conclusion that enrolment rate is very low for Sierra Leone. It was also seen that although there had been a general increase in overall attendance the rate of increase declined between 1974 and 1985 as compared to between 1963 and 1974. Considerable differences were also observed between the sexes and among the various administrative regions.

Reasons for low enrolment rates were identified as historical, cultural, managerial, distance from schools, high costs of education, inappropriate curricula, and parental attitudes and expectations. All of these conclusions and the factors supporting them have policy implications.

Historical factors have led to a disparate distribution of schools in Sierra Leone. The situation is that some areas are better served than others. The managerial control of schools compounds this problem in that the provision of schools is not rationalized and the quality of schools and the education they provide vary with the financial capability of management authorities. To address the historical imbalance in school provision, therefore, the role of Government should be more dominant than as present. Responsibility must be seen to lie with Government and it should be recognized that in the matter of school provision the agenda of management bodies may be different from that of Government. Cultural patterns also impinge on education, for example those who profess Islam may prefer education in Arabic or other types of education and may have some inhibition as to female participation especially of girls of pubescent ages.

Distance from school is a serious problem. It is easily one of the reasons that parents offer for not sending their children to schools. Yet the pattern of settlement and the cost of establishing and operating schools in most rural areas where they are mostly needed is, in the

immediate future, prohibitive. In this regard the proper mapping of schools is required and the role of feeder schools which have traditionally addressed this problem examined.

The issue of inappropriate curriculum in Sierra Leone's schools is not new. In the main it has been claimed that the curriculum is too academic and inappropriate for rural development. The point should be made that most people in Sierra Leone are born in rural settings and they live and die in those settings. This being the case their education should aim at maximizing their functioning in their milieu. What literacy they acquire and what skills they gain should all go towards enriching their lives. This calls for additional effort towards creating a rural education curriculum and looking at feeder schools both as terminal institutions and as feeders to other schools for those who need it.

Parental attitudes and expectations are on the whole becoming receptive to education judging alone from the increases in the participation of women in education. But the need to maintain the change through awareness raising and making education practically beneficial still remains. It is in this vein that the cost to parents of primary education should be reviewed. Although tuition has been "removed" it has practically been replaced by other and higher costs labelled "other charges". This negates the intentions of Government to make education affordable and appealing.

The analysis showed that the number of people who can be regarded as functionally literate in English is 339,598 which is 13% of the population. This level could be adjusted by 5% to accommodate other forms and degrees of literacy in the country. This notwithstanding, the statistics once more assert the position that the level of literacy for the country is appallingly low.

Literacy levels have been linked to many aspects of population characteristics and activities. They have been linked, for instance, to agricultural, industrial and socio-economic activities. Education also affects families especially age at marriage, child bearing and rearing and child survival. For instance, both in 1974 and 1985, the completed fertility of a woman with secondary or higher education was much lower than those with no or primary education only. Similarly, morbidity, and mortality ( especially infant and child ) was significantly lower among the educated than the others. It is therefore readily assumed that the level of literacy in a population is a reasonable index of a population's propensity for change and development. By such standards the results for Sierra Leone could be judged to be far from indicating a state of readiness for change or development.

The low literacy rate is attributable to many factors including low accessibility to schools, and economic factors. Some of these have already been cited in various sections of this chapter. To these may be added the problem of language policy. English is the official language of the country and still the main medium of instruction in schools. As a foreign language for most of the country's population it is learned mostly in the school situation. As a result children who drop out of school before adequately learning to write it or read it remain illiterate or relapse into illiteracy quickly (Mayor 1990, P 443). In order to accelerate the growth of literacy, therefore, the policy on language education should be given serious attention.

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# CHAPTER 8

## EMPLOYMENT AND LABOUR FORCE

### O. TAYLOR

#### 8.1 Introduction

The ultimate objective of development is to bring about sustained improvement in the well-being of the population. An important Government policy is to increase employment opportunities. To be able to formulate economic policy and development plans, studies have to be made on the various economic activities and other characteristics of the labour force. Censuses provide the most comprehensive source of data for such studies, which among other things provide data for projections of labour force and employment in various economic activities. A classification of the labour force by industry is useful in assessing industrial progress; such data which can be used to estimate production targets are also linked with the estimation of capital requirements in any industrial sector. Data on the labour force classified by occupation can be regarded as an inventory of the skills workers possess. Such data is useful in assessing the shortfall in manpower requirements which in turn is essential for planning the type of output required from the educational system. Furthermore classification by occupation and status (employer, employee, etc) can be made, for instance, on social mobility, fertility, and mortality for various groups.

Labour force statistics form the basis for the study of labour productivity and also the demand for labour in various industries. If the results of two or more censuses can be compared, the movement of labour between industries is a useful indicator of the level of development. Census data on employment and labour force form a reference point for various surveys, e.g., surveys on industrial production, household income and expenditure, and agricultural production. The usefulness of comparing indicators obtained from two or more enquiries cannot be over-emphasised.

For any meaningful comparison of data one needs to closely scrutinise the concepts and definitions used in the various censuses. In this section, an attempt will be made to compare various concepts regarding the labour force used in the censuses of 1963, 1974 and 1985. Concepts include the labour force, the time horizon used for investigating economic activity and the tabulations published.

#### 8.2 The Data

In the 1963 census the concept of the civilian labour force was used. The civilian labour force comprised those aged 10 years and above who were:-

- a) working, including house-keeping and working but excluding the armed forces
- b) not working but available for work including those persons who answered unemployed or "looking for work"

The non-active population for the 1963 census comprised people involved in full time house-keeping, inmates, students, retired persons and those not working and not looking for work.

For the 1974 census the economically active population could not be determined as there was no question to assess unemployment; for the 1985 census the economically active comprised those 10 years of age and above who were working whether full time or part time and were paid in cash or kind, those who worked for the family gain, those unemployed and those looking for work.

For the 1974 census, the non-economically active comprised people involved in full time house-keeping, students and those not working. This definition implies that those not working include the unemployed, and pensioners.

For the 1985 census, the non-active population comprised those who though unemployed were not looking for work, full time housewives, students, and the retired.

It is also very important to compare the various categories used in the published tabulations. In the 1963 census, general characteristics of the labour force referred to the civilian labour force i.e. the armed forces were excluded. Tabulations on occupation, industry and employment status however apply to that section of the civilian labour force classified as working and for the armed forces. According to the census report, the primary classification by type of activity was based on the answer to the question "what was this person doing for most of the time for the past year?".

In the 1974 population census, the tabulations on occupation, industry and employment status refer to the working population; i.e. persons who at the time of the census declared they had a job within the last year. Whilst the definition for the 1963 census required a rather subjective assessment of the frequency of work, there did not appear to be any reference whatsoever to the regularity of work during the previous year in the 1974 census. In using a time frame of one year, it is possible that the most recent activity will be reported.

In the 1985 census tabulations on occupation, industry and educational attainment refer to the "cash-earning" population - this in effect refers to those who worked regularly for payment in cash or in kind during the previous month. Here too, one has to define "regularly". This

definition may explain the drop from 988,428 for the total working population used in the 1974 tabulations to 768,141 for the total of the cash-earning population obtained from the 1985 census. The total working population used in tabulations for the 1963 census is 908,147.

It is obvious therefore that the data and tabulations on the labour force as obtained from the 3 censuses are not comparable on account of:-

- a) The time frame for which information on economic activity is requested
- b) The minimum age for participation in the labour force
- c) The group to which the tabulations refer.

### 8.3 Quality Of Data

Before we go into the quality of data we give below the concepts and definitions used in the 1985 census.

The economically active are those 10 years of age and above who furnished supply of labour for the production of goods and services during the previous month. In the census this group comprised those who 1. Earn income in cash or kind, 2. Work in the family farm, 3. Do periodic piece jobs, 4. Are Looking for work.

The Economically Inactive people 10 years of age and above who were not in a job and were not looking for work during the previous month. In this category are also people doing full-time house-keeping, students and pensioners.

The Employed: The emphasis is on regular employment i.e. people who worked regularly and were paid in cash or in kind during the previous month.

The Unemployed: People looking for work during the previous month.

Employment Status:

The following categories are used:

Self-Employed: People who are in business for themselves e.g. farmers with specific intention of selling their products store owners, hawkers, shoe repairers etc.

Employee: Some-one who works for others and is paid in cash or in kind.

Family Farm: This category comprises those working in the family farm and who grow mainly for the family's consumption.

Because of the scale of census enquiries, many enumerators were used. It is likely therefore that because of the varying levels of education and experience of the personnel involved, there will be differences in the interpretation of concepts and definitions, especially because on some occasions, interviewers have to make some judgment of their own. In addition, there are errors caused by interviewees giving wrong information, for example, on age; these errors can be found in all areas of the census; nevertheless there are certain errors which are specific to information collected on the labour force. These are discussed below.

Data on employment and economic activity are obtained from answers to questions on columns P13 to P16 of the census questionnaire. These questions are : During the past one month did ... work regularly for cash?; what did ... do; what kind of work did ...do(occupation) and what is the main (product/service) activity of place of work? The type of activity was enquired as to status(employee, self employed, not active) and further as housewife, student, retired, family farm, period piece jobs, looking for work and other.

To determine the employment status of the individual, a question is asked to ascertain if he worked regularly and was paid in cash or kind during the previous month. If the answer is in the affirmative, further questions are asked to confirm whether the individual was self-employed or if he worked for someone else. There is however no definition for "regularly" in the census manual.

#### 8.3.1. Evaluation of data

##### a) Time horizon

The time horizon for questions on economic activity is one month. This can be a major source of error in a country like Sierra Leone where there is a marked seasonal variation in activity. Since this census took place in December at a time when harvesting of crops like rice and cacao is in progress, it is likely that agriculture will be over-estimated in the industrial classification.

On the other hand, one still has to verify that the activity was performed throughout the whole period.

##### b) Employment Status

Arrangements in traditional employment are usually different from those in the modern sector. In traditional employment, the household is usually the main working unit. In such cases it is difficult to define an employer/employee relationship. Instead what operates is self-employment and family labour. Fitting people in the labour force in the employer/employee work structure can be difficult and misleading.

There is also the problem of distinguishing between the unemployed which means one who belongs to the labour force, but was out of work during the month in question and the economically inactive - i.e. not belonging to the labour force. To distinguish between these two

categories, one has to ascertain whether or not the person was looking for a job. Such a distinction can be very difficult in areas where the possibility of acquiring a job is remote.

c) Under-employment

It must also be emphasised that the information obtained from analysing such data will not throw any light on issues such as underemployment.

#### 8.4. Existing Information and Literature Review

##### Censuses

Censuses provide useful information on employment and labour force statistics. A useful assessment of the structure and evolution of the labour force can be obtained by comparing data from the full scale censuses of 1963 and 1974. For a meaningful comparison however, the various concepts and definitions used should be compared and the level of error estimated.

##### The 1988-89 Labour Force Survey

The 1988-89 labour force survey undertaken by the CSO provides useful information on economic activity. This survey was done in two stages: the post-rainy season i.e. from September to December 1988 and in a period which embraced both the dry and rainy season i.e. from March to July 1989. This timing was useful since it minimised bias due to seasonal variation in activity. The sample design was a stratified two-stage sample with each district divided into three strata. In addition to providing data such as number of households by type and size, the social and demographic characteristics of economically active and inactive persons, details of the main occupation, industry and employment status of the employed; it also provides much needed data on the under-employed and makes an estimate of employed persons in the formal sector.

One major disadvantage of this study however, is that findings obtained from this survey are not comparable to those obtained from the 1985 census or any of the previous censuses for that matter. This is due to major differences in concepts and definitions. It must however be pointed out that this study to a large extent followed the ILO recommendations. The time reference for the survey was seven days. In addition anybody who worked for at least one hour during the seven day reference period for "payment or profit in cash or in kind or family gain" was regarded as employed. This definition is a significant departure from that used in the 1985 census where the concept of working regularly for cash during the preceding month was used.

##### Ministry of Labour

The Ministry of Labour publishes monthly figures on employment and unemployment. This is in accordance with the Registration of Employees Act - Cap 213 of the Laws of Sierra Leone. Other data are also provided on hours of work, industrial accidents and disputes and wages.

Data on employment are obtained through questionnaires sent by post to establishments with 6 or more workers; home workers and family workers are covered in this exercise and deals with employees aged 15 years and above. The coverage also includes persons "temporarily absent because of illness, injury, mechanical breakdown and weather". The list of establishments used dates back to 1964. This will cause considerable error in a country with a high turnover of establishments. The response rate is usually very low and it would appear that follow up action by the Ministry of Labour is minimal.

Figures on unemployment are obtained from the various employment exchanges. Registration in employment exchanges is not mandatory and figures from this source will tend to be under-estimated. In addition, it is quite likely that names of some people still remain in the register even though they may have succeeded in finding jobs.

#### 8.5 The 1985 Census Analysis of Data

##### 8.5.1 The Size of the Labour Force

The labour force comprises persons aged 10 years and above who during the month preceding the census were (a) in either full- or part-time employment and were paid in cash or in kind, (b) produced for subsistence and (c) were unemployed i.e. were out of a job and were looking for one.

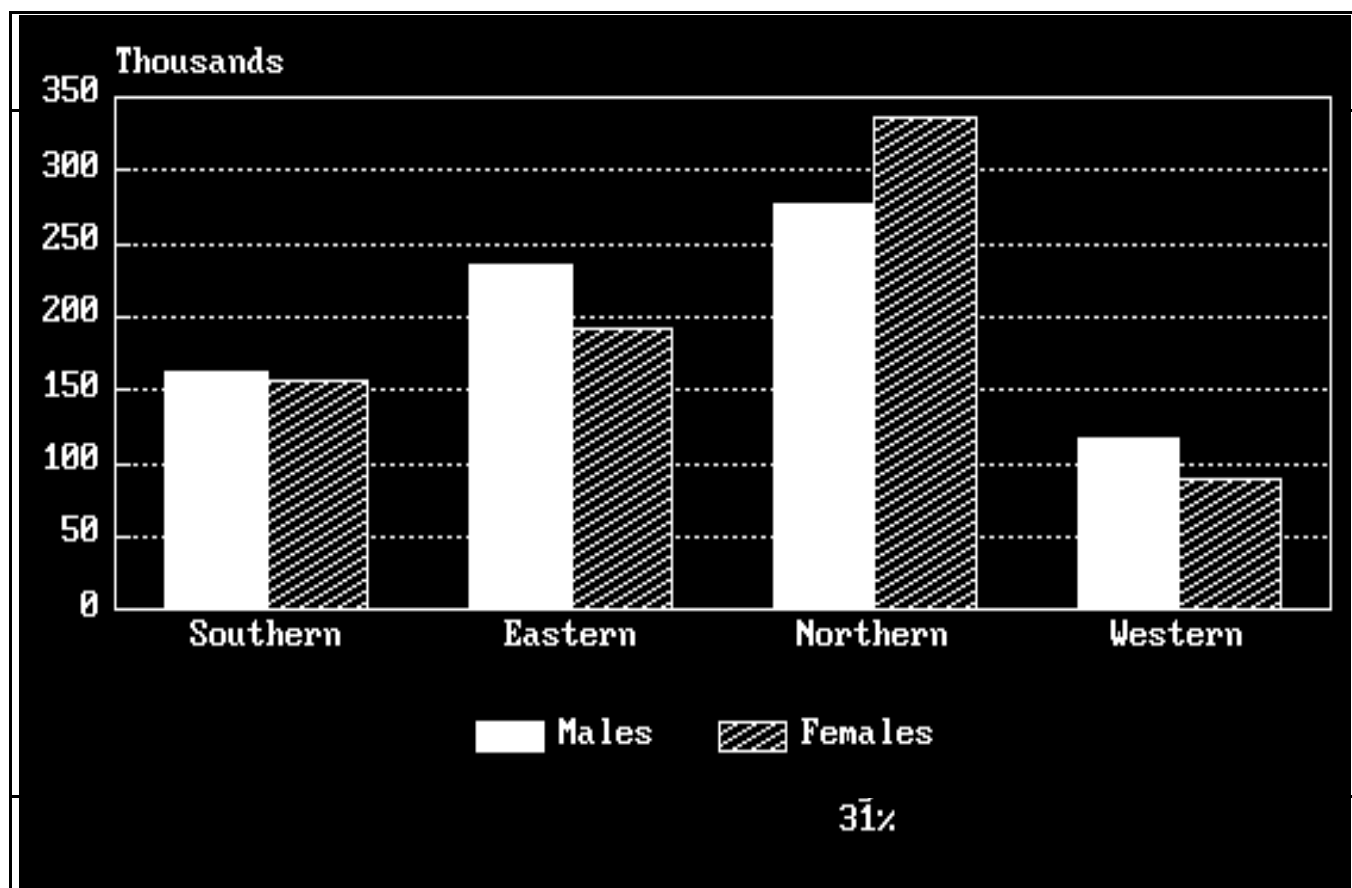
People not in the labour force are those engaged in activities which do not contribute directly to the production of economic goods and services. They comprise full-time housewives, students and pensioners. Also included in this category are those who were out of a job and were not looking for one.

Results from the census reveal that for the country as a whole there were 1,566,406 people in the labour force of which 791,925 are male and 774,481 are female. There are therefore 2.2 per cent more males than females in the labour force whilst in the population 10 years of age and above there are 4.6 per cent more females.

The labour force concept however, only gives one a rough idea of the employment situation. It masks phenomena like under-employment, part-time, seasonal and irregular employment. This should be borne in mind when interpreting the figures.

### 8.5.2 Population by Type of Economic Activity

For the country as a whole Table A8.1 shows that 35.2% of the population are wage/salary earners. They are paid in cash or kind for the goods and services they produce. 31.1 per cent of the population work on the family farm. This category of people is made up of subsistence farmers and unpaid family workers. They cultivate mainly for the consumption of the household and the unpaid family workers do not receive any personal income but work for the family gain. 28.2 per cent of the population are non-active, 3.6 per cent of the population have irregular employment and 1 per cent is unemployed (See Figure 8.1). Figure 8.2 shows the distribution of the labour force by sex and province.



### 8.5.3 The Crude Activity Rate

A useful indicator pertaining to the labour force is the crude activity rate. This is the percentage of the total population classified as being economically active. This rate gives an indication of the level and extent of employment; in addition under given conditions of productivity, the higher the activity rate, the higher is the level of income that can be achieved. The crude activity rate as obtained from the 1985 census is given in Table 8.1 below.

Table 8.1 Crude Activity Rates for Sierra Leone

	Both Sexes	Males	Females
Population	3222901	1590692	1632292
Labour Force	1566407	791925	774481
Crude Activity Rate	48.6	49.8	47.4

It can be seen that the crude activity rate for females is lower than that obtained for males. This can partly be explained by the fact that full-time housewives are classified as being economically inactive.

A better measure of the activity rate, the refined activity rate relates the labour force to the population in the age group 10 years and above. It can be seen from table 8.2 that the refined activity rates for males and females are 74.3 per cent and 69.5 per cent respectively.

Table 8.2 - Refined Activity Rate

	<u>Both Sexes</u>	<u>Males</u>	<u>Females</u>
Population 10 years and over	2180915	1066134	1114781
Labour Force 10 years and over	1566407	791925	774481
Refined Activity Rate	71.8%	74.3%	69.5%

At this point, it will be useful to investigate refined activity rates as registered by the various Provinces and Districts.

Table 8.3 - Refined Activity Rates of Districts and Provinces

	<u>Both Sexes</u>	<u>Males</u>	<u>Females</u>
Sierra Leone		72	74
Southern Province	68	72	64
Bo District	67	71	63
Bonthe District	70	77	63
Moyamba District	70	72	68
Pujehun District	65	72	59
Sherbro Urban District		53	61
Eastern Province	70	75	65
Kailahun District	67	67	67
Kenema District		70	74
Kono District	72	80	62
Northern Province	78	76	79
Bombali District	74	70	76
Kambia District	75	74	76
Koinadugu District	83	82	85
Port Loko District	78	76	79
Tonkolili District	79	77	80
Western Area	67	73	61
Freetown	66	73	59
Western Rural Area	72	74	71

Refined activity rates for the provinces vary between 78 per cent for the Northern Province and 67 per cent for the Western Area. The national average is 72% . All the provinces except the Northern Province registered on average higher activity rates for males than females. See Table 8.3

The different pattern registered by sex in the Northern Province can be explained by the fact that a higher percentage of women are classified as working on the family farm. In the Northern Province 54 per cent of women aged 10 and above work on the family farm. The figure for the Southern Province is 38 per cent and that for the Eastern Province is 35 per cent.

Between districts, the lowest refined activity rate is registered by females in the Sherbro Urban District which also registered the lowest average refined activity rate for any district whilst the highest refined activity rate is registered by females in the Koinadugu District.

It cannot however be over-emphasised that these variations shown in different areas of the country need to be treated with caution due to the different interpretation of the question which may have been made both by interviewers and interviewees.

#### 8.5.4 Dependency Ratios (economic)

Another indicator closely associated with the crude activity rate, is the dependency ratio, defined as the number of persons not in the labour forces per 100 in the labour force. This is a crude measure of the burden on income earners of those who produce no income. This is a useful social indicator. It must be noted however that although some of these dependants do not produce and so by definition do not earn income, they may still be financially independent in varying degrees because of the personal income they receive in the form of rents, pensions, dividends etc. Also they may be contributing towards family labour, production etc. For the country, the dependency ratio is 106 i.e. for the country as a whole for every 100 persons in the labour force there are 106 people not in the labour force. This figure appears low, but it must be remembered that about a third of the population described as working on the family farm are classified as economically active even though they might still receive financial help from the cash-earning group and their productivity may be very low.

It will be useful to classify dependants by their status e.g. school children, the aged, the disabled, the financially dependent etc.. but this is beyond the scope of this paper.

The age distribution of dependants for the country is shown below. it will be seen that 45 per cent of dependants are male and 55 per cent

are female. The larger proportion of dependants among females is due to higher proportion of family workers. This phenomenon of female dependants exceeding males is replicated in most districts. The age distribution of the non-active population by sex is shown in Table 8.4 below.

Table 8.4: The Non-Active Population by Age and Sex

Age Groups	Both Sexes	Males	Females
10-14	148,468	85,901	62,567
15-19	108,514	56,111	52,403
20-24	49,472	16,868	32,604
25-29	34,066	4,528	29,538
30-34	21,232	1,574	19,658
35-39	16,821	1,054	15,767
40-44	10,959	673	10,286
45-49	8,534	635	7,899
50-54	7,305	725	6,580
55-59	5,737	861	4,876
60-64	51,625	25,390	26,235
65-69	38,603	19,793	18,810
70-74	33,838	18,270	15,568
75-79	25,379	13,969	11,410
80+	53,956	27,857	26,099
TOTAL	614,509	274,209	340,300

It can also be seen that 42 per cent of the non-active population aged 10 and above are in the 10-19 age group and 33 per cent are over 60 years of age. When the 0-9 age group is taken into account, it is observed that the dependency load is weighted in favour of the younger population.

#### 8.5.5 Sex-Age Specific Activity Rates

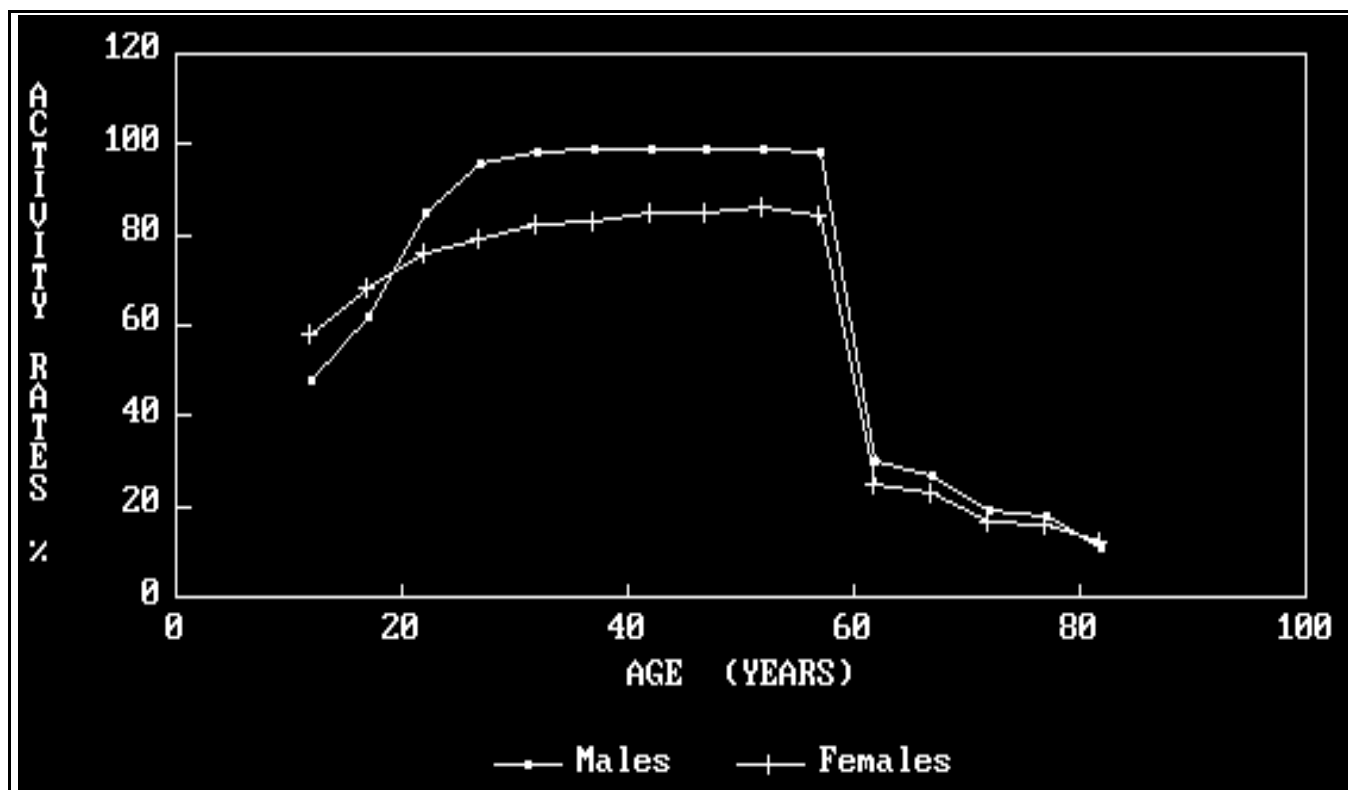
This indicator is used to show the proportion of economically active persons in different categories - Sex, Age, - of the population.

The sex-age specific activity rate is given by  $r = Pe/Pt$  where  $Pe$  is the number of economically active persons in an age-sex group and  $Pt$  is the total number of persons in the same age-sex group.

The predominant pattern for sex-age activity rates is as follows:- There is a steep rise in activity rates between the ages 10-24 because of new entrants into the labour market. This is followed by a gradual increase in activity rates between the 25 & 59 age groups. The maximum activity rate is achieved in the 45-49 age group. There is then a sharp drop in activity rates from the 60-65 age group; this phenomenon is associated with retirement from the labour force. The decline in activity rates is gradual for the remaining age groups. See table 8.4 and figure 8.3.

Table 8.5 Age sex specific Activity Rates 1985

AGE	ACTIVITY RATE		AGE	ACTIVITY RATES	
	M	F		M	F
10-14	47.8	56.6	50-54	98.5	85.4
15-19	61.0	68.0	55-59	99.9	83.9
20-24	84.5	76.0	60-64	30.1	24.3
25-29	96.0	79.2	65-69	26.3	22.1
30-34	98.3	82.0	70-74	18.7	16.9
35-39	98.8	82.8	75-79	17.3	15.8
40-44	99.0	84.8	80+	11.1	10.9
45-49	99.0	85.3	TOTAL	74.1	69.2



If activity rates for both sexes are compared, it can be observed that higher activity rates are registered for females in the 10-19 age group. This is probably due to the fact that a higher percentage of males receive formal education whilst their female counterparts participate in household or other enterprises. From age 20 and above, activity rates for females trail behind those for males with the difference being marked between the 25 and 59 age groups.

One can think of certain factors accounting for this difference. The age group 25-59 embraces a high percentage of the child-bearing population, causing a significant percentage of women getting married, involved with child bearing/rearing and household chores, -activities not classified as being economically active. Furthermore, it is well-known that women move in and out of the labour force several times during their working life. An analysis of the proportion of women active at some time during their lives would show higher activity rates.

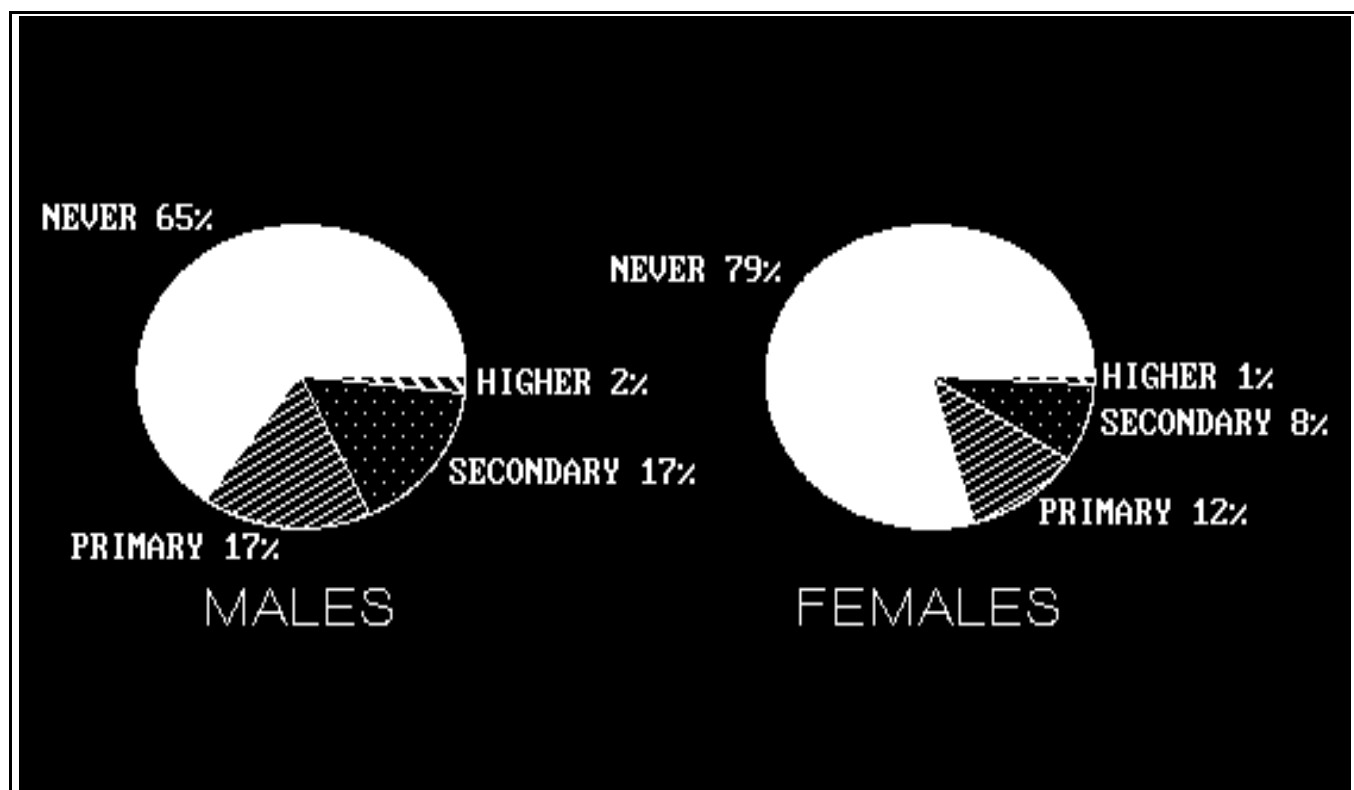
#### 8.5.6 Types of Economic Activity

Following an analysis of the size and activity rates of the labour force it will be useful at this stage to look into the types of economic activity pursued. In the discussion that follows, workers will be classified by industry, - i.e. the activity of the establishment or enterprise in which the individual works, by occupation, i.e. the type of work done by the individual, by status i.e. as employee or self employed, by cash-earning or non-cash-earning, and by educational attainment. Such information is essential for studies relating to the problems of improving the quality of manpower, raising productivity and minimising unemployment and underemployment.

In what follows we shall investigate the employment status of the cash-earning population, their educational attainment their occupation and the industry in which they work.

The Educational attainment of the population aged 10 years and above.

The question on educational attainment investigated the highest class attained by each household member.



According to the census figures (see Table A8.2) 72% of the population aged 10 and above had never been to school. 12 per cent had some primary education; 2 per cent had finished primary education. 9 per cent had some secondary education, 1 per cent had reached institutions of higher learning.

If one considers the educational attainment by sex it will be seen that there are marked differences between the sexes; it is observed that 56 per cent of those who had never attended school were women, compared to 44 per cent male. In addition 79 per cent of women aged 10 and above had never been to school. For males the figure is 65 per cent. (See figure 8.4)

Of the 1.2 per cent who had attained higher education, 0.9 per cent were males compared to 0.3 per cent females. Similarly of the 3.2 per cent whose highest educational attainment was completion of secondary education, 2.3 per cent were males and 0.9 per cent females. Of the 12 per cent who received some primary education, 7 per cent were males, and 5 per cent females. It can be seen that the disparity in educational attainment between the sexes becomes more marked as the level of education gets higher.

It is also useful to compare educational attainment between first the provinces and then between districts. If a comparison is made between provinces, the characteristics for the Western Area differ from those of the other provinces. In the Western Area for instance, 39 per cent of the population aged 10 and over were never at school. This compares with 74 per cent for the Southern and Eastern Provinces and 83 per cent for the Northern Province.

The percentage who received post-secondary education was 3.2 per cent in the Western Area compared to 1 per cent in the Southern Province, 0.8 per cent in the Northern Province and 0.7 per cent in the Eastern Province.

If one compares the attainment of secondary education between the provinces, it will be seen that 12 per cent of the population aged 10 years and above attained secondary education in the Western Area. This compared with 1 per cent for the Northern Province, 2 per cent for the Eastern Province and 2 per cent in the Southern Province.

If one examines educational attainment by sex for the provinces, it will be seen that the percentage of females who were never at school ranged between 45 per cent for the Western Area and 89 per cent for the Northern Province. An examination of the percentages who received higher education reveals that 0.4 per cent of females attained higher education in the Southern Province, 0.2 per cent in the Eastern Province, 2.2 per cent in the Northern Province and 1.1 per cent in the Western Area. For more details on educational attainment of the population 10 years of age and above see Table A8.2

An analysis of the population aged 10 and above by districts reveals that there is also a wide disparity between districts. Ninety per cent of the population in Koinadugu district had never been to school; this compares with thirty-six per cent in Freetown.

#### 8.5.7 Analysis of the Population aged 10 and above by Cash-earning Status.

The figures reveal that as at December 1985 quite a substantial proportion of the population was not in regular paid employment. Payment here refers to payment in cash or in kind for regular employment. For the country as a whole only 35 per cent were regularly paid earners. The remaining group comprises the non-active population, those working in the family farm, those doing periodic piece jobs and the unemployed.



If cash-earning status is classified by sex, it is seen that 45 per cent of males are in regular paid employment compared with 26 per cent females. It follows therefore that a substantial member of women (69 per cent) were either non-active or worked on the family farm.

**Table 8.6 Cash-earning Status of Population Aged 10 and Above**

		<u>Cash</u>		<u>Non-Cash</u>	
		Males	Females	Males	Females
Sierra Leone		476337	291804	589060	822488
Southern Province	90850	54521	132524	191201	
Eastern Province	158063	73279	156830	223449	
Northern Province	136258	95360	230529	328002	
Western Area		91166	68644	69177	79836

When provincial variations are considered, it is seen that in the Southern Province 31 per cent are in regular employment, compared with 38 per cent in the Eastern Province, 29 per cent in the Northern Province and 52 per cent in the Western Area. (See table 8.6). The percentage of women in regular employment also range between 46.2 per cent for the Western Area and 22.2 per cent in the Southern Province.

A deeper insight into the cash-earning status of the population aged 10 years and above is obtained if we try to distinguish between employees and those who are self-employed.

For the country as a whole 24.4 per cent of the population aged 10 and above are self-employed, compared with 10.9 per cent classified as employees. (See table A8.2). This pattern of having more people classified as self-employed than those classified as employees is observed throughout the country with the exception of the Western Area, where 24.8 per cent are self-employed compared to 27 per cent employees. This different pattern can be attributed to the fact that the capital city, in which there is a concentration of industries and retail enterprises, is in the Western Area. Another major source of employment - the Civil Service also has its headquarters in Freetown.

#### 8.5.8 Educational Attainment Classified by Cash-earning Status.

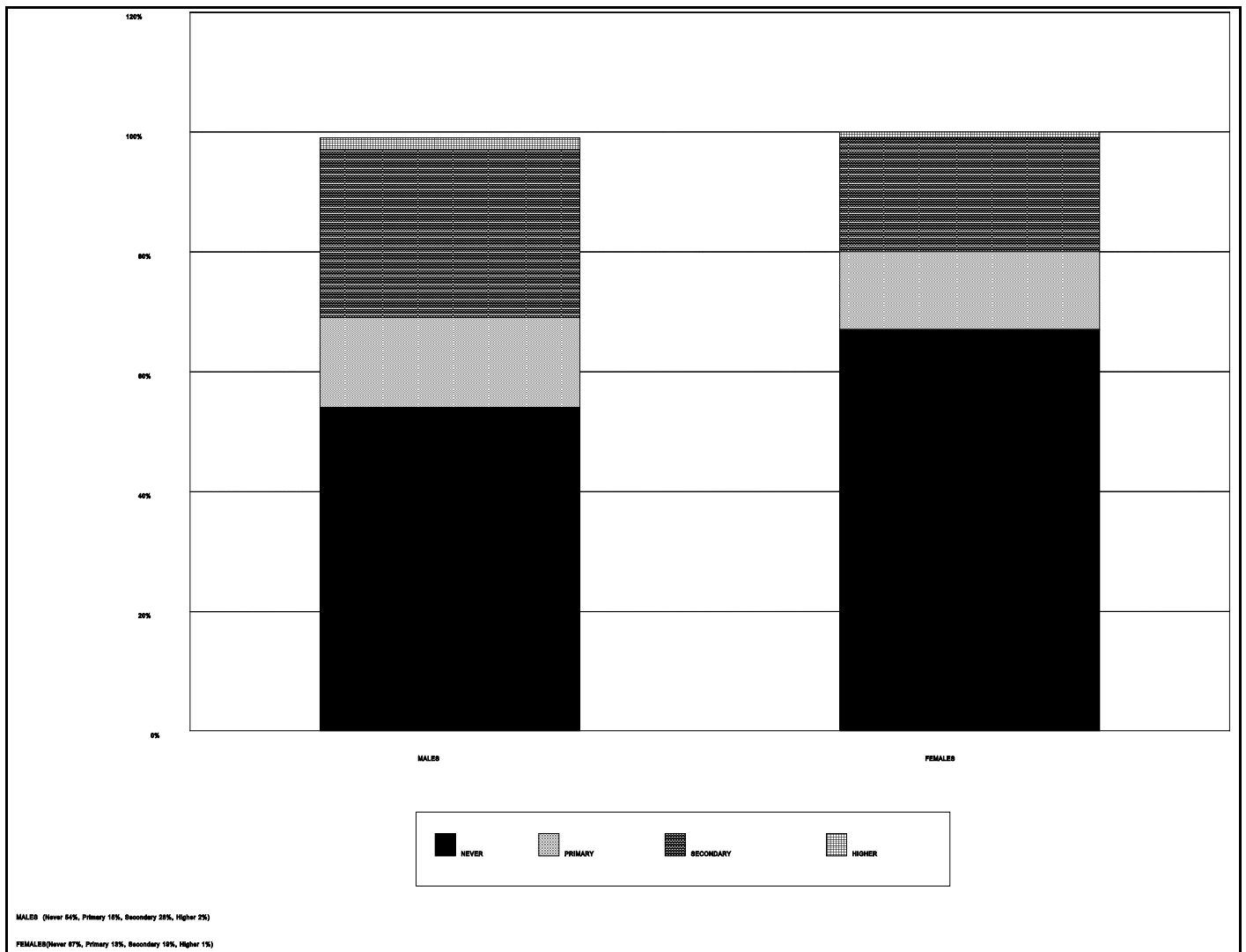
It is useful to investigate the educational attainment of the various employment groups. As is expected for the country as a whole, 48.7 per cent of those in the employee category had never been to school compared with 83 per cent of the self-employed. In addition 8.9 per cent of employees had some primary education, 3.1 per cent had finished their primary education, 16.0 per cent had finished secondary education and 6.3 per cent had higher education. For the self employed 7.1 per cent had some primary education, 1.9 per cent had finished primary school, 5.9 per cent had some secondary education, 1.5 per cent had completed secondary education and 0.4 per cent had attained higher education. It would appear that those with education, tended to be employees, and those with lower standards of education tended to be self-employed. (See Table A8.2).

For those in the non-cash-earning category, 72.1 per cent were never at school. 14.8 per cent had some primary education, 1.6% had completed primary education, 9.1 per cent had some secondary education, 1.6 per cent had finished secondary education, and 0.6 per cent had finished higher education. These figures reveal that those in the non-cash-earning status are mostly the uneducated and the drop-outs from both primary and secondary education.

An analysis of the employment status of people with various levels of education reveal that of those who were never at school, 7.3 per cent were employees, 27.9 per cent were self-employed and 64.7 per cent were non-cash-earning. For those with secondary education, 54.8 per cent were employees, 11.8 per cent were self employed and 33.5 per cent were non cash earning. 59.3 per cent of those with higher education were employees, 9.2 per cent were self employed and 31.4 per cent were non-cash-earning. It would appear therefore that with education the chances of being in regular employment was greatly increased. It however must be pointed out that 31.4 per cent of those who completed higher education and 33.5 per cent of those with secondary education were not in regular employment. The figure in this category was highest for primary school dropouts - 77.8 per cent.

#### 8.5.9 Sex, Age and Level of Education Characteristics for the Unemployed and Under-employed.

Sixty per cent of people who were either unemployed or doing specific piece jobs were never at school. (See Table A8.3) one per cent had attained higher education, 10 per cent had finished secondary school, 14 per cent were secondary school drop-outs and 12 per cent primary school drop-outs.



82 per cent of people in this category i.e. the unemployed and those doing specific piece-jobs are aged between 10 and 34 with 25 per cent of them in the age group 10 - 14. The high percentage registered in the 10 - 14 age group is disturbing since one would normally expect that they should still be at school.

Of the total number of people in this category 55 per cent were male and 45 per cent female. Thirty five per cent of people in this group are within the Western Area.

The Regional distribution of the unemployed and those doing periodic piece-jobs is as follows:- 15.4% in the Southern Province, 26.3 per cent in the Eastern Province, 23.6 per cent in the Northern Province and 34.7 per cent in the Western Area.

In interpreting these figures it should be borne in mind that the notion of looking for work will vary between urban and rural areas. In locations where employment is scarce, fewer people will be looking for work. It is likely that the incidence of part-time employment is also higher in the urban areas. This might explain the proportionately higher incidence of unemployment and periodic work in the Western Area.

## 8.6 The Occupation of the Cash-Earning Population.

Another type of useful information is the occupation of the employed population classified by age and sex. Such information is very useful in assessing the professional stock in the country and also estimating the country's man-power needs. With economic development one would normally expect a shift of workers from the agricultural sector to other sectors resulting in a changed professional structure of the labour force. The percentage distribution of occupations is shown below:-

Table 8.7 Cash-Earning Population Aged 10 and above by occupation

		Both sexes	Males	Females
Professional		10.2	9.9	10.8
Managerial		0.4	0.5	0.2
Clerical	3.1	3.2		3.0
Sales		29.7	13.1	56.9
Service		4.0	5.0	2.5
Farmers etc		33.4	39.5	23.4
Production		9.3	13.7	2.2
Craftsmen		0.6	0.9	-
Transport	6.8	10.5		0.6
Not stated		2.4	3.7	0.4
TOTAL		100.0	100.0	100.0

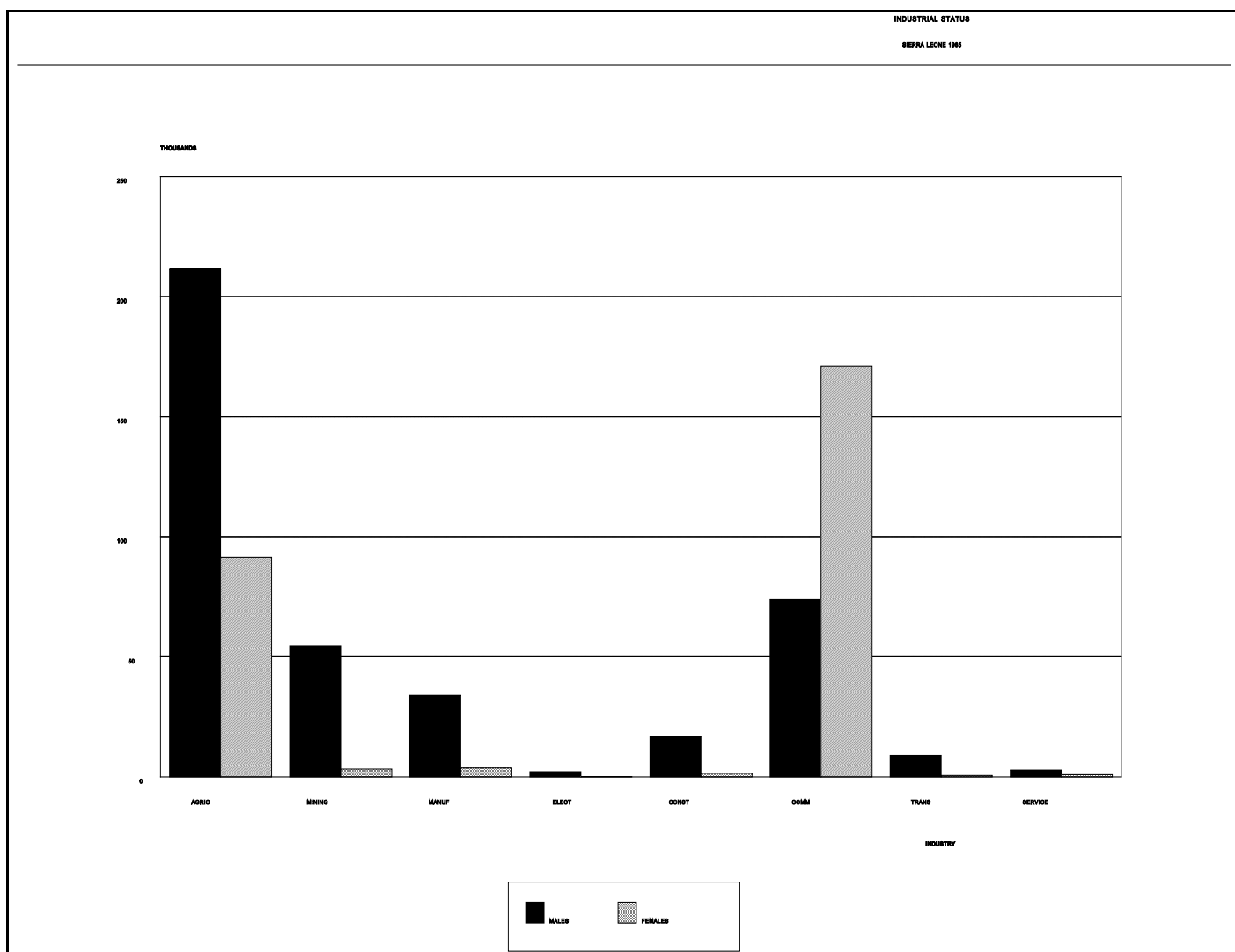
It can be seen that the most popular occupation for the country is farming, fishing etc; this occupies a third of the population in the cash-earning category. This is also the major occupation for males; for females however sales is the predominant occupation, accounting for 56.9 per cent.

Sixty-three per cent of the cash-earning population are farmers and sales workers; for males the figure is 52.6 per cent whilst for females 80.3 per cent of the cash-earning group fall under these two categories. (See Table A8.4)

### 8.7 The Industrial status of the cash-earning population.

An attempt was made to classify the cash-earning population by industry and age group. In the analysis of industrial status, it must be emphasised that there may be errors in the reporting of industry. One possible source of this type of error arises from the fact that the question on industrial status is invariably answered by people other than the workers themselves; there may therefore be instances of the wrong industry or occupation being reported. A labourer may for instance be classified as a mason or a clerk as a managerial worker.

In assessing the number of persons engaged in various industries, there is usually a problem in reporting dual activities. According to the instructions given, an individual should be classified according to his industry, occupation and his employment status in the job reported as his main activity. This will result in under-estimating participation in activities which are usually subsidiary and over-estimating the "main activities". In the analysis that follows it must be borne in mind that for 11.7 per cent of the population the industry was classified as "not described" while for 0.1 per cent the industry was "not stated". So in effect for 11.8 per cent of the population the industrial activity they are engaged in, is not known.



For the country as a whole the most popular industrial activity is agriculture and fishing - 39.4 per cent of the population is involved in this activity. The next most popular activity is commerce with 31.8 per cent. The share of the other industrial sectors is as follows:- mining and quarrying 7.5 per cent, manufacturing 4.9 per cent, construction 2.4 per cent, Transport and Communication 1.2 per cent, services 0.5 per cent and electricity, gas and water 0.3 per cent.

The industrial activity pattern of males differ significantly from those of females, whilst agriculture and fishing is the most popular activity with the males, commerce is by far the most popular activity practised by females. It must be pointed out however that for a substantial number of males 14.9 per cent, industrial activity was not described and for 0.2 per cent it was not stated. For these two categories, the figure recorded for females was 6.4 per cent and 0.1 per cent respectively.

44.4 per cent of males were engaged in agriculture/fishing, 15.5 per cent were engaged in commerce, 11.5 per cent in mining and quarrying, 7.1 per cent in manufacturing, 3.5 per cent in construction, transport and services had only very few persons. (See Table A8.5).

Females were predominantly in the agriculture and fishing and commerce sectors. - 89.9 per cent were engaged in these activities - 58.6 per cent were engaged in commerce and 31.3 per cent in agriculture and fishing; The other sectors had very few participants.

These figures should only be taken as a rough indicator of the activities pursued by the population, for as can be seen in Table A8.5 there was a large number "not described" and "not stated". A scrutiny of the figures also reveals that a high percentage of those under these two categories fall in the age groups with very high activity rates.

With the exception of the Western Area, the predominant economic activity in all the provinces is agriculture and fishing, followed by commerce. In the Southern Province for instance 47 per cent of the cash-earning population are engaged in farming and 28.5 per cent in commerce. For the Eastern Province the figures are 37 per cent and 29.8 per cent. For the Northern Province these are 55.5 per cent and 28 per cent. In the Western Area there is a departure from this pattern with 43 per cent engaged in commerce and 13 per cent engaged in agriculture. In fact in the Western Area, those with activities not described outnumber those in the agriculture sector! - 25 per cent were registered in this category. It is also observed that for the Eastern Province even though agriculture is the predominant activity, its share is much lower when compared with figures for the Northern and Southern Province, this can be explained by the fact that mining plays an important role in this region involving 17.4 per cent of the cash-earning population.

It can be seen that at the district level, with the exception of Bonthe district, commerce is the predominant activity of women. In the Bonthe district women are predominantly employed in agriculture.

## 8.8 Educational Attainment and Occupation of the Cash-earning Population

Assessing the relationship of the level of educational attainment with occupation, it can be seen that those with no schooling whatsoever mostly work as farmers and salesmen i.e. 41 per cent and 32.1 per cent respectively. Ten per cent of the people with no schooling are production workers (Table A8.6).

For primary school drop outs, there is a slight variation in occupational patterns when compared with those who had never been to school. The main difference is a smaller percentage of farmers and production workers. For farmers the figure dropped from 41 per cent to 23 per cent. All other occupations showed increased share when these two categories are compared.

Generally, the percentage of people who work in a professional capacity, tended to increase with education. The same was true for those who worked in a managerial capacity. The reverse was observed for farmers and fishermen and sales men where the general trend was for participation to decrease as educational attainment progressed. For clerical workers and transport workers, there was a general rise in participation as education increased, reached a peak, and decreased as educational attainment increased further. For the clerical occupation, the peak was achieved at the attainment of secondary education whilst for transport workers, the peak was attained at the completion of primary education.

For males with no schooling, the two most important occupations are farmers and fishermen and production workers, they account for 65 per cent of the workers in this category. Another important occupation for males with no schooling is "sales workers", who account for 13.8 per cent of males in this category. For females with no schooling, the occupational groups sales, farmers and fishermen account for 88 per cent of the workers. For women in this category, the third most important occupation is the professional group. It must be noted that this category - never at school accounts for 69.5 per cent of the male cash-earning population and 77 per cent of the female cash-earning population.

For males as well as females, the percentage of people who work in a professional capacity increased as educational attainment increases; this is also true for both sexes for people in the managerial category. For women in the first three levels of educational attainment however - never at school, some primary and completed primary, those in the managerial category is negligible.

## 8.9 Educational Attainment and Industry of the Cash-Earning Population

In this section the effect of educational attainment on industrial employment will be investigated. The pattern is more or less the same as obtained for the occupational groups. Those with no schooling, predominantly work in agriculture and fishing and commerce. (These sectors employ 80 per cent). For primary school drop outs these two sectors are still the most important with regard to employment, although there is a drop in participation rate for the agricultural sector. 35.8 per cent of primary school drop-outs work in this sector, compared to 46.1 per cent of those never at school. For commerce there is an increased participation between the two educational levels - 33.9 per cent for those never at school, compared with 35.2 percent for primary school drop-outs. (Table A8.8)

For the agriculture and fishing sector the percentage of people employed decreases with educational attainment, although the trend is broken with a slight percentage increase for people with higher education.

The reverse is observed for the services, transport and communications and construction sectors where participation increases with educational attainment but the trend is reversed for people with higher education. For manufacturing and commerce, participation increased with the first two or three stages of educational attainment and decreases as higher education is approached. There does not appear to be any relationship between persons working in the mining and quarrying and their educational attainment. The same appears to hold for electricity, gas and water.

For males, the variation of educational attainment with industry is more or less the same as that experienced for both sexes. There is however a different pattern in the commerce sector where participation rate decreases with educational attainment at the first two levels, increases at the following two levels and drops again thereafter.

## 8.10 Cash-Earning Population by Occupation and Industry

As can be expected there is a high concentration of certain occupations in certain industries. Using the figures for the whole country, it can be seen, for example, that 82 per cent of workers in the agriculture industry are farmers, 90 per cent of those in the mining industry are production workers and 92 per cent of people in the commerce sector are sales workers. In the electricity, gas and water industry however, 50 per cent are employed as transport workers (See table A8.7). The construction industry also registers a high percentage of people who are transport workers - 35 per cent. In fact this is the highest single occupation registered in this industry. The occupation of an unusually high proportion 35 per cent are classified as "not stated". Other occupations of importance in this industry are clerical workers who account for 15 per cent of the workers and service workers who account for 6.8 per cent. One would have expected to see a higher percentage of production workers or labourers in this sector; as is generally known however there are always many problems getting information relating to this sector.

The occupation of workers in the various industries also varies between the sexes. In what follows we shall see that women mostly perform a clerical role in some industries. In the agriculture and fishing industry 86 per cent of the males employed are farmers/fishermen compared with 73.5 per cent for females. The percentage of female workers in the professional category, in this industry is 24.2 whilst that for males is 10 per cent.

For the mining sector, even though males outnumber females in the ratio of approximately 17:1, the percentage of workers of both sexes

falling under the major occupation in the sector - production workers - are more or less the same; 91 per cent for females and 90 per cent for males.

56 per cent of females engaged in the manufacturing sector are production workers; for males the figure is 43 per cent. An analysis of the electricity and water sector reveals that some 74 per cent of the females engaged in this industry are clerks. For the males 53 per cent of the employees in this industry are transport workers. A similar pattern is seen in the construction sector where 80 per cent of the females employed in this sector work in a clerical capacity. In commerce 82.5 per cent of males in this industry, and 96.5 per cent of females are sales workers.

The services sector includes a more even spread of occupations - as far as the males are concerned - than the other sectors. For instance 30 per cent of the males in the services sector are clerks, 29 per cent are service workers and 13 per cent are transport workers. For the females, occupations in this sector are heavily weighted in favour of clerical workers who account for 72 per cent of the total employment in the sector.

Looking at the employment of people with various occupations in the different industries, by regions and by sex, indicates that in all the provinces, males in the cash-earning category outnumber females by a significant amount. For the Southern Province these are 67 per cent more males than females in this category. For the Eastern and Northern Provinces, the figures are 115 per cent and 43 per cent respectively. For the Western Area, the figure is 33 per cent. Because of this marked difference in size of employment between the sexes, one is not surprised to see that in some sectors e.g. electricity and water, the percentage of women working in the sector in some provinces is very low. In the Southern Province of the 173 personnel employed in this sector only 2 are females; one of these works in a professional category, and the other in a clerical category. With the exception of the Western Area, nearly all the females engaged in this sector do so as clerks or transport workers.

In the mining and quarrying industry, the level of women participation in production varies between the provinces. In the Northern Province, 96 per cent of the women employed in this sector are involved with production. The figures for the Eastern and Southern Provinces are 92 per cent and 63 per cent respectively while the figure for the Western Area is 21 per cent. In the Western Area 29 per cent of women are employed in this industry in a clerical capacity.

### 8.11 Conclusion

1. As can be seen from the foregoing analysis, a high percentage of the labour force is uneducated. There is therefore the need to actively pursue a strategy of human resource development.
2. Emphasis should also be given to the development of the productive sectors, modern manufacturing in particular. Employment in this sector is very low and it is envisaged that growth in this sector will absorb underutilised labour from the agricultural sector. Of course some training may also be necessary. Especially labour intensive activities like building infrastructure, housing and other socio-economic facilities and amenities will not only boost employment but it will also improve the quality of life of the people.
3. In planning the next census, special effort must be made to ensure that concepts and definitions are carefully agreed on so that future censuses could be fully comparable.

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Table A8.1 POPULATION AGED 10 + BY ADMINISTRATIVE DISTRICT AND TYPE OF ECONOMIC ACTIVITY□

	CASH EARNING	NON ACTIVE	FAMILY FARM	PERIODIC PIECE	LOOKING JOBS	NOT FOR WORK	OTHERS	STATED	TOTAL
SIERRA LEONE	768141	614509	677904	78245	23023	17719	1374	2180915	
SOUTHERN PROVINCE	145371	150562	152669	13172	2418	4807	484	469483	
Bo District	57665	60333	60055	1239	1388	3833	143	184656	
Bonthe District	24709	19728	17238	2744	199	598	143	65359	
Moyamba District	42474	41236	48312	4700	515	221	124	137582	
Pujehun District	18178	26957	27011	4323	303	104	74	76950	
Sherbro Urban District	2345	2308	53	166	13	51	0	4936	
EASTERN PROVINCE	231342	184917	165905	24330	2255	2856	501	612106	
Kailahun District	48189	52615	50449	6080	430	497	246	158506	
Kenema District	89079	68992	61960	8130	957	1145	125	230388	
Kono District	94074	63310	53496	10120	868	1214	130	223212	
NORTHERN PROVINCE	231618	177286	356243	22597	1315	1066	273	790398	
Bombali District	51530	46131	74520	5087	512	262	81	178123	
Kambia District	28212	28480	54311	3586	142	124	40	114895	
Koinadugu District	35484	20083	61335	3531	98	127	19	120677	
Port Loko District	68631	47752	89919	6493	333	346	70	213544	
Tonkolili District	47761	34840	76158	3900	230	207	63	163159	
WESTERN AREA	159810	101744	3087	18146	17035	8990	116	308928	
Freetown	137919	91385	1457	15867	16475	8064	110	271277	
Western Area Rural	159810	101744	3087	18146	17035	8990	116	308928	

TABLE A8.2 POPULATION AGED 10+ BY SEX, EDUCATION AND CASH EARNING STATUS

	CASH EARNING	STATUS							
EDUCATION	SELF- EMPLOYEE	NON-CASH EMPLOYED	NOT EARNING	TOTAL STATED					
SIERRA LEONE BOTH SEXES									
	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT				
NEVER AT SCHOOL	115445 48.7	440236 82.9	1018171 72.1	506 41.3	1574358 72.2				
SOME PRIMARY	21170 8.9	38020 7.2	208312 14.8	64 5.2	267566 12.3				
ALL PRIMARY	7334 3.1	10003 1.9	22323 1.6	6 0.5	39666 1.8				
SOME SECONDARY	38255 16.1	31150 5.9	129111 9.1	23 1.9	198539 9.1				
ALL SECONDARY	37921 16.0	8146 1.5	23182 1.6	12 1.0	69261 3.2				
HIGHER	14942 6.3	2329 0.4	7917 0.6	5 0.4	25193 1.2				
NOT STATED	1839 0.8	1351 0.3	2532 0.2	610 49.8	6332 0.3				
TOTAL	236906 100.0	531235 100.0	1411548 100.0	1226 100.0	2180915 100.0				
MALES									
NEVER AT SCHOOL	81527 47.1	249364 82.2	359025 60.9	236 32.0	690152 64.7				
SOME PRIMARY	15785 9.1	20731 6.8	117208 19.9	42 5.7	153766 14.4				
ALL PRIMARY	6139 3.5	5522 1.8	12300 2.1	3 0.4	23964 2.2				
SOME SECONDARY	28724 16.6	18537 6.1	78780 13.4	13 1.8	126054 11.8				
ALL SECONDARY	27999 16.2	6236 2.1	14923 2.5	9 1.2	49167 4.6				
HIGHER	11294 6.5	1939 0.6	5359 0.9	4 0.5	18596 1.7				
NOT STATED	1581 0.9	959 0.3	1465 0.2	430 58.3	4435 0.4				
TOTAL	173049 100.0	303288 100.0	589060 100.0	737 100.0	1066134 100.0				
FEMALES									
NEVER AT SCHOOL	33918 53.1	190872 83.7	659146 80.1	270 55.2	884206 79.3				
SOME PRIMARY	5385 8.4	17289 7.6	91104 11.1	22 4.5	113800 10.2				
ALL PRIMARY	1195 1.9	4481 2.0	10023 1.2	3 0.6	15702 1.4				
SOME SECONDARY	9531 14.9	12613 5.5	50331 6.1	10 2.0	72485 6.5				
ALL SECONDARY	9922 15.5	1910 0.8	8259 1.0	3 0.6	20094 1.8				
HIGHER	3648 5.7	390 0.2	2558 0.3	1 0.2	6597 0.6				
NOT STATED	258 0.4	392 0.2	1067 0.1	180 36.8	1897 0.2				
TOTAL	63857 100.0	227947 100.0	822488 100.0	489 100.0	1114781 100.0				



TABLE A8.3 PERSONS AGED 10+ LOOKING FOR WORK/DOING SPECIFIC PIECE JOBS BY SEX, AGE AND LEVEL OF EDUCATION

EDUCATION	A G E																TOTAL
	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80+		
SIERRA LEONE TOTAL																	
NEVER AT SCHOOL	20678	11482		6320	5009	3226	2958	2458	2378	2399	2015	592	470	283	246	410	60924
SOME PRIMARY	3855	4060		1819	918	378	300	152	143	115	93	35	28	9	13	9	11927
ALL PRIMARY	155	1029		649	354	133	98	66	73	68	63	29	12	4	7	8	2748
SOME SECONDARY	243	3922		5208	2522	924	577	291	202	126	89	25	23	8	5	5	14170
ALL SECONDARY	32	1403		4889	2213	707	372	188	119	76	62	25	13	5	8	3	10115
HIGHER	2	44	229	249	173	92	65	50	20	29	6	2	2	0	0		963
NOT STATED	46	54	70	60	43	37	30	26	17	14	7	5	6	3	3		421
TOTAL	25011	21994	19184	11325	5584	4434	3250	2991	2821	2365	719	553	317	282	438		101268
MALES																	
NEVER AT SCHOOL	8586	5838		3816	2991	1830	1708	1318	1288	1078	855	250	209	129	111	136	30143
SOME PRIMARY	1836	2237		1179	628	274	225	117	114	83	71	20	17	3	7	7	6818
ALL PRIMARY	87	581		446	252	93	69	58	62	51	49	18	4	1	3	2	1776
SOME SECONDARY	133	1955		3118	1741	675	444	214	156	91	59	17	13	5	3	4	8628
ALL SECONDARY	25	729		3295	1793	568	319	155	101	63	39	19	7	1	5	1	7120
HIGHER	2	24	138	175	135	75	52	38	18	22	5	1	1	0	0		686
NOT STATED	32	36	53	47	36	28	25	17	8	11	4	4	0	1	1		303
TOTAL	10701	11400	12045	7627	3611	2868	1939	1776	1392	1106	333	255	140	130	151		55474
FEMALES																	
NEVER AT SCHOOL	12092	5644		2504	2018	1396	1250	1140	1090	1321	1160	342	261	154	135	274	30781
SOME PRIMARY	2019	1823		640	290	104	75	35	29	32	22	15	11	6	6	2	5109
ALL PRIMARY	68	448		203	102	40	29	8	11	17	14	11	8	3	4	6	972
SOME SECONDARY	110	1967		2090	781	249	133	77	46	35	30	8	10	3	2	1	5542
ALL SECONDARY	7	674		1594	420	139	53	33	18	13	23	6	6	4	3	2	2995
HIGHER	0	20	91	74	38	17	13	12	2	7	1	1	1	0	0		277
NOT STATED	14	18	17	13	7	9	5	9	9	3	3	1	6	2	2		118
TOTAL	14310	10594	7139	3698	1973	1566	1311	1215	1429	1259	386	298	177	152	287		45794

Table A8.4 Cash-Earning Population aged 10+ by Sex, Age and Occupation, Sierra Leone 1985

AGE	PROFESS- IONAL	MANA- RIAL	CLER- ICAL	SALES	SERVICE FISHERMEN	FARMERS UCTION	PROD- LABOURERS	CRAFTSMEN /COMMUN.	TRANSPORT STATED	NOT	TOTAL
MALES											
10 - 14	6237	2	31	1650	142	2682	1153	124	714	93	12828
15 - 19	4327	19	240	4119	679	6524	6495	295	2875	527	26100
20 - 24	4642	81	1651	6692	2171	11494	10388	394	5681	1584	44778
25 - 29	7330	223	3136	10092	3379	19555	13355	522	8744	2543	68879
30 - 34	6440	305	2773	8680	3034	22555	9366	481	7538	2478	63650
35 - 39	5743	366	2498	9143	3380	27298	8225	602	7829	2589	67673
40 - 44	3330	357	1507	6299	2488	24741	5021	398	4989	1874	51004
45 - 49	2900	403	1293	5673	2615	25984	4544	417	4904	1980	50713
50 - 54	1875	322	849	3619	1730	23113	2507	300	2589	1375	38279
55 - 59	1150	198	563	2588	1338	18074	1795	242	1809	1026	28783
60 - 64	1006	130	273	1480	923	2481	938	175	1056	658	9120
65 - 69	712	96	167	1003	737	1403	631	144	665	437	5995
70 - 74	450	55	98	536	461	831	340	104	391	243	3509
75 - 79	329	40	55	394	262	598	216	76	239	153	2362
80+	510	56	24	415	258	702	248	98	225	128	2664
TOTAL	46981	2653	15158	62383	23597	188035	65222	4372	50248	17688	476337
FEMALES											
10 - 14	5500	0	8	7378	403	1544	243	3	53	45	15177
15 - 19	4134	6	231	20977	722	5351	672	9	121	84	32307
20 - 24	4125	91	1844	25491	1166	6848	815	7	231	194	40812
25 - 29	4847	116	2749	29033	1192	8947	863	9	262	202	48220
30 - 34	3409	116	1700	22150	928	8756	693	12	214	141	38119
35 - 39	2482	127	992	19167	812	8547	635	8	156	117	33043
40 - 44	1836	101	535	12091	557	7835	405	4	124	86	23574
45 - 49	1350	69	291	9449	476	7177	374	6	119	77	19388
50 - 54	1097	51	219	6605	370	6623	355	5	107	73	15505
55 - 59	726	13	63	4559	229	4785	313	1	66	54	10809
60 - 64	649	14	41	3366	194	811	264	4	79	30	5452
65 - 69	438	7	9	2265	106	449	223	1	60	31	3589
70 - 74	293	3	8	1375	67	214	170	0	38	14	2182
75 - 79	218	4	7	916	51	121	131	1	22	13	1484
80+	489	1	8	1096	69	159	239	2	59	21	2143
TOTAL	31593	719	8705	165918	7342	68167	6395	72	1711	1182	291804

Table A8.5 Cash-Earning Population Aged 10+ by Sex, Age and Industry□

AGE	INDUSTRY												NOT TOTAL
	AGRICUL FISHING	MINING QUARRYING	MANUFAC- TURING	ELECTRIC GAS/WATER	CONSTRUC- TION	COMMERCE & COMMS	TRANSPORT	SERVICE DESCRIBED	NOT STATED				
-----													
MALES													
10-14	8808	932	810	7	63	1788	23	6	377	14	12828		
15-19	10325	5082	3023	57	326	4791	210	56	2192	38	26100		
20-24	13660	8558	4342	174	1440	8205	718	326	7275	80	44778		
25-29	21787	11126	5722	305	2600	12207	1439	524	13041	128	68879		
30-34	24448	7831	4483	291	2496	10386	1603	481	11531	100	63650		
35-39	28895	7085	4522	352	2527	10721	1540	458	11470	103	67673		
40-44	25833	4405	2853	251	1795	7345	1037	335	7063	87	51004		
45-49	26922	4069	2797	271	1743	6680	969	291	6896	75	50713		
50-54	23837	2248	1651	184	1311	4143	585	187	4085	48	38279		
55-59	18548	1524	1284	142	962	3032	394	84	2776	37	28783		
60-64	3197	767	829	81	640	1769	205	56	1561	14	9119		
65-69	1909	473	608	42	448	1190	137	34	1144	10	5995		
70-74	1206	216	429	27	226	640	64	20	673	9	3510		
75-79	868	142	269	5	134	472	30	16	419	7	2362		
80+	1177	132	360	6	103	466	22	13	378	7	2664		
TOTAL		211420	54590	33982		2195	16814	73835	8976	2887	70881	757	476337
FEMALES													
10-14	7025	194	102	0	6	7481	5	2	344	18	15177		
15-19	9235	496	294	5	44	21370	16	26	800	22	32308		
20-24	9578	568	454	25	379	26303	93	160	3205	46	40811		
25-29	11757	621	503	38	539	29746	156	244	4569	47	48220		
30-34	10796	442	411	26	256	22696	121	191	2912	35	37886		
35-39	10030	388	343	20	154	19899	76	146	2202	18	33276		
40-44	8887	215	245	19	58	12466	51	92	1522	19	23574		
45-49	7979	153	249	12	39	9771	38	39	1103	5	19388		
50-54	7297	98	249	1	35	6860	35	32	887	11	15505		
55-59	5267	40	220	4	14	4770	10	8	470	6	10809		
60-64	1329	29	197	2	2	3541	8	8	333	3	5452		
65-69	809	17	164	0	4	2403	1	1	185	5	3589		
70-74	493	7	117	0	1	1466	4	2	93	0	2183		
75-79	324	5	82	0	4	984	1	0	80	4	1484		
80+	628	9	140	1	1	1258	0	3	99	3	2142		
TOTAL		91434	3282	3770		153	1536	171014	615	954	18804	242	291804

Table A8.6 Cash-Earning Population Aged 10+ by Sex, Occupation and Educational Attainment□

O C C U P A T I O N											
EDUCATION	PROFESSIONAL	MANAGERIAL	CLERICAL	SALES	SERVICE	FARMERS	PRODUCTION	CRAFTMEN	TRANSPORT	NOT STATED	TOTAL
SIERRA LEONE ( BOTH SEXES)											
NEVER AT SCHOOL	32262	540	1874	178232	15513	228445	55493	3498	27670	12154	555681
SOME PRIMARY	8409	104	766	19790	2677	13563	6236	341	5844	1460	59190
ALL PRIMARY	1543	88	646	5592	1542	3022	1490	117	2666	631	17337
SOME SECONDARY	10454	340	6517	17725	6712	7879	6374	306	10375	2723	69405
ALL SECONDARY	13616	1112	12665	5392	3866	2019	1462	137	4285	1512	46066
HIGHER	11799	1158	1200	859	344	919	216	27	564	186	17272
NOT STATED	491	30	195	711	285	355	346	18	555	204	3190
TOTAL	78574	3372	23863	228301	30939	256202	71617	4444	51959	18870	768141
MALES											
NEVER AT SCHOOL	15047	507	1725	45838	11850	164050	50224	3451	26696	11503	330891
SOME PRIMARY	5096	96	622	4355	1903	11157	5830	338	5762	1357	36516
ALL PRIMARY	1072	85	552	1419	1164	2675	1358	114	2632	590	11661
SOME SECONDARY	6701	247	3451	6041	4997	7101	5962	297	9998	2466	47261
ALL SECONDARY	9870	774	7840	3699	3193	1934	1312	129	4067	1417	34235
HIGHER	8811	919	810	675	265	812	201	25	547	168	13233
NOT STATED	384	25	158	356	225	306	335	18	546	187	2540
TOTAL	46981	2653	15158	62383	23597	188035	65222	4372	50248	17688	476337
FEMALES											
NEVER AT SCHOOL	17215	33	149	132394	3663	64395	5269	47	974	651	224790
SOME PRIMARY	3313	8	144	15435	774	2406	406	3	82	103	22674
ALL PRIMARY	471	3	94	4173	378	347	132	3	34	41	5676
SOME SECONDARY	3753	93	3066	11684	1715	778	412	9	377	257	22144
ALL SECONDARY	3746	338	4825	1693	673	85	150	8	218	95	11831
HIGHER	2988	239	390	184	79	107	15	2	17	18	4039
NOT STATED	107	5	37	355	60	49	11	0	9	17	650
TOTAL	31593	719	8705	165918	7342	68167	6395	72	1711	1182	291804

Table A8.7 Cash-Earning Population Aged 10+ by Sex Industry and Educational Attainment□

I N D U S T R Y													
EDUCATION	AGRIC FISHING	MINING QUARRYING	MANUFAC- TURING	ELECTRIC GAS/WATER	CONSTRUC- TION	COMMERCE & COMMS	TRANSPORT	SERVICE DESCRIBED	STATED	NOT TOTAL	NOT		
-----													
MALES													
NEVER AT SCHOOL	175121	40055	23999	792	8308	52751	3907	652	24909	397	330891		
SOME PRIMARY	15720	4892	3104	172	1252	5106	761	137	5301	71	36516		
ALL PRIMARY	3337	1205	1052	112	731	1758	435	116	2888	27	11661		
SOME SECONDARY	11149	5929	3543	498	3333	7596	1808	558	12746	101	47261		
ALL SECONDARY	3946	1829	1759	454	2661	5246	1727	957	15549	107	34235		
HIGHER	1653	331	332	98	382	948	237	431	8793	28	13233		
NOT STATED	494	349	193	69	147	430	101	36	695	26	2540		
TOTAL	211420	54590	33982	2195	16814	73835	8976	2887	70881	757	476337		
FEMALES													
NEVER AT SCHOOL	81012	2783	2512	6	112	135582	73	14	2558	138	224790		
SOME PRIMARY	5457	229	227	1	47	15761	9	14	907	22	22674		
ALL PRIMARY	659	32	105	2	28	4296	9	6	537	2	5676		
SOME SECONDARY	3058	118	539	35	670	12334	159	159	5040	30	22142		
ALL SECONDARY	790	83	334	98	639	2389	317	612	6533	37	11832		
HIGHER	357	28	44	10	30	283	46	146	3089	7	4040		
NOT STATED	101	9	9	1	10	369	2	3	140	6	650		
TOTAL	91434	3282	3770	153	1536	171014	615	954	18804	242	291804		

Table A8.8 Cash-Earning Population Aged 10+ by Sex, Occupation and Industry

INDUSTRY											
OCCUPATION	AGRIC FISHING	MINING QUARRY	MANUFAC- TURING	ELECTRIC. GAS/WATER	CONSTRUC- TION	COMMERCE COMMUNIC	TRANSPORT	SERVICE DESCRIBED	NOT STATED	NOT	TOTAL
SIERRA LEONE											
BOTH SEXES											
PROFESSIONAL	43438	404	375	170	500	573	599	375	32082	58	78574
MANAGERIAL	195	74	170	43	355	361	134	306	1722	12	3372
CLERICAL	2451	524	845	410	2795	2312	1827	1550	11032	117	23863
SALES	772	485	342	15	46	226043	64	187	328	19	228301
SERVICE	1223	1259	562	193	1254	5275	902	897	19289	85	30939
FARMERS	249253	106	593	13	160	5131	38	41	837	30	256202
PRODUCTION	370	51945	16821	11	173	1744	65	11	449	28	71617
CRAFT & LABOUR	189	38	2919	8	140	113	20	13	1000	4	4444
TRANSPORT	1912	2328	14035	1170	6500	2328	5324	390	17842	130	51959
NOT STATED	3051	709	1090	315	6427	969	618	71	5104	516	18870
TOTAL	302854	57872	37752	2348	18350	244849	9591	3841	89685	999	768141
MALES											
PROFESSIONAL	21285	347	326	162	450	471	555	323	23010	52	46981
MANAGERIAL	160	64	144	32	335	259	110	216	1326	7	2653
CLERICAL	1579	475	640	297	1571	1491	1448	863	6717	77	15158
SALES	355	392	274	11	22	60911	44	149	213	12	62383
SERVICE	1133	1232	526	188	1227	2254	834	840	15290	73	23597
FARMERS	182031	87	447	12	155	4548	34	39	658	24	188035
PRODUCTION	282	48964	14739	10	169	636	63	9	325	25	65222
CRAFT & LABOUR	184	36	2893	8	138	96	19	10	984	4	4372
TRANSPORT	1817	2296	13047	1162	6416	2250	5262	375	17499	124	50248
NOT STATED	2594	697	946	313	6331	919	607	63	4859	359	17688
TOTAL	211420	54590	33982	2195	16814	73835	8976	2887	70881	757	476337
FEMALES											
PROFESSIONAL	22153	57	49	8	50	102	44	52	9072	6	31593
MANAGERIAL	35	10	26	11	20	102	24	90	396	5	719
CLERICAL	872	49	205	113	1224	821	379	687	4315	40	8705
SALES	417	93	68	4	24	165132	20	38	115	7	165918
SERVICE	90	27	36	5	27	3021	68	57	3999	12	7342
FARMERS	67222	19	146	1	5	583	4	2	179	6	68167
PRODUCTION	88	2981	2082	1	4	1108	2	2	124	3	6395
CRAFT & LABOUR	5	2	26	0	2	17	1	3	16	0	72
TRANSPORT	95	32	988	8	84	78	62	15	343	6	1711
NOT STATED	457	12	144	2	96	50	11	8	245	157	1182
TOTAL	91434	3282	3770	153	1536	171014	615	954	18804	242	291804

## HOUSEHOLD AND HOUSING CHARACTERISTICS

J.L.K. MUANA, K.V. RAMACHANDRAN and H.B.S. KANDEH

9.1 Introduction

During the 1985 National Population and Housing Census, data were collected, among others, on household and housing characteristics. On household characteristics, data were collected on the Heads of Households by age, sex, economic activity and marital status. In addition, there was a question on relationship of members of household to the head, but apparently, it was not tabulated. Regarding the institutional and homeless population, some information was collected but only their numbers were made available and no tabulation was prepared. However, the number was too small and for all practical purposes, the private household population which constituted 99.64% of the population is the one being analysed in this chapter. For all private households, the housing characteristics data collected included types of toilet facilities; sources of drinking water; fuel used for cooking and lighting; materials of construction of wall, floor and roof of the housing units and the methods of acquisition of dwelling units.

The analysis includes a review of the existing data and information sources on the household and housing characteristics in Sierra Leone, evaluate the quality of the data collected, examine the policy implications, and try to indicate what the future household and housing characteristics that would be useful for policy and planning.

Before proceeding with the main purpose of the chapter, it is first necessary to define certain concepts used in the chapter and then justify the carrying out of the analysis.

- (a) Household: A structure may house a large number of people, some of whom are related and others who are not. Even people who are related may live largely separately preparing their own food and organizing their budget. Thus a structure may house one or more households. As used in this chapter, the term household means people who accept the authority of a single head (male or female) and contribute to a single budget to prepare meals and provide other essentials for the household. The household then, is not just the husband and wife and their own children but other people including the couples' immediate relatives (father and mother), near relatives (uncle, aunt, niece, nephew etc.) and sometimes even non related persons. The essential point is that the people accept the authority of one person as the head of the household and they combine their resources to provide themselves with food and other household needs.
- (b) Head of Household: The person whom the members of the household accept as their head. He/She may be the sole provider for the household.
- (c) Dwelling Unit: This is a structurally separate and independent place of abode intended for or used as a living quarter. It can be a detached house, a villa, a flat, an apartment, a separate room or groups of rooms, a hut or a cabin, a shack or any other shelter occupied or available for living quarters. Apparently, even though in most cases a dwelling unit will also correspond with a housing unit, but there may be cases, especially in urban areas where several households live in separate dwelling units but within the same housing unit as in apartment houses, flats etc. The information collected in such cases in the census pertained rather to the housing unit than the individual dwelling. This distinction seem not to have been addressed in the data collection. Therefore the terms - housing unit and dwelling unit - have been used more or less with similar connotation .
- (d) Housing/Shelter: The term refers to the structure composed of the wall, roof, bed rooms etc., and the ancillary facilities and services (internal water supply, electricity supply, the kitchen and its cooking and storage equipments and toilet facilities) meant for the exclusive use of the household occupying the dwelling unit.
- (e) Housing Need: There are two types of housing need - accumulated and recurrent. The former refers to the housing that should be improved/provided to meet the basic housing requirements of the existing households who are inadequately accommodated. Recurrent need refers to the housing that should be provided for the households that will be formed in future.
- (f) Pan-body: This is a local term used to describe a dwelling unit whose walls and roof are constructed of corrugated iron sheet and other pan materials.
- (g) Informal Settlements: These are settlements that have developed spontaneously at very unfavourable sites, for low income housing development, in Freetown. The settlements are not squatter settlements as land tenure can be both legal and illegal and housing development also can be legal and illegal.

The analysis of the household and housing characteristics data will serve three basic purposes. First, it will provide, for the first time, a full picture of the housing situation in Sierra Leone. Prior to the 1985 national population and housing census only a partial picture of the housing situation in Sierra Leone has been presented by the sample household surveys that had been conducted by the Central Statistics Office, between 1968 and 1969.

Secondly the analysis will provide the data and information which policy-makers can use to make well-informed decisions on what should be the feasible housing policy and programme for Sierra Leone. The descriptive analysis of the data will pin-point the problems and will give the clues about which policies will work best.

Thirdly, the analysis will prove a valuable source of data and information on household and housing characteristics in Sierra Leone for not only the general public but national and international scholars, researchers and consultants. As will be noted later, very little literature exist on the housing situation in Sierra Leone, due perhaps to the lack of data. The available data and information will remedy this situation.

## 9.2 Existing Information and Literature

### 9.2.1 The Data Base

The existing data base on household and housing characteristics in Sierra Leone is weak. The 1963 and 1974 National Population Censuses collected data on household characteristics but not on housing characteristics. Thus, apart from the housing data collected during the 1985 National Population and Housing Census, the only sources of data on housing are the sample household surveys. And even the meagre household data was neither tabulated nor analysed.

Between 1968 and 1969 the Central Statistics Office (C.S.O.) conducted sample household surveys on Household Characteristics and Housing Conditions in Freetown, that is, the city and other "urban" centres (Kissy, Wellington, Murray Town, Wilberforce, Aberdeen and Lumley), and in selected urban and rural settlements in the provinces. During the surveys, data collected on the dwelling unit characteristics included:

- type, construction, age, condition and uses of structure;
- number of rooms used for living space;
- tenure, rent or rental value;
- facilities available;
- fuel used for cooking; and
- method of refuse disposal

For each member of the household, information recorded related to:

- family relationship, sex, age, tribal affiliation, marital status and education; and
- occupation, industry, income and work status of all adult members.

No other surveys on household characteristics and housing conditions were conducted again by the C.S.O. though sample household surveys on household expenditure were conducted.

Consultants, students and researchers have also been carrying out sample household surveys on the housing condition and the socio-economic characteristics of households. But the surveys have been confined to mainly Freetown. Apart from the survey conducted in 1986 by Jon Wegge among 805 lower income households spread throughout Freetown, all the other surveys have been carried out in small geographic areas such as Kroo Bay, Susan's Bay, George Brook, Brookfields and in peri-urban areas such as Wellington and Kissy. The objectives of each of the surveys dictated the choice of the indicators for data collection.

In essence, the existing data on household and housing characteristics at the provincial level are limited and the available data are out-of-date. On the contrary, fairly adequate and recent data are available on the household and housing characteristics in Freetown. But the data are of limited area and indicator coverage.

### 9.2.2 The Literature on Housing

While a fair amount of literature exist on the household and housing characteristics in Freetown, there is dearth of literature on the household and housing characteristics in urban and rural areas in the provinces. Apart from Muana (1974), study on housing in the provinces has been a neglected field of study. The literature that exist on housing in Freetown are the reports of United Nations consultants/missions (Hanson, D. 1969; Fitchett, R.E. 1972; Patel, C.B. 1976/1977 and Wegge, Jon, 1986) dissertations written by Fourah Bay College students (Carew, H. 1977; Ewulo, S.D. 1985; Collier, A.O.U., 1988), papers presented at national seminars and workshops (Muana, J.L.K., 1986; the Sierra Leone Housing Corporation, 1986; Thomas, A.C., 1985; and Campbell, E. 1977) and special studies undertaken for United Nations and other agencies (Forde, E.R.A. 1991 and Muana, J.L.K. 1991). On the whole, very few of these have been published.

## 9.3 The Quality of the Household and Housing Data

As mentioned earlier, an important and useful information regarding households is the composition of households. This would have been available, if the information on relationship of members to head had been tabulated by age, sex and marital status. Another vital information pertains to the non private households i.e., the institutional and homeless population. But since their number is reported to be small ( only .36 percent ), it may be considered that it may not pose a serious drawback.

However, the available data cover most of the indicators that are normally used in collecting data on household and housing characteristics during censuses and sample household surveys. But certain indicators on occupancy levels ( vacancy, doubling up, over crowding),



residential / non residential nature of buildings and structures and their use, conversion of residential to non residential uses and vice versa, structural conditions of the dwelling units ( date of construction / age , dilapidation and other conditions ) were not included. As will be noted later, the unavailability of data on these indicators will make it difficult to assess the housing conditions and estimate the housing needs. Never-the-less, considering the fact that this is the first time a housing census has been conducted, the available data can be considered to be adequate. Improvements on the present situation can be made in future housing censuses by including additional housing indicators on the housing questionnaire.

Another important fact to be mentioned here is that the census was a de facto count which is not the best for study of migration and housing. It would be useful if an additional question on usual residence or information on absentees and visitors were included in the census so that both the de facto and de jure counts could be obtained .

As noted already, no housing data were collected during the 1963 and the 1974 National Population Censuses. No census data, therefore, exists with which to compare the housing data from the 1985 National Population and Housing Census. It is also not possible to compare the housing data from the sample household surveys already referred to and the 1985 National Population and Housing Census as the data from the former sources are of limited area coverage, whereas the latter is nation-wide.

The 1963 and 1974 National Population Censuses collected data on Household characteristics. But the indicators used during the two previous censuses are different from those used during the current census. Data were collected on the economic status of heads of households during the two previous censuses but the data refer to the occupational status and not the actual economic activity the head of household was engaged in. Data were not tabulated by the marital status of heads of households during the 1963 and 1974 population Censuses.

In essence, comparison of data on household and dwelling characteristics between the 1963 and 1974 Population and the 1985 Population and housing Censuses is not practicable. The comparison could be carried out in future when similar household and dwelling units characteristic indicators are used in subsequent censuses.

#### 9.4 Households

In the census, a total of 3222901 persons were enumerated of which only 11662 were reported to be living in institutions or were homeless. The private household population therefore constituted 3211239 persons living in 485711 households indicating that 99.64 percent of the population of Sierra Leone lived in private households with an average household size of 6.61, which is quite large. Since the composition of the household is not available, it is not possible to identify the reason for this rather large household size. That is, it is not clear whether the large size is due to the high fertility or is it due to non relatives and distant relatives staying together in one household. The structure and composition of the household would have been a very important socio cultural indicator of living arrangements in the country which has been lost because of the non tabulation of the interesting and important data collected in the census.

##### 9.4.1 Household Size

At the national level, 31.6 per cent of the households are of 1-3 person households, 28.6 per cent 4-6 persons, 18.3 per cent 7-9 persons and 21.5 per cent 10 and more persons. The average household size is 6.6 (Table 9.1).

Variations from the national household size occur only in the Bombali, Kambia, Port Loko and Tonkolili Districts where the average household sizes are above the national average household size and 30 per cent of the households have 10 and more persons per household. Small household size is naturally found in the urbanised parts and Freetown has the second lowest after Bonthe of 5.6 and the largest size of 8.4 is in Kambia. The districts in the Northern Province have larger household sizes with the province thereby having the largest average of 7.7 - a sixth larger than the national average.

TABLE 9.1 PERCENTAGE DISTRIBUTION OF HOUSEHOLDS BY HOUSEHOLD SIZE  
TOTAL POPULATION, AVERAGE HOUSEHOLD SIZE AND REGIONS

DISTRICT PROVINCE	TOTAL NUMBER OF PERSONS IN HOUSEHOLD (H/HOLD SIZE)										TOTAL	AVERAGE	HOUSEHOLD POPULATION	HOUSEHOLD SIZE	
	1	2	3	4	5	6	7	8	9	10					
Bo	10.3	13.0	12.0	11.0	9.7	8.2	7.0	5.7	4.9	18.0	43,866	264,030	6.0		
Bonthe	9.6	13.4	12.7	12.0	10.6	8.8	7.4	5.9	4.4	15.2	16,825	95,569	5.6		
Moyamba	8.3	11.9	12.4	11.5	10.5	9.0	7.8	6.2	5.0	17.2	33,282	201,266	6.0		
Pujehun	10.2	13.6	13.0	11.6	9.8	7.9	6.7	5.7	4.3	17.2	18,668	111,244	5.9		
Sherbro	9.5	7.1	9.5	12.1	11.2	10.9	8.8	9.3	6.9	14.8	1,174	6,942	5.9		
SOUTHERN PROVINCE			9.6	12.8	12.4	11.4	10.1	8.5	7.2	5.9	4.8	17.2	113,815	679,051	6.0
Kailahun	8.1	11.0	11.4	10.6	9.4	8.8	7.0	6.4	5.4	21.9	35,566	236,678	6.6		
Kenema	11.6	11.4	12.0	11.2	9.6	8.0	6.6	5.3	4.5	19.6	52,781	333,678	6.3		
Kono	13.3	9.8	10.8	10.3	9.7	8.4	7.1	6.0	4.6	20.0	50,685	322,986	6.4		
EASTERN PROVINCE			11.3	10.7	11.4	10.7	9.6	8.3	6.9	5.9	4.8	20.0	139,032	893,342	6.4
Bombali	9.6	5.7	7.2	8.5	8.8	8.9	7.6	6.9	6.2	30.7	34,725	276,717	7.9		
Kambia	8.4	5.3	6.7	7.8	8.6	8.5	7.9	6.9	6.2	33.7	21,308	179,528	8.4		
Koinadugu	15.7	10.2	11.8	11.6	10.8	8.2	5.3	4.3	15.5	15.5	31,621	179,676	5.7		
Port Loko	12.4	5.9	7.4	7.9	8.1	7.7	7.0	6.4	5.6	31.5	29,441	325,377	8.1		
Tonkolili	14.2	5.4	6.6	7.6	7.9	7.3	7.0	5.8	5.6	32.5	29,441	243,246	8.3		
NORTHERN PROVINCE			12.3	6.5	8.0	8.7	8.8	8.1	7.2	6.2	5.5	28.6	146,536	1,204,544	7.7
Freetown	10.8	11.4	11.9	11.0	9.8	7.7	9.8	6.4	4.7	14.8	66,749	381,157	5.7		
Western Rural Area	11.1	10.9	11.7	11.7	10.7	8.7	7.6	5.9	5.0	16.7	8,928	53,297	6.0		
WESTERN AREA		10.8	11.3	11.9	11.8	11.0	9.6	7.7	6.3	4.7	15.0	75,677	434,454	5.7	
SIERRA LEONE		11.1	9.9	10.6	10.4	9.7	8.5	7.2	6.1	5.0	21.5	475,060	3,211,391	6.6	

#### 9.4.2 Head of Households by Age and Sex

Table 9.2 gives the sex composition of heads by district . Of the 479,018 heads, 83 per cent were male heads and 17 per cent female heads. There is not much regional variation in the distribution of heads of households by sex, but Kono District had the highest percentage of male headed households (88.3 per cent) and Sherbro the highest percentage of female headed households (37.4 per cent).

In terms of age, table 9.3 indicates that 61.6 per cent of all heads of households were 25 to 54 years old, 34 per cent were aged 55 years and above and only 4.4 per cent were 10 to 24 years old. Whereas the majority of the male heads of households were 25 to 54 years of age, one-third and one-quarter of the female heads were 10 to 24 and 55 years and above respectively. Freetown, Western Area Rural and Sherbro had the highest percentages of female heads in the age groups 55 and above.

TABLE 9.2 HEADS OF HOUSEHOLDS BY SEX  
SEX

REGIONS (DISTRICTS)	MALE		FEMALE		TOTAL HOUSEHOLDS	
	NO	%	NO	%	NO	%
BO	34,023	77.9	9,647	22.1	43,670	100.0
BONTHE	13,034	78.4	3,594	21.6	16,628	100.0
MOYAMBA	25,806	79.4	6,683	20.6	32,489	100.0
PUJEHUN	15,337	82.3	3,298	17.7	18,635	100.0
SHERBRO	743	62.6	438	37.4	1,172	100.0
SOUTHERN PROVINCE	88,943	79.0	23,660	21.0	112,594	100.0
KAILAHUN	28,224	80.5	6,815	19.5	35,039	100.0
KENEMA	45,587	87.7	6,400	12.3	51,987	100.0
KONO	44,115	88.3	5,859	11.7	49,974	100.0
EASTERN PROVINCE	117,926	86.1	19,074	13.9	137,000	100.0
BOMBALI	28,723	84.2	5,581	15.8	34,104	100.0
KAMBIA	17,940	85.0	3,169	15.0	21,109	100.0
KOINADUGU	24,393	77.3	7,152	22.7	31,545	100.0
PORT LOKO	33,200	84.3	6,205	15.7	39,405	100.0
TONKOLILI	24,959	85.1	4,370	14.9	29,329	100.0
NORTHERN PROVINCE	129,215	83.1	26,477	16.9	155,492	100.0
FREETOWN	53,334	81.8	11,828	18.2	65,162	100.0
WESTERN AREA RURAL	6,753	77.0	2,017	23.0	8,770	100.0
WESTERN AREA	60,087	81.3	13,845	18.7	73,932	100.0
SIERRA LEONE	396,171	82.7	83,056	17.3	479,018	100.0

#### 9.4.3 Headship Rates by Age and Sex

Table 9.4 gives the age and sex composition of heads and the headship rates . Clearly shown across all ages is the dominance of males as household heads. The headship rates per 1000 males increases from 5.2 per 1000 males in age group 10-14 years to 781 per 1000 males in the 65-69 year age group. In the case of females it increases from 3.4 per 1000 females in the 10-14 year age group to 237.0 per 1000 females in the 75-79 year age group.

TABLE 9.3 HEADS OF HOUSEHOLDS BY AGE AND SEX

REGIONS	ALL HEADS OF HOUSEHOLDS						MALE HEADS OF HOUSEHOLDS						FEMALE HEADS OF HOUSEHOLDS					
	AGE GROUPS						AGE GROUPS						AGE GROUPS					
	10- 24	25- 39	40- 54	55- 69	70+	TOTAL 24	10- 39	25- 54	40- 69	55- 70+	TOTAL 24 39	10- 54	25- 69	40- 70+	55- 70+	TOTAL		
BO	5.3	26.8	28.8	22.8	16.3	100.0	65.0	80.3	81.4	76.4	74.1 77.9	35.0	19.7	18.6	23.6	26.0	20.1	
BONTHE		4.6	26.1	28.5	22.3	18.4	100.0	71.4	81.8	81.1	77.4 72.3	78.4	29.6	18.2	18.9	22.6	27.7	21.6
MOYAMBA		4.0	25.0	29.4	23.9	17.7	100.0	74.2	83.8	81.9	76.3 74.6	79.4	25.6	17.2	18.1	23.7	25.4	11.6
PUJEHUN		3.4	24.7	28.7	24.1	19.0	100.0	74.0	86.2	84.9	79.9 77.9	82.3	26.0	13.8	15.1	20.1	22.1	18.7
SHERBRO		5.2	22.2	31.7	25.3	15.6	100.0	50.8	63.4	68.5	61.3 53.0	62.6	49.2	36.4	31.5	38.7	47.0	37.4
SOUTHERN PROVINCE		4.5	25.8	29.0	23.3	17.4	100.0	69.3	82.3	81.9	77.0 74.5	79.0	30.7	17.7	18.1	23.0	15.5	21.0
KAILAHUN		4.7	25.8	27.3	22.0	20.2	100.0	71.6	83.9	83.2	79.3 76.2	80.6	28.4	16.1	16.8	20.7	23.8	12.4
KENEMA		4.2	31.7	30.6	19.1	14.4	100.0	68.2	88.0	90.5	87.9 86.5	87.7	31.8	12.0	9.5	12.1	13.5	12.3
KONO		5.5	38.3	33.7	15.1	7.4	100.0	69.8	89.6	90.6	87.5 86.4	88.3	30.2	10.4	9.4	12.5	13.6	11.7
EASTERN PROVINCE		4.8	32.6	30.9	18.4	13.3	100.0	69.7	87.8	89.0	85.1 82.5	86.1	30.3	12.2	11.0	14.9	17.5	13.9
BOMBALI		3.3	28.3	30.7	21.9	15.8	100.0	64.6	84.5	84.3	83.5 88.7	84.2	35.4	15.5	15.7	16.5	11.3	15.8
KAMBIA		2.4	23.3	30.5	24.0	17.4	100.0	68.5	85.1	85.9	84.1 86.6	85.0	31.5	14.9	14.1	15.9	13.4	15.0
KOINADUGU		6.1	34.4	32.2	16.5	10.8	100.0	64.1	77.3	79.2	78.2 78.3	77.3	35.9	22.7	20.8	21.8	21.7	22.7
PORT LOKO		2.5	25.1	32.6	23.6	16.2	100.0	71.1	85.9	84.5	83.0 85.1	84.3	28.9	14.1	15.5	17.0	14.9	15.7
TONKOLILI		3.2	27.5	31.9	20.9	16.5	100.0	70.3	86.6	86.1	83.4 85.6	85.1	29.7	13.4	13.9	14.6	14.4	14.9
NORTHERN PROVINCE		3.5	27.9	32.0	21.3	15.2	100.0	67.0	83.5	83.9	82.6 85.3	83.1	33.0	16.5	16.1	17.4	14.7	17.9
FREETOWN		5.2	41.8	31.4	15.2	6.3	100.0	81.0	87.4	83.1	71.1 62.6	81.8	19.0	12.6	16.9	27.9	37.4	18.2
WESTERN AREA RURAL		3.8	30.3	30.8	21.8	13.2	100.0	76.6	85.4	80.7	68.7 63.1	77.0	23.0	14.6	19.3	31.3	36.9	23.0
WESTERN AREA		5.1	40.5	31.3	16.0	7.1	100.0	80.6	87.2	82.8	71.6 62.1	81.3	19.4	12.8	17.2	28.4	37.3	18.7
SIERRA LEONE		4.4	30.7	30.9	20.1	13.9	100.0	70.9	85.3	84.7	80.4 79.6	82.7	29.1	14.7	15.3	19.6	20.4	17.3

TABLE 9.4                      The Distribution of Household Heads by Age and Sex, 1985

AGE TOTAL		10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80+
HEADS	Male	862	3089	10866	31504	40828	53101	43035	45962	36255	28755	27610	21103	17148	13166	22848
	Female	5720	4150	3238	6272					508	1733	3854	6401	6870	8297	7599 7907 7101 6265 6941
POPULATION	Male	167187	146675	111513	114807	91378	89235	66449	63835	49337	37113	36476	26993	22555	16951	31459
	Female	30652	34864	24299	18879	13660	29518			148214	166596	137725	143378	109933	92125	67993 54085 45564
HEADSHIP RATE (per 1000 persons)	Male	5.2	21.1	97.4	274.4	446.8	595.1	647.6	720.0	734.8	775.6	756.9	781.8	760.3	776.7	726.3
	Female	237.0	212.5							3.4	10.4	28.0	44.6	62.5	90.1	111.8 146.2 155.8 204.4 199.1 235.4 219.8

    \_No. of heads of that age and sex

Headship Rate at a given age =

No. of persons of that age and sex in the population

#### 9.4.3 Heads of Households by Age, Sex and Marital Status

Between 70 and 80 per cent of the Heads of households in Sierra Leone are married. (Table 9.5). While there are little or no variations in marital status by regions (district/provincial), there are wide differences by age and sex. In all the regions, there are more male heads of households who are never married than female heads of households. On the other hand, there are more female than male heads of households who are widowed/divorced. Table 9.6 further reveals that the never married marital status is common among the 10-39 year old heads of households, the 25-54 year old heads of households are mostly married and the 55 and above year old heads of households are mostly widowed/divorced.

#### 9.4.4 Heads of Households by Age, Sex and Economic Activity

The heads of households were engaged in various types of economic activity - cash earning, family farm, productive piece jobs etc.. As Table 9.7 shows, 66.8 per cent of all heads of households were engaged in cash earning economic activity - 69.8 percent among the male and 52.3 percent among the female heads- while 24.0 per cent were non-active - 21.6 percent among male and 35.3 percent among female heads-, and 6.8 per cent were engaged in family farm activity- 6.2 percent among male and 9.4 percent among female heads. Comparatively few heads of households were engaged in piece jobs and were looking for work.

There are regional variations in economic activity. For cash earning activity, Pujehun had the lowest percentage (46.6 per cent) of heads of households and Freetown the highest percentage (82.4 per cent), followed by Western Rural Area (80.6 per cent), Kono (76.9 per cent), Sherbro (72.8 per cent), and Kenema (70.4 per cent) districts. In terms of non-economic activity category, Freetown had the lowest percentage (9.6 per cent) while Kailahun (34.3 per cent), Pujehun (34.1 per cent), Moyamba (31.1 per cent) and Kambia (30.9 per cent) districts had the highest percentage of heads of households who were non-active. Further, Bo, Pujehun, Koinadugu and Kambia Districts had over 10 per cent of the heads of households in family farm activity.

There were variations in the economic activity by age and sex. In terms of age, in all the districts, heads of households aged 10-24 were mostly engaged in productive piece jobs and looking for work; those aged 25-54 were mainly engaged in cash earning, family farm and productive piece work but those aged 25-39 years were also looking for work, and the 55 and above year old heads of households were mostly non-active. Further there were more male than female heads of households engaged in economic activity, that is, cash earning, family farm and productive piece jobs. While more male heads of households were looking for work, the female heads were generally more in the non-active category.

TABLE 9.5 HEADS OF HOUSEHOLDS BY SEX AND MARITAL STATUS

Sex of Head of Household	MARITAL STATUS					Total H/holds
	Never Married	Married	Widowed/ Divorced	Other	Not Stated	Households
BO DISTRICT						
All Heads	7.1	80.2	9.4	3.1	0.2	100
Male	91.1	82.2	31.4	76.5	84.9	77.9
Female	8.9	17.8	68.6	23.5	15.1	22.1
BONTHE DISTRICT						
All Heads	4.8	79.1	11.6	4.3	0.3	100
Male	90.8	87.1	32.8	63.4	83.2	19.4
Female	9.2	12.9	67.2	36.6	16.8	20.6
MOYAMBA DISTRICT						
All Heads	4.8	79.1	11.6	4.3	0.3	100
Male	90.8	87.1	32.8	63.4	83.2	79.4
Female	9.2	12.9	67.2	36.6	16.8	20.6
PUJEHUN DISTRICT						
All Heads	5.5	82.5	8.4	3.3	0.2	100
Male	94.1	86.1	40.9	73.6	70.3	82.3
Female	5.9	13.9	59.1	26.4	29.7	17.7
SHERBRO DISTRICT						
All Heads	6.5	69.9	17.3	6.2	0	100
Male	81.5	73.5	17.1	47.9	-	62.6
Female	18.5	26.5	82.9	52.1	100	37.4
SOUTHERN DISTRICT						
All Heads	5.8	80.2	10.2	3.5	0.3	100
Male	91.3	84.4	32.6	69.6	81.5	79
Female	8.7	15.6	67.4	20.4	18.5	21
KAILAHUN DISTRICT						
All Heads	5.9	80.9	10.3	2.7	0.2	100
Male	93.9	86	31.5	75.1	78.9	80.6
Female	6.1	14	68.5	24.9	21.1	19.4

# KENEMA DISTRICT

All Heads	7.1	83.1	6.5	3.1	0.2	100
Male	94.4	90.2	50.5	82.6	87.6	87.7
Female	5.6	9.8	49.5	17.4	12.4	12.3

TABLE 9.5 (Contd.)

Sex of Head of Household	MARITAL STATUS					Total H/holds Households
	Never Married	Married	Widowed/ Divorced	Other Stated	Not Stated	

# KONO DISTRICT

All Heads	9.4	81.1	6.2	3.3	0.1	100
Male	93.7	91.1	45.6	79.1	87.5	88.3
Female	6.3	8.9	54.4	20.9	12.5	11.7

# EASTERN PROVINCE

All Heads	7.7	81.8	7.4	3	0.2	100
Male	93.7	90	42.2	79.6	84.7	86.1
Female	6.3	10	57.8	20.4	15.3	13.9

# BOMBALI DISTRICT

All Heads	4.1	87.7	6.8	1.7	0	100
Male	88.1	88.8	28.6	60.1	66.7	84.2
Female	11.9	11.2	71.4	39.9	33.3	15.8

# KAMBIA DISTRICT

All Heads	2.7	90.6	5.3	1.4	0	100
Male	90.1	84.1	38.8	63.2	33.3	85
Female	9.1	15.9	61.2	36.8	66.7	15

# KOINADUGU DISTRICT

All Heads	5.8	84.2	7.3	2.7	0	100
Male	94.7	80.4	33.3	62.6	60	77.3
Female	5.3	19.6	66.7	37.4	40	22.7

# PORT LOKO DISTRICT

All Heads	3.3	86	7.7	3	0	100
Male	88.2	89.3	35.8	58.5	100	84.3
Female	11.8	10.7	64.2	41.5	0	15.7



TONKOLILI DISTRICT

All Heads	4	84.2	8.7	3.1	0	100
Male	90.5	91.4	32.2	54.7	-	85.1
Female	9.5	8.6	57.3	45.3	100	14.5

TABLE 9.5 (Contd.)

Sex of Head of Household	MARITAL STATUS					Total H/holds
	Never Married	Married	Widowed/ Divorced	Other Stated	Not Stated	Households

NORTHERN PROVINCE

All Heads	4	86.2	7.3	2.5	0	100
Male	90.7	87.6	33.3	59.1	61.1	83.1
Female	9.3	12.4	66.7	40.9	38.1	16.9

FREETOWN

All Heads	15	71.2	8.4	5.2	0.2	100
Male	77.6	90.2	27.2	67.9	78.1	81.8
Female	22.4	9.8	72.7	32.1	21.9	18.2

WESTERN AREA RURAL

All Heads	11	71.2	11.5	6	0.4	100
Male	69.1	87.4	24.9	67.2	78.1	77
Female	30.9	12.6	75.1	32.8	21.9	23

WESTERN AREA

All Heads	14.5	71.2	8.7	5.3	0.2	100
Male	76.8	89.9	26.9	67.8	78.1	81.2
Female	23.2	10.1	73.1	32.2	21.9	18.2

SIERRA LEONE

All Heads	7.1	81.2	8.2	3.3	0.1	100
Male	87.4	87.7	34.3	69.2	81.2	82.7
Female	12.6	12.3	65.7	30.8	18.8	17.3

Table 9.6 PERCENTAGE OF HEADS OF HOUSEHOLDS BY AGE, SEX AND MARITAL STATUS

ALL HEADS							MALES							FEMALES						
AGE							AGE					AGE								
10-24	25-39	40-54	55-69	70+	ALL	10-24	25-39	40-54	55-69	70+	ALL	10-24	25-39	40-54	55-69	70+	ALL			
=====																				
=====																				
BO																				
Never Married	34.3	41.3	13.3	6.5	4.6	7.1	86.2	93.3	94.9	92.5	92.3	91.1	15.8	6.7	5.1	7.5	2.7	8.9		
Married	3.2	28.0	32.5	23.1	14.1	80.2	44.7	79.4	83.9	84.2	89.1	82.2	55.3	20.6	16.1	15.8	10.9	17.8		
Divorced/Widowed	0.3	5.8	17.7	32.9	43.3	9.4	61.5	50.0	38.5	27.1	29.1	31.4	38.5	50.0	51.5	62.9	70.9	68.6		
Other	5.7	26.0	28.9	22.6	16.7	3.1	63.6	75.4	75.6	76.0	84.9	75.5	36.4	24.6	24.4	24.0	15.1	24.5		
Total	5.3	26.8	28.8	22.8	16.3	100.0	65.0	80.3	81.4	76.4	74.1	77.9	35.0	19.7	18.6	23.6	25.9	22.1		
BONTHE																				
Never Married	39.0	37.5	13.0	7.2	3.4	4.8	86.6	95.3	90.4	92.5	81.5	90.4	13.4	4.7	9.6	10.3	18.5	9.6		
Married	3.2	28.3	30.5	22.3	15.7	80.1	61.8	82.1	89.7	84.2	88.3	84.1	38.2	17.9	15.3	14.2	11.7	15.9		
Divorced/Widowed	0.4	6.2	19.7	29.7	44.1	11.3	62.5	49.1	43.9	27.1	32.5	36.5	27.5	50.9	56.1	65.4	67.5	63.5		
Other	4.0	25.3	34.4	19.0	17.2	3.4	43.4	68.6	69.4	76.0	69.4	67.7	56.4	31.4	30.6	37.0	30.6	32.3		
Total	4.6	26.1	28.5	22.3	18.4	100.0	71.5	81.8	81.1	77.4	72.3	78.4	28.6	18.2	8.9	22.6	27.6	21.6		
MOYAMBA																				
Never Married	35.4	40.0	13.7	7.2	3.7	4.8	90.5	91.1	90.6	88.3	94.8	90.8	9.5	8.9	9.4	11.7	5.2	9.2		
Married	2.7	27.0	32.0	23.3	14.9	79.1	62.9	84.9	87.2	88.0	93.1	86.9	27.1	15.1	12.8	12.0	6.9	13.1		
Divorced/Widowed	0.3	4.7	18.5	33.8	42.6	11.6	25.0	44.7	30.4	25.4	30.3	29.3	75.0	55.3	69.6	74.6	69.7	70.7		
Other	3.9	24.1	27.6	27.2	17.1	4.3	63.0	67.6	57.9	60.4	71.3	63.4	37.0	32.4	42.1	39.6	28.7	36.6		
Total	4.0	25.0	29.4	23.9	17.7	100.0	74.2	83.3	81.9	76.3	74.6	79.4	25.8	16.2	18.1	23.7	25.4	20.6		
PUJEHUN																				
Never Married	25.6	42.2	17.7	9.3	5.1	5.5	92.8	96.8	97.3	88.5	77.4	94.1	7.2	3.2	2.7	11.5	22.6	5.9		
Married	2.2	25.7	30.6	24.3	17.1	82.5	60.9	86.2	86.5	85.5	89.5	86.1	39.1	13.8	13.5	14.5	10.5	13.9		
Divorced/Widowed	0.4	5.1	16.6	30.1	47.7	8.4	33.3	56.8	51.2	37.2	38.0	40.0	66.7	43.2	48.8	62.7	62.0	59.1		
Other	3.8	22.9	29.0	27.6	16.7	3.3	62.5	69.9	80.1	72.9	72.1	73.6	37.5	30.1	19.9	27.1	27.9	26.4		
Total	3.4	24.8	28.7	24.1	19.0		74.0	86.2	84.9	79.9	77.9	82.3	36.0	13.8	15.1	20.1	22.1	17.7		
SHERBRO																				
Never Married	42.1	32.9	15.8	6.6	2.6	6.5	81.3	76.0	83.3	100.0	100.0	81.6	18.7	24.0	16.7	-	-	18.4		
Married	2.9	25.9	36.0	23.7	11.5	69.9	16.7	66.0	76.3	79.9	83.0	73.5	83.3	34.0	23.7	20.1	17.0	26.5		
Divorced/Widowed	-	3.4	16.3	41.9	38.4	17.3	-	28.6	24.2	16.5	14.1	12.3	-	71.4	75.8	83.5	85.9	87.7		

Other	6.8	21.9	41.1	17.8	12.3	6.2	20.0	56.3	36.7	61.5	66.7	47.9	80.0	43.7	63.3	38.5	33.3	52.1	
Total	5.2	22.2	31.7	25.3	15.6	100.0	50.8	63.4	68.5	61.3	53.0	62.6	49.2	36.6	31.5	38.7	47.0	37.4	

#### KAILAHUN

Never Married	35.5	40.7	11.8	7.2	5.3	5.9	90.4	96.4	95.5	94.7	94.0	93.9	9.6	3.6	4.5	5.3	6.0	6.1	
Married	3.0	27.2	29.7	22.1	18.2	80.9	55.3	83.8	86.7	88.0	90.6	86.0	44.7	16.4	13.7	12.0	9.4	14.0	
Divorced/Widowed	0.3	5.6	17.2	30.6	46.3	10.3	63.6	47.0	32.9	28.7	30.7	31.5	36.4	53.0	67.1	71.3	69.3	68.5	
Other	5.5	28.7	27.2	22.3	16.3	2.7	66.7	76.1	25.6	73.1	78.3	75.1	33.3	23.9	24.6	26.9	21.7	24.9	
Total	4.7	25.8	29.0	23.3	17.4	100.0	69.3	82.3	81.9	27.0	74.5	79.0	30.7	17.3	18.1	23.0	25.5	21.0	

#### KENEMA

Never Married	26.1	49.1	14.9	6.2	3.7	7.1	87.8	97.0	96.2	96.1	95.6	94.4	12.2	3.0	3.8	3.9	4.4	5.6	
Married	2.6	31.9	32.7	19.4	13.4	83.1	51.7	87.8	92.3	93.0	94.5	90.2	48.3	12.2	7.7	7.0	5.5	9.8	
Divorced/Widowed	0.6	9.4	21.4	30.4	38.3	6.5	57.9	58.2	55.2	45.7	49.5	50.5	42.1	41.8	44.8	54.3	50.5	49.5	
Other	3.8	32.8	29.4	18.9	15.1	3.1	62.3	79.9	85.0	83.9	87.2	82.6	27.3	20.1	15.0	16.1	12.8	17.4	
Total	4.2	1.7	30.6	19.1	14.4	100.0	68.2	88.0	90.5	87.9	86.5	87.7	31.8	12.0	9.5	12.1	13.5	12.3	

#### KONO

Never Married	32.3	51.0	11.8	3.4	1.5	9.4	84.0	98.1	95.5	98.1	91.3	93.1	16.0	1.9	4.5	1.9	8.7	6.9	
Married	2.7	38.5	36.4	15.3	7.0	81.0	51.0	89.7	93.8	94.4	96.3	91.3	49.0	10.3	6.2	5.6	3.7	8.7	
Divorced/Widowed	0.8	13.5	32.4	29.5	23.7	6.2	58.3	50.7	40.5	40.2	47.7	45.6	41.7	49.3	53.5	59.8	52.3	54.6	
Other	4.9	42.8	32.8	24.5	1.3	3.3	63.8	80.2	78.4	79.7	87.7	79.1	26.2	19.8	21.6	20.3	12.3	20.9	
Total	5.5	38.3	33.7	15.1	7.4	100.0	69.8	86.6	90.6	87.5	86.4	88.3	30.2	10.4	9.4	12.5	13.6	11.7	

Table 9.6 PERCENTAGE OF HEADS OF HOUSEHOLDS BY AGE, SEX AND MARITAL STATUS

ALL HEADS							MALES					FEMALES						
AGE							AGE					AG						
10-24	25-39	40-54	55-69	70+	ALL	10-24	25-39	40-54	55-69	70+	ALL	10-24	25-39	40-54	55-69	70+	ALL	
=====																		
BOMBALI																		
Never Married	32.7	46.6	12.2	4.7	3.8	4.1	85.1	91.1	86.6	81.8	88.9	88.1	14.9	8.9	13.4	18.2	11.1	11.9
Married	2.1	28.6	31.7	22.0	15.6	87.4	51.0	85.9	89.1	90.9	95.7	88.8	49.0	14.4	10.9	9.1	4.3	11.2
Divorced/Widowed	0.7	10.8	28.3	33.4	26.5	6.8	38.1	35.2	22.9	24.4	36.8	28.6	6.2	64.8	77.1	75.6	63.2	71.4
Other	44.4	37.1	33.5	15.6	9.4	1.7	48.0	67.5	52.4	53.4	75.5	60.1	52.0	32.5	47.6	46.4	24.5	39.9
Total	3.3	29.3	30.7	21.9	15.8	100.0	64.6	84.5	84.3	83.5	88.7	84.2	35.4	15.5	15.7	16.5	11.3	15.8
KAMBIA																		
Never Married	36.7	38.9	10.2	6.0	8.1	2.7	88.5	96.8	87.9	73.5	80.4	90.1	11.5	3.2	12.1	26.5	19.6	9.9
Married	0.9	23.7	64.1	24.0	16.8	90.6	91.4	85.4	88.4	88.8	92.0	37.9	8.6	14.6	11.6	11.2	8.0	12.1
Divorced/Widowed	-	8.4	25.2	33.6	32.9	5.3	-	41.4	37.8	33.4	43.1	38.8	-	58.6	62.2	66.6	56.9	61.2
Other	7.3	23.8	30.1	23.5	15.2	1.4	54.5	79.2	54.9	57.7	67.4	63.2	45.5	20.8	45.1	42.3	32.6	36.8
Total	2.4	23.3	30.5	24.0	17.4	100.0	68.5	85.1	85.9	84.1	86.6	85.0	31.5	14.9	14.1	15.9	13.4	15.0
KOINADUGU																		
Never Married	38.6	42.9	11.8	4.2	2.4	5.8	93.5	97.1	93.1	85.9	95.6	94.7	6.5	2.9	6.9	14.1	4.4	5.3
Married	4.1	35.2	34.1	16.5	10.1	84.2	44.9	77.1	82.8	86.0	88.6	80.4	55.1	22.9	17.2	14.0	11.4	19.6
Divorced/Widowed	1.1	16.3	27.7	27.8	27.1	7.3	60.0	45.6	31.8	26.3	33.8	33.4	40.0	54.4	68.2	73.7	66.2	66.6
Other	13.0	41.2	28.1	11.7	6.0	2.7	64.9	69.4	53.5	58.0	62.7	62.6	35.1	30.6	46.5	42.0	37.3	37.4
Total	6.1	34.4	32.2	16.5	10.5	100.0	64.1	77.3	79.2	78.2	78.3	77.3	35.9	22.7	20.8	21.8	21.7	22.7
PORT LOKO																		
Never Married	26.0	44.8	15.4	8.4	5.5	3.3	87.2	92.9	89.9	70.4	77.5	88.2	12.8	7.1	10.1	29.6	22.5	11.8
Married	1.7	25.8	33.8	23.4	15.3	86.0	63.4	87.4	89.1	90.7	94.0	89.3	26.6	12.6	109.0	9.3	6.0	10.7
Divorced/Widowed	0.6	7.7	26.4	33.7	31.7	7.7	41.2	49.4	32.1	30.6	40.9	35.8	58.2	50.6	67.9	69.4	59.1	64.2
Other	3.8	29.7	32.2	20.3	14.1	3.3	62.2	61.4	53.4	55.4	67.3	58.5	37.8	38.6	46.6	44.6	32.7	41.5
Total	2.5	25.1	32.6	23.6	16.2	100.0	71.1	85.9	84.5	83.0	85.1	84.3	28.9	14.1	15.5	17.0	14.9	15.7
TONKOLILI																		
Never Married	33.5	44.9	12.5	5.6	3.5	4.0	88.8	92.8	89.9	87.9	82.9	90.5	11.9	7.2	10.2	12.1	17.1	9.5
Married	2.1	28.4	33.4	20.4	15.7	84.2	59.4	88.8	92.0	93.4	96.5	91.4	40.6	11.2	8.0	6.6	3.5	8.6
Divorced/Widowed	0.3	8.5	25.5	33.6	32.2	8.7	28.6	43.3	27.3	29.3	36.4	32.3	71.4	56.7	72.7	70.7	63.6	67.3
Other	4.3	32.6	33.1	19.2	10.7	3.1	32.5	56.1	49.7	58.8	67.7	54.7	67.5	43.9	50.3	41.2	32.3	45.3

Total	3.2	27.5	31.9	20.9	16.5	100.0	70.3	86.6	86.1	83.4	85.6	85.1	29.7	13.4	13.9	16.6	14.6	14.9
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# FREETOWN

Never Married	22.4	56.2	13.3	5.7	2.3	15.0	87.4	81.0	63.1	53.4	40.4	77.6	12.6	9.0	36.9	46.6	59.6	22.4
Married	2.2	41.9	35.7	14.8	4.9	71.2	70.3	92.4	91.1	88.2	88.2	88.2	29.7	7.6	8.9	11.8	11.8	8.2
Divorced/Widowed	0.4	9.8	27.8	35.4	26.5	8.4	37.5	43.3	28.6	23.3	24.9	27.2	62.5	56.7	71.4	46.7	75.1	72.8
Other	4.2	44.7	31.7	15.1	4.3	5.2	68.1	73.9	61.8	62.1	71.0	67.9	31.9	26.1	38.9	37.9	29.0	32.1
Total	5.2	41.8	31.4	15.2	6.3	100.0	81.0	87.4	83.1	72.1	62.6	81.8	19.0	12.6	16.9	27.9	37.6	18.2

# W.AREA RURAL

Never Married	16.2	39.7	20.2	15.0	8.8	11.0	81.4	76.2	63.1	51.4	58.8	69.1	18.6	23.8	36.9	48.6	41.2	30.9
Married	2.3	32.6	34.1	20.7	10.3	71.1	71.9	89.6	88.8	84.9	84.5	88.0	28.1	10.4	11.2	15.1	15.5	12.0
Divorced/Widowed	0.3	6.1	20.1	35.7	37.7	11.5	33.3	29.0	25.2	21.1	27.6	24.9	66.7	71.0	74.8	78.9	72.4	75.1
Other	5.1	30.9	31.7	22.6	9.7	6.0	77.7	75.5	64.7	57.1	66.7	67.2	22.2	24.5	35.5	42.9	22.2	32.8
Total	5.1	40.5	31.3	16.0	7.1	100.0	80.6	87.2	82.8	71.6	62.7	81.3	19.4	12.8	17.2	28.4	37.3	18.7

TABLE 9.7 PERCENTAGE OF ALL HEADS OF HOUSEHOLD BY ECONOMIC ACTIVITY

REGIONS	ECONOMIC ACTIVITY							
(DISTRICTS)	CASH EARNING	FAMILY FARM JOBS	PRO PIECE WORK	LOOKING FOR ACTIVE	NON ACTIVE	OTHERS	NOT STATED	TOTAL
PROVINCE								
BO	55.1	17.1	0.3	0.4	26.4	0.7	0.0	100.0
BONTHE	64.7	4.3	1.8	0.1	28.5	0.5	0.1	100.0
MOYAMBA	58.8	8.5	1.4	0.1	31.1	0.1	0.0	100.0
PUJEHUN	46.6	16.7	2.5	0.1	43.1	0.1	0.0	100.0
SHERBRO	72.8	0.3	1.8	0.2	24.5	0.3	0.0	100.0
SOUTHERN PROVINCE	56.4	12.5	1.2	0.2	29.3	0.4	0.0	100.0
KAILAHUN	58.3	5.8	1.3	0.1	34.3	0.1	0.0	100.0
KENEMA	70.4	3.5	1.4	0.2	24.3	0.2	0.0	100.0
KONO	76.9	5.9	1.6	0.2	15.3	0.1	0.0	100.0
EASTERN PROVINCE	69.6	5.0	1.5	0.2	23.8	0.1	0.0	100.0
BOMBALI	66.6	3.8	1.1	0.2	28.3	0.0	0.0	100.0
KAMBIA	56.0	11.8	1.2	0.0	30.9	0.1	0.0	100.0
KOINADUGU	64.1	13.3	1.4	0.1	21.1	0.0	0.0	100.0
PORT LOKO	67.2	3.9	1.1	0.1	27.6	0.1	0.0	100.0
TONKOLILI	64.4	6.0	1.0	0.1	28.5	0.0	0.0	100.0
NORTHERN PROVINCE	64.4	7.3	1.1	0.1	27.0	0.1	0.0	100.0
FREETOWN	82.4	0.2	3.1	3.5	9.6	1.1	0.0	100.0
WESTERN AREA RURAL	80.6	0.8	1.9	0.4	15.6	0.6	0.0	100.0
WESTERN AREA	82.2	0.3	2.9	3.2	10.4	1.1	0.0	100.0
SIERRA LEONE	66.8	6.8	1.5	0.6	24	0.3	0.0	100.0

## 9.5 Dwelling Characteristics

### 9.5.1 Water Supply

As Table 9.8A shows, only 18 per cent of all households obtained their drinking water from pipe-borne supply system. The remaining 82 per cent obtained their drinking water from rivers (43.2 per cent), well (35.6 per cent) and from other sources (2.8 per cent). In other words, 78.8 per cent of the households in Sierra Leone obtained their drinking water from sources which are considered to be less safe sources. Since the impact of such situation is better appreciated, if the corresponding population figures also are indicated, tables have been produced both with numbers of households and population therein who have the various types of facilities and amenities. For instance, even though 18 percent of households obtained pipe-borne water, the corresponding population constituted only 15.9 percent. This clearly shows that the households which enjoy this amenity have smaller size than those without. Similarly 44.1 percent of the population got their water from rivers and 36.8 percent from well. Table 9.8B shows that the majority of the population (44.1%) get their drinking water directly from rivers and streams with wells being the second most important source (36.8%).

At district and provincial levels, the water supply situation is comparatively better in Freetown and the Western Area Rural districts. Whereas in Western Area including Freetown and the Western Area Rural Districts, 84.3 per cent of the households ( 84.1 percent of population ) obtained their drinking water from pipe-borne water supply systems, in Freetown itself the corresponding figures were 88.3 percent for households and 88.4 percent for population. In the Southern, Eastern and Northern Provinces, 92.0 per cent, 84.0 per cent and 86.0 per cent of households respectively obtained their drinking water from rivers and wells with corresponding population constituting 97.4 , 87.0 and 93.0 percent respectively. The unsatisfactory water supply situation at the Provincial level is reflected at the district level. In Sherbro District, 97.7 per cent of the households depend upon wells as sources of drinking water.

### 9.5.2 Toilet Facilities

The sanitation situation is also very unsatisfactory in Sierra Leone. Tables 9.9A and 9.9B respectively give the percentage of households and population with the type of toilet facilities. From these tables, it is clear that at the national level only 7.4 per cent of the households

(7.0 percent of population ) used flushed toilets as sanitation system. Pit latrine and the bush/river are used by 62.7 per cent and 22.7 per cent of households and (66.2 and 20.7 percent of population ) respectively. The pattern of use of the toilet facilities does not vary by regions. When the types of toilet facilities and principal source of water are considered together it can be seen that in all the regions (districts) of the Southern and the Eastern Provinces and in the Koinadugu District in the Northern Province, communal toilet facilities are more prevalent than in the other regions (districts). By toilet facilities, pit latrines are mainly of the private types while flushed toilets are of the communal types in Southern and Eastern Provinces. Naturally bush/river toilet facilities are communally used.

TABLE 9.8A PERCENTAGE OF HOUSEHOLDS BY PRINCIPAL SOURCE OF WATER SUPPLY

REGIONS	SOURCE OF WATER SUPPLY						
	TAP	WELL	NOT RIVER	OTHER	STATED	TOTAL	
BO	1.5	41.8	55.7	0.8	0.2	100.0	
BONTHE	2.0	31.8	62.9	3.2	0.1	100.0	
MOYAMBA	9.0	24.7	63.0	2.9	0.1	100.0	
PUJEHUN	0.4	18.6	78.5	2.5	0.1	100.0	
SHERBRO	-	97.7	2.0	-	0.3	100.0	
SOUTHERN PROVINCE	3.6		32.2	62.1	2.0	0.1	100.0
KAILAHUN	3.6	54.6	39.2	2.5	0.1	100.0	
KENEMA	18.2	40.2	39.5	1.4	0.7	100.0	
KONO	6.1	48.6	39.3	3.7	2.3	100.0	
EASTERN PROVINCE	10.1		46.9	39.3	2.5	1.1	100.0
BOMBALI	1.7	55.1	40.3	3.0	0.0	100.0	
KAMBIA	1.0	57.0	37.7	3.6	0.7	100.0	
KOINADUGU	3.8	29.4	62.6	4.2	0.1	100.0	
PORT LOKO	6.1	37.4	50.7	5.7	0.1	100.0	
TONKOLILI	4.1	31.3	62.6	1.8	0.1	100.0	
NORTHERN PROVINCE	3.6		41.2	51.3	3.8	0.1	100.0
FREETOWN	88.5	6.6	2.4	2.5	0.0	100.0	
WESTERN							
AREA RURAL	50.3	16.5	25.8	3.4	0.0	100.0	
WESTERN AREA	84.3	7.8	5.2	2.6	0.1	100.0	
SIERRA LEONE	18.0	35.5	43.2	2.8	0.4	100.0	

TABLE 9.8B PERCENTAGE OF THE POPULATION BY PRINCIPAL SOURCE OF WATER SUPPLY

REGIONS	SOURCE OF WATER SUPPLY					
	TAP	WELL	RIVER	OTHER	TOTAL	
BO	1.3	43.3	55.7	0.8	100.0	
BONTHE	2.3	30.8	62.9	3.2	100.0	
MOYAMBA	8.9	26.3	63.0	2.9	100.0	
PUJEHUN	0.3	18.6	78.5	2.5	100.0	
SHERBRO	-	97.3	2.0	-	100.0	
KAILAHUN	3.8	54.9	39.2	2.5	100.0	
KENEMA	17.2	41.2	39.5	1.4	100.0	
KONO	6.0	48.3	39.3	3.7	100.0	
BOMBALI	1.5	53.4	40.3	3.0	100.0	
KAMBIA	0.9	57.3	37.7	3.6	100.0	
KOINADUGU	5.0	30.2	62.6	4.2	100.0	
PORT LOKO	4.7	37.2	50.7	5.7	100.0	
TONKOLILI	3.0	29.9	62.6	1.8	100.0	
FREETOWN	88.4	6.7	2.4	2.5	100.0	
WESTERN						
AREA RURAL	53.0	17.6	25.8	3.4	100.0	
SIERRA LEONE	15.9	36.8	44.1	2.8	100.0	

TABLE 9.9A PERCENTAGE OF HOUSEHOLDS BY TYPE OF TOILET FACILITIES

TYPE OF TOILET FACILITIES								
REGIONS	FLUSHED PIT BUCKET BUSH/RIVER OTHER NOT TOTAL							
				STATED				
BO	4.0	61.1	1.7	32.8	0.2	0.2	100.0	
BONTHE	0.6	16.2	29.1	45.8	0.1	0.1	100.0	
MOYAMBA	11.5	32.2	29.2	26.9	0.1	0.1	100.0	
PUJEHUN	2.7	46.5	2.8	47.8	0.1	0.1	100.0	
SHERBRO	2.3	23.3	45.3	28.7	0.2	0.2	100.0	
SOUTHERN PROVINCE	6.7	43.2	14.5	35.4	0.1	0.1	100.0	
KAILAHUN	1.5	54.4	1.4	42.4	0.2	0.1	100.0	
KENEMA	21.8	45.2	14.8	16.9	0.6	0.7	100.0	
KONO	1.7	82.0	1.4	12.5	0.1	2.3	100.0	
EASTERN PROVINCE	10.2	67.1	7.1	24.0	0.3	1.3	100.0	
BOMBALI	2.4	80.1	0.3	16.9	0.1	0.2	100.0	
KAMBIA	1.1	82.9	0.2	15.6	0.1	0.1	100.0	
KOINADUGU	0.2	44.2	0.4	55.0	0.1	0.1	100.0	
PORT LOKO	2.3	82.5	0.3	14.6	0.3	0.2	100.0	
TONKOLILI	4.4	77.5	3.7	14.1	0.1	0.2	100.0	
NORTHERN PROVINCE	2.1	73.4	0.9	23.3	0.1	0.2	100.0	
FREETOWN	16.6	73.3	6.9	2.9	0.1	0.1	100.0	
WESTERN AREA RURAL	12.4	73.0	0.3	14.1	0.2	0.0	100.0	
WESTERN AREA	16.1	73.3	6.1	4.2	0.1	0.1	100.0	
SIERRA LEONE	7.4	62.7	6.5	22.7	0.2	0.4	100.0	

TABLE 9.9B PERCENTAGE OF THE POPULATION BY TYPE OF TOILET FACILITIES

TYPE OF TOILET FACILITIES								
REGIONS	FLUSHED PIT BUCKET BUSH/RIVER OTHER TOTAL							
BO	4.1	64.0	1.6	30.1	0.2		100.0	
BONTHE	9.4	18.8	28.0	43.6	0.1		100.0	
MOYAMBA	11.8	34.6	27.5	25.8	0.1		100.0	
PUJEHUN	2.7	51.0	2.9	43.1	0.1		100.0	
SHERBRO	2.4	23.1	44.7	29.5	0.2		100.0	
KAILAHUN	1.7	57.2	1.5	39.2	0.3		100.0	
KENEMA	22.4	48.0	13.4	15.2	0.9		100.0	
KONO	1.8	83.8	1.3	12.0	1.2		100.0	
BOMBALI	1.8	81.4	0.2	16.3	0.2		100.0	
KAMBIA	1.0	84.2	0.1	14.4	0.2		100.0	
KOINADUGU	0.2	50.2	0.4	49.1	0.1		100.0	
PORT LOKO	1.8	83.3	0.2	14.2	0.3		100.0	
TONKOLILI	3.6	78.9	3.3	13.9	0.2		100.0	
FREETOWN	17.4	72.7	6.8	2.8	0.1		100.0	
WESTERN AREA RURAL	11.9	72.4	0.2	15.2	0.2		100.0	
SIERRA LEONE	7.0	66.2	5.6	20.7	0.4		100.0	



### 9.5.3 Fuel for Cooking and Lighting

84.7 per cent and 93.2 per cent of the households ( 86.3 and 94.1 percent of population ) in Sierra Leone use kerosene and wood for lighting and cooking respectively. Tables 9.10A, 9.10B and 9.11A, 9.11B show that there are no regional variations in the use of the two energy sources for cooking and lighting.

### 9.5.4 Housing Tenure

Owner, rental and employer provided tenure systems operate in the country. But as Table 9.12 shows, the three tenure systems do not operate uniformly throughout Sierra Leone. In the provinces, the majority of the households are owner occupiers of dwelling houses which they themselves have constructed, have purchased or inherited. By contrast the majority of the households in the Western Area are rental occupiers. In Freetown 74.2 per cents of the households are rental occupiers compared to only 10.5 per cent of the households who have been able to construct their own dwelling units. In the whole country, however, there are more owner-occupiers of their own dwelling units (44.6 per cent) than rental occupiers of private dwelling units (25.8 per cent). More households live in their own dwelling units in the Northern Province (59.1 per cent) than households in the Southern (49.2 per cent) Eastern (42.1 per cent) provinces and in the Western Area (12.5 per cent).

Very insignificant percentage of households throughout the country are benefitting from Government provided dwelling house -1.3 per cent at the national level, with no variation in the percentage at regional levels. The private sector employers are not also significantly supplying their employees dwelling units. Thus the majority of the households have been left to fend for themselves.

### 9.5.5 Materials of Construction of Wall, Roof and Floor

#### (a) Roof Materials

In Sierra Leone, 80 per cent of the housing units have their roofs constructed of zinc. Throughout the country there is very little variation from this pattern of roof construction, except in the Koinadugu District where 61 per cent of the housing units have their roof covered with thatch (Table 9.13A).

#### (b) Wall Materials

In Sierra Leone, 63 per cent and 26 per cent of all housing units have their walls constructed of mud and cement respectively (Table 9.14A). There are very little variations from the pattern of use of these two building materials for walls at district and provincial levels, except in Freetown and the Western Rural Areas. In Freetown, 59 per cent and 31 per cent of the all housing units have their walls constructed of cement and zinc respectively. It will be noticed also that 7 per cent of the dwelling houses have their walls constructed of cement and zinc respectively, and 7 per cent of the dwelling houses in Freetown are of plank (wood) construction and further more it is only in Freetown that plank and zinc are used as wall materials.

#### (c) Floor Materials

58 per cent and 38 per cent of all housing units in Sierra Leone have mud and cement floors respectively. As shown in Table 9.15A in all the provincial districts, mud and cement are the principal floor materials in that order. In the Western Area, however, cement is the principal floor material for 88 percent and 54 per cent of dwelling houses in Freetown and the Western Rural Area respectively. It is to be observed that it is only in the Western Area that wood is used as a floor material.

TABLE 9.10A PERCENTAGE OF HOUSEHOLDS BY PRINCIPAL SOURCE OF FUEL FOR COOKING

REGIONS	SOURCE OF FUEL FOR COOKING								ELECTRICITY	GAS	KEROSENE	CHARCOAL
	WOOD	OTHER	NOT	STATED	TOTAL							
BO	0.1	0.2	4.2	0.3	95.0	0.2	0.2	100.0				
BONTHE		0.2	0.1	3.1	0.2	96.2	0.1	0.1	100.0			
MOYAMBA		0.1	0.3	2.9	0.6	96.0	0.1	0.1	100.0			
PUJEHUN		0.0	0.3	4.7	0.3	94.5	0.1	0.1	100.0			
SHERBRO		-	-	2.7	0.3	96.4	0.3	0.3	100.0			
SOUTHERN PROVINCE			0.1	0.2	3.7	0.4	95.3	0.1	0.1	100.0		
KAILAHUN		0.0	0.1	4.5	0.2	95.0	0.1	0.1	100.0			
KENEMA		0.1	0.4	4.3	0.3	94.1	0.1	0.7	100.0			
KONO		0.1	0.6	4.8	0.8	91.5	0.1	2.2	100.0			
EASTERN PROVINCE			0.1	0.4	4.5	0.5	93.4	0.1	1.1	100.0		
BOMBALI		0.1	0.2	4.1	0.2	95.3	0.1	0.0	100.0			
KAMBIA		0.0	0.2	4.6	0.3	94.6	0.2	0.1	100.0			
KOINADUGU		0.1	0.1	2.4	0.3	97.0	0.1	0.1	100.0			
PORT LOKO		0.3	0.1	4.1	0.3	95.1	0.1	0.0	100.0			
TONKOLILI		0.1	0.2	3.8	0.4	95.3	0.1	0.0	100.0			
NORTHERN PROVINCE			0.1	0.1	3.8	0.3	95.5	0.1	0.1	100.0		
FREETOWN		1.5	4.0	6.5	3.5	83.4	0.9	0.2	100.0			
WESTERN AREA RURAL			0.6	0.7	4.5	0.9	93.0	0.2	0.1	100.0		
SIERRA LEONE		0.3	0.8	4.4	0.8	93.2	0.2	0.4	100.0			

TABLE 9.10B PERCENTAGE OF THE POPULATION BY PRINCIPAL SOURCE OF FUEL FOR COOKING

REGIONS	SOURCE OF FUEL FOR COOKING								ELECTRICITY	GAS	KEROSENE	CHARCOAL	WOOD	OTHER	TOTAL
BO	0.0	0.1	3.9	0.3	95.4	0.1		100.0							
BONTHE		0.2	0.1	2.8	0.2	96.4	0.1								
MOYAMBA		0.1	0.2	2.8	0.6	96.1	0.0								
PUJEHUN		0.0	0.1	1.2	0.3	95.1	0.1								
SHERBRO		-	-	2.4	0.3	96.7	0.3								
KAILAHUN		0.0	0.1	4.2	0.2	95.2	0.1								
KENEMA		0.0	0.3	4.3	0.3	94.6	0.1								
KONO		0.0	0.4	4.4	0.7	93.2	0.1								
BOMBALI		0.0	0.1	3.9	0.2	95.6	0.0								
KAMBIA		0.0	0.2	4.6	0.3	94.6	0.2								
KOINADUGU		0.0	0.1	2.4	0.2	97.1	0.1								
PORT LOKO		0.2	0.1	4.1	0.3	95.3	0.1								
TONKOLILI		0.0	0.1	3.6	0.4	95.8	0.1								
FREETOWN		1.3	3.5	5.4	3.5	85.8	0.4								
WESTERN AREA RURAL			0.5	0.6	4.2	1.0	93.6	0.1							
SIERRA LEONE		0.2	0.6	4.1	0.7	94.1	0.1								

TABLE 9.11A PERCENTAGE OF HOUSEHOLDS BY PRINCIPAL SOURCE OF FUEL FOR LIGHTING

REGIONS	SOURCE OF FUEL FOR LIGHTING								ELECTRICITY	GAS	KEROSENE
	COAL/WOOD	OTHER	NOT STATED	TOTAL							
BO	0.4	0.1	97.1	2.0	0.3	0.2	100.0				
BONTHE	0.3	0.0	97.4	2.0	0.2	0.1	100.0				
MOYAMBA	2.9	0.1	93.5	1.3	0.4	0.1	100.0				
PUJEHUN	1.6	0.1	95.6	2.3	2.4	0.1	100.0				
SHERBRO	17.0	-	78.4	3.5	3.8	0.3	100.0				
SOUTHERN PROVINCE	1.5	0.1	95.7	2.3	0.3	0.1	100.0				
KAILAHUN	1.2	0.1	97.3	1.2	0.3	0.1	100.0				
KENEMA	2.5	0.1	94.4	2.0	0.9	0.7	100.0				
KONO	1.5	0.1	89.0	3.9	3.3	2.2	100.0				
EASTERN PROVINCE	1.7	0.1	94.0	2.5	1.6	1.1	100.0				
BOMBALI	2.5	0.1	88.2	8.6	0.5	0.1	100.0				
KAMBIA	1.6	0.1	96.2	1.7	0.4	0.1	100.0				
KOINADUGU	1.8	0.0	58.3	37.4	2.4	0.1	100.0				
PORT LOKO	3.5	0.1	94.0	1.9	0.4	0.0	100.0				
TONKOLILI	1.2	0.1	91.1	3.9	1.2	2.2	100.0				
NORTHERN PROVINCE	2.3	0.1	85.3	11.4	0.9	0.1	100.0				
FREETOWN	53.3	0.2	44.9	0.6	0.9	0.1	100.0				
WESTERN AREA RURAL	11.1	0.1	87.4	0.9	0.3	0.1	100.0				
WESTERN AREA	48.4	0.2	49.8	0.6	0.9	0.1	100.0				
SIERRA LEONE	9.1	0.1	84.7	5.0	0.6	0.4	100.0				

TABLE 9.11B PERCENTAGE OF THE POPULATION BY PRINCIPAL SOURCE OF FUEL FOR LIGHTING

REGIONS	SOURCE OF FUEL FOR LIGHTING							TOTAL
	ELECTRICITY	GAS	KEROSENE	COAL/WOOD	OTHER			
BO	0.4	0.1	97.4	1.8	0.1		100.0	
BONTHE	0.3	0.1	97.5	2.0	0.1		100.0	
MOYAMBA	3.1	0.1	94.0	2.6	0.2		100.0	
PUJEHUN	1.8	0.1	95.8	2.1	0.1		100.0	
SHERBRO	17.5	0.0	78.7	3.2	0.4		100.0	
KAILAHUN	1.0	0.1	97.4	1.3	0.1		100.0	
KENEMA	2.4	0.1	94.9	2.2	0.1		100.0	
KONO	1.5	0.1	92.5	4.7	0.1		100.0	
BOMBALI	2.0	0.1	89.4	8.5	0.0		100.0	
KAMBIA	1.3	0.1	96.4	2.1	0.1		100.0	
KOINADUGU	1.9	0.0	62.3	35.6	0.2		100.0	
PORT LOKO	2.7	0.1	94.9	2.2	0.0		100.0	
TONKOLILI	0.9	0.1	91.9	7.0	0.1		100.0	
FREETOWN	55.9	0.2	42.5	1.0	0.3		100.0	
WESTERN AREA RURAL	10.2	0.1	88.6	1.0	0.0		100.0	
SIERRA LEONE	8.3	0.1	86.3	5.0	0.1		100.0	

TABLE 9.12 DWELLING UNITS BY METHOD OF ACQUISITION

REGIONS (Districts Provinces)	OWNER			EMPLOYER PROVIDED			RENTING			OTHER	TOTAL	
	Pcd.	Con.	Inh.	Govt.	Pvt.	Govt.	H.C	Pvt.				
BO	1.7	43.0	27.3	1.4	1.0	0.4	0.3	22.1	2.7	100.0		
BONTHE	1.9	55.1	23.6	0.4	1.0	0.4	0.1	14.1	3.5	100.0		
MOYAMBA	1.5	52.0	27.1	1.0	0.9	0.7	0.1	14.3	2.3	100.0		
PUJEHUN	1.5	54.3	28.5	0.9	1.2	0.6	0.2	10.0	2.2	100.0		
SHERBRO	2.3	34.2	17.3	1.9	0.3	1.2	-	41.2	1.5	100.0		
SOUTHERN PROVINCE			1.7	49.2	26.8	1.0	1.0	0.6	0.2	16.9	2.7	100.0
KAILAHUN	1.4	50.7	28.0	0.6	1.2	0.7	0.2	13.7	3.6	100.0		
KENEMA	2.6	37.6	23.2	0.8	2.3	0.8	0.2	28.2	4.2	100.0		
KONO	5.1	40.7	12.7	2.3	1.7	1.1	0.2	33.3	3.0	100.0		
EASTERN PROVINCE			3.2	42.1	20.6	1.3	1.8	0.9	0.2	26.3	3.6	100.0
BOMBALI	1.5	60.6	17.5	2.0	0.9	0.8	0.2	14.9	1.6	100.0		
KAMBIA	1.2	56.0	30.6	0.4	0.8	0.8	0.1	6.2	3.8	100.0		
KOINADUGU	2.3	74.8	13.6	0.4	0.6	0.3	0.1	6.2	1.7	100.0		
PORT LOKO	2.1	47.1	31.9	1.4	0.9	1.0	0.2	10.7	4.7	100.0		
TONKOLILI	2.0	58.9	24.6	0.6	0.9	1.1	0.3	10.1	1.5	100.0		
NORTHERN PROVINCE			1.9	59.1	23.5	1.0	0.8	0.8	0.2	10.0	2.7	100.0
FREETOWN	1.7	10.5	7.1	2.0	1.8	2.0	0.1	74.2	0.7	100.0		
WESTERN AREA RURAL			1.9	27.5	18.4	2.7	2.6	0.4	0.2	45.1	1.0	100.0
WESTERN AREA			1.7	12.5	8.4	2.1	1.9	1.8	0.1	70.8	0.7	100.0
SIERRA LEONE			2.2	44.6	21.1	1.3	1.3	0.9	0.2	25.8	2.7	100.0

Pcd.: Purchased; Con.: Constructed; Inh.: Inherited; Pvt.: Private

Govt.: Government; H.C.: Housing Corporation

TABLE 9.13A PERCENTAGE OF HOUSEHOLDS BY TYPE OF ROOF MATERIALS OF DWELLING

REGIONS		TYPE OF ROOF MATERIALS OF DWELLING									
THATCH	OTHER	NOT STATED	TOTAL						CONCRETE/TILE	ASBESTOS	ZINC
BO	1.3	0.3	86.6	11.3	0.5	0.0	100.0				
BONTHE	0.2	0.1	62.7	36.1	0.9	0.0	100.0				
MOYAMBA	0.6	0.0	71.6	26.8	0.9	0.0	100.0				
PUJEHUN	0.6	0.2	84.2	13.9	1.3	0.0	100.0				
SHERBRO	1.7	0.1	91.7	6.3	0.2		100.0				
SOUTHERN PROVINCE	0.8		0.2	78.3	19.8	0.7	0.0	100.0			
KAILAHUN	0.6	0.3	93.3	5.1	0.7	0.0	100.0				
KENEMA	1.9	0.4	88.8	7.9	1.0	0.0	100.0				
KONO	3.4	0.9	79.0	15.6	1.0	0.0	100.0				
EASTERN PROVINCE	2.1		0.6	86.4	10.0	0.9	0.0	100.0			
BOMBALI	0.3	0.4	77.7	20.2	1.3	0.1	100.0				
KAMBIA	0.5	0.4	85.2	11.1	2.5	0.2	100.0				
KOINADUGU	0.3	0.1	33.7	61.4	4.3	0.1	100.0				
PORT LOKO	1.3	0.4	91.1	5.4	1.8	0.0	100.0				
TONKOLILI	0.4	0.3	77.1	20.1	2.1	0.1	100.0				
NORTHERN PROVINCE	0.6		0.3	73.2	23.5	2.3	0.0	100.0			
FREETOWN	8.6	0.1	89.4	0.2	0.6	0.0	100.0				
WESTERN AREA RURAL	1.4		0.5	90.5	6.8	0.7	0.0	100.0			
WESTERN AREA	7.7		1.1	89.6	1.0	0.6	0.0	100.0			
SIERRA LEONE	2.2		0.5	80.7	1.5	1.3	0.0	100.0			

TABLE 9.13B PERCENTAGE OF THE POPULATION BY TYPE OF ROOF MATERIALS OF DWELLING

REGIONS	TYPE OF ROOF MATERIALS OF DWELLING						TOTAL
	CONCRETE/TILE	ASBESTOS	ZINC	THATCH	OTHER		
BO	1.2	0.3	90.1	7.9	0.4		100.0
BONTHE	0.3	0.1	68.5	30.2	0.8		100.0
MOYAMBA	0.6	0.2	75.4	23.0	0.8		100.0
PUJEHUN	0.5	0.2	87.9	10.3	1.1		100.0
SHERBRO	1.1	0.0	92.4	6.4	0.1		100.0
KAILAHUN	0.6	0.3	95.2	3.2	0.6		100.0
KENEMA	1.6	0.4	91.2	6.0	0.8		100.0
KONO	2.2	0.7	82.4	13.7	0.9		100.0
BOMBALI	0.3	0.4	80.6	17.4	1.3		100.0
KAMBIA	0.5	0.5	87.2	9.3	2.3		100.0
KOINADUGU	0.3	0.1	41.3	53.9	4.2		100.0
PORT LOKO	0.9	0.3	92.1	4.9	1.8		100.0
TONKOLILI	0.4	0.3	78.8	18.4	2.1		100.0
FREETOWN	8.7	1.3	89.1	0.3	0.6		100.0
WESTERN AREA RURAL	1.2	0.4	90.5	7.2	0.7		100.0
SIERRA LEONE	1.9	0.5	83.7	12.7	1.3		100.0

TABLE 9.14A PERCENTAGE OF HOUSEHOLDS BY TYPE OF WALL MATERIALS OF DWELLING

REGIONS	TYPE OF WALL MATERIALS OF DWELLING								CEMENT	ASBESTOS	ZINC	POLES/REED
	MUD	OTHER	NOT	STATED	TOTAL							
BO	26.4	0.1	2.3	0.1	70.9	0.1	0.1	100.0				
BONTHE	9.2	0.4	1.9	1.3	87.1	0.0	0.1	100.0				
MOYAMBA	14.7	0.1	2.2	0.2	82.7	0.0	0.1	100.0				
PUJEHUN	13.6	0.1	2.9	0.0	83.3	0.0	0.1	100.0				
SHERBRO	26.8	0.4	3.7	0.8	68.0	0.0	0.3	100.0				
SOUTHERN PROVINCE								100.0				
KAILAHUN	24.4	0.1	3.1	0.3	72.0	0.0	0.1	100.0				
KENEMA	34.1	0.1	2.9	0.1	62.1	0.0	0.7	100.0				
KONO	35.8	0.1	3.1	0.2	58.6	0.0	2.2	100.0				
EASTERN PROVINCE								100.0				
BOMBALI	19.0	0.1	3.6	0.8	76.3	0.1	0.1	100.0				
KAMBIA	9.2	0.2	6.0	1.6	81.9	1.0	0.1	100.0				
KOINADUGU	5.0	0.1	4.3	1.5	88.8	0.2	0.1	100.0				
PORT LOKO	17.5	0.2	5.0	0.4	76.4	0.5	0.0	100.0				
TONKOLILI	12.1	0.2	5.0	0.4	79.6	0.5	2.2	100.0				
NORTHERN PROVINCE								100.0				
FREETOWN	59.3	0.6	31.1	0.0	8.9	0.0	0.1	100.0				
WESTERN AREA RURAL	27.3	0.3	20.3	0.3	51.7	0.0	0.1	100.0				
WESTERN AREA								100.0				
SIERRA LEONE	26.4	0.2	7.6	0.4	63.4	1.9	0.1	100.0				

TABLE 9.14B PERCENTAGE OF THE POPULATION BY TYPE OF WALL MATERIALS OF DWELLING

REGIONS	TYPE OF WALL MATERIALS OF DWELLING								TOTAL
	CEMENT	ASBESTOS	ZINC	POLES/REED	MUD	OTHER			
BO	29.3	0.1	2.2	0.6	67.8	0.0		100.0	
BONTHE	11.4	0.3	2.0	0.7	84.4	1.2		100.0	
MOYAMBA	16.3	0.1	2.3	0.5	80.5	0.2		100.0	
PUJEHUN	15.6	0.1	2.8	0.3	81.2	0.0		100.0	
SHERBRO	28.1	0.9	4.1	0.9	66.0	0.1		100.0	
KAILAHUN	26.9	0.1	3.1	0.2	69.6	0.2		100.0	
KENEMA	35.6	0.1	3.0	0.5	60.8	0.1		100.0	
KONO	35.7	0.1	3.0	0.6	60.4	0.2		100.0	
BOMBALI	18.0	0.1	3.8	1.0	76.2	0.9		100.0	
KAMBIA	9.7	0.2	6.6	0.9	78.2	4.4		100.0	
KOINADUGU	5.8	0.1	4.5	1.5	86.6	1.6		100.0	
PORT LOKO	16.6	0.2	4.8	0.5	77.2	0.8		100.0	
TONKOLILI	11.0	0.2	4.9	1.3	81.8	0.8		100.0	
FREETOWN	60.7	0.6	29.4	7.2	2.0	0.1		100.0	
WESTERN AREA RURAL	25.1	0.3	18.4	4.6	51.3	0.3		100.0	
SIERRA LEONE	26.2	0.2	6.9	1.5	64.5	0.7		100.0	

TABLE 9.15A PERCENTAGE OF HOUSEHOLDS BY TYPE OF FLOOR MATERIALS OF DWELLING

REGIONS	TYPE OF FLOOR MATERIALS OF DWELLING							CEMENT	WOOD	MUD	OTHER
NOT STATED	TOTAL										
BO	37.4	0.6	60.3	0.1	1.5	100.0					
BONTHE	17.5	0.4	80.0	0.4	1.5	100.0					
MOYAMBA	21.3	0.7	76.0	0.2	1.9	100.0					
PUJEHUN	26.3	0.5	71.2	0.2	1.7	100.0					
SHERBRO	50.3	0.7	48.0	0.4	0.6	100.0					
SOUTHERN PROVINCE	28.1		0.6		69.5	0.2	1.7	100.0			
KAILAHUN	33.4	0.6	64.4	0.1	1.8	100.0					
KENEMA	43.6	0.5	54.1	0.3	1.5	100.0					
KONO	43.0	0.7	52.4	0.1	1.5	100.0					
EASTERN PROVINCE	40.8		0.6		59.0	0.2	1.5	100.0			
BOMBALI	30.2	1.5	66.3	0.3	1.8	100.0					
KAMBIA	18.5	0.7	78.6	0.2	2.0	100.0					
KOINADUGU	12.6	2.4	82.0	0.4	2.6	100.0					
PORT LOKO	27.1	1.1	69.2	0.4	2.1	100.0					
TONKOLILI	20.0	1.7	75.9	0.1	2.3	100.0					
NORTHERN PROVINCE	22.1		1.6		73.8	0.4	2.1	100.0			
FREETOWN	88.0	6.2	4.7	0.8	0.3	100.0					
WESTERN AREA RURAL	54.6		2.0		41.6	0.7	1.1	100.0			
WESTERN AREA	84.4	5.7		9.1	0.4	0.4	100.0				
SIERRA LEONE	38.4	1.7	57.9	1.6	1.6	100.0					

TABLE 9.15B PERCENTAGE OF THE POPULATION BY TYPE OF FLOOR MATERIALS OF DWELLING

REGIONS	TYPE OF FLOOR MATERIALS OF DWELLING					TOTAL
	CEMENT	WOOD	MUD	OTHER		
BO	41.2	0.6	56.7	0.1	100.0	
BONTHE	21.4	0.4	76.2	0.3	100.0	
MOYAMBA	23.4	0.7	73.9	0.2	100.0	
PUJEHUN	30.4	0.5	67.4	0.2	100.0	
SHERBRO	51.3	0.6	46.8	0.5	100.0	
KAILAHUN	36.5	0.6	61.4	0.1	100.0	
KENEMA	46.4	0.6	51.4	0.3	100.0	
KONO	43.0	0.7	54.8	0.1	100.0	
BOMBALI	28.8	1.6	67.6	0.3	100.0	
KAMBIA	17.3	1.6	78.8	0.6	100.0	
KOINADUGU	14.4	2.4	80.2	0.4	100.0	
PORT LOKO	26.1	1.2	70.3	0.5	100.0	
TONKOLILI	18.7	1.6	77.5	0.1	100.0	
FREETOWN	88.0	6.3	4.7	0.8	100.0	
WESTERN AREA RURAL	53.0		1.6	43.6	0.8	100.0
SIERRA LEONE	38.1	1.7	58.4	0.3	100.0	

## 9.6 The Housing Situation in Freetown

Having noted the general housing condition in the country as shown by the 1985 census, it is now interesting to have a look at the situation in Freetown over a period of time. In 1968 the C.S.O. conducted a sample household survey on the household characteristics and housing conditions of households in Freetown. In this section, the same housing indicators used in the C.S.O. survey of 1968 and the 1985 Population and Housing Census are used to compare the housing characteristics of 1968 with those of 1985 to determine the changes that have occurred in the housing situation in Freetown since 1968.

### 9.6.1 Housing Services and Facilities

Data from the recent census indicated that there has been some deterioration in the housing services and facilities situation of the households. In 1969, 44.4 per cent of the households obtained their drinking water from public stand-pipes as against 53.3 per cent in 1985. Pit latrine continues to be the principal means of human waste disposal system; wood and kerosene continue to be the main sources of energy for cooking and lighting respectively.

### 9.6.2 Housing Tenure

Majority of the households in Freetown continue to be rental occupiers of private dwelling houses. In 1968, 17.0 per cent and 77.0 per cent of the households were owner and rental occupiers respectively compared to 19.3 per cent owner occupiers and 74.2 per cent rental occupiers in 1985.

### 9.6.3 Materials of Construction of Walls

The majority of the households continue to occupy housing units whose walls are constructed of cement, zinc and wood (plank). In effect, there has been no improvement in the housing situation of the majority of the households since 1968. Considering the increase in the number of households since 1968, it can be safely stated that, in fact, more households are living in qualitatively deficient housing or alternatively the qualitative housing situation of the majority of the households in Freetown has deteriorated. Majority of households are rental occupiers. This means that they have been unable to construct and purchase their own dwelling units. Few households occupy units provided by government.

TABLE 9.16 COMPARISON OF THE HOUSING SITUATION IN FREETOWN BETWEEN 1968 AND 1985

INDICATORS	1968	1985	INDICATORS	1968	1985
WATER SUPPLY			TOILET FACILITIES		
=====			=====		
Indoor tap	29.4	35.2	Flushed	3.6	16.6
Public tap	70.6	53.3	Pit	94.6	73.3
Stream/Well/Other	11.5		Other types	1.8	10.1
LIGHTING			COOKING FUEL		
=====			=====		
Electricity	46.7	53.3	Kerosene	4.7	6.5
Pressure lamp	2.1	-	Gas	0.5	4.0
Kerosene lamp	50.8	11.7	Charcoal	0.9	3.5
Candle & others	0.4	25.0	Electricity	91.2	83.4
WALL MATERIALS			TENURE		
=====			=====		
Masonry	34.3	59.3	Owner occupied	17.7	19.3
Masonry and wood	9.5	-	Rental occupied	77.0	74.2
Wood only (plank)	21.0	7.1	Rent free/other	5.3	6.5
Corrugated iron sheet	34.0	31.1			
Other	1.2	2.5			

The 1968 figures are derived from the results of the "Sample Household Survey"; Household Characteristics and Housing Conditions; Western Area Urban. Conducted by the Central Statistics Office, 1968 (see Bibliography).



#### 9.6.4 Causes of the Housing Situation in Freetown

The deterioration in the housing situation of the majority of the households can be ascribed to a number of causes, the major causes are briefly discussed below.

##### a) Population Growth

Between 1974 and 1985, the population of Freetown increased from 276247 to 469776. The increase in the number of people was naturally accompanied by the generation of housing need. Assuming that the household size of around 5 did not change between 1974 and 1985, it means that a total of 38705 new dwelling units should have been provided for the new households that were formed between the 11 year period. These new dwellings do not include the requirements of the households who were inadequately accommodated between 1974 and 1985 and the loss to the housing stock - inventory. In other words, the new dwelling units were required essentially to cater for the recurrent and not the accumulated housing needs and the loss from the inventory due to dilapidation, conversion, vacancy etc. are ignored.

##### b) The Response

The rapid growth of the population led to increased demand for housing. But the response to the need was inadequate. Until 1974, government was more or less pursuing an ad-hoc housing policy. In 1974, a national housing policy and programme was formulated and included in the National Development Plan, 1974/75 - 1978/79 (Sierra Leone Government, 1974). Experience shows that, at the end of the plan period in 1979, none of the housing policies was implemented and out of the planned 2,200 dwelling houses meant for low income households throughout the country, only 24 new dwelling units were constructed in Freetown only. However, other strategies were employed to meet the housing needs of the low income households in particular. Essentially, this strategy involved the provision of public funds for the construction of dwelling. Contractors were hired to provide the specified quantity of housing units at standards dictated by the Government.

Through this approach, less than 1,000 units have been provided since 1961. Considering the housing requirements generated by the low income households since 1963, this quantity is grossly inadequate. Based on experience, more of the other income than low income households are occupying the "low cost" dwelling units in Freetown.

It should be noted that no public housing programme has been undertaken in the provinces. On the other hand, in the provinces, the households have been left largely on their own to satisfy their housing needs, and as noted in the preceding analysis, very inadequately, at least in qualitative terms.

Based on personal observation and experience over the past decade, the private (formal) housing developers have been, and are still producing large quantity of high quality modern dwelling houses for owner occupation, leasehold and rental purposes. But considering the rents charged for these dwelling houses (minimum of Le30, 000 per annum and down payment of 6-12 months), it is evident that this sector is responding to the housing needs of the upper middle and high income households only.

The inappropriate public policy and the non-response of the private (formal) housing sectors to the housing needs of the low income households in Freetown had left them with no option but to rely on their own resources to satisfy their housing needs. To satisfy these needs, the low income households have had to "pack" into the existing low rental pan-body and timber-framed dwelling houses as renters of bed space and share the already inadequate housing services and facilities. The continuous "packing" of the households over the past years has produced not only the slum conditions in the inner-city areas, but the scarcity of accommodation in the low rental substandard pan-body and timber framed dwelling houses. The scarcity of accommodation has meant that the households either have had to move outside of the already congested city areas to areas of less population density or up the hills, to the foreshore and to stream valley terraces. On the legally and illegally acquired private and government lands, the urban poor households have constructed legally and illegally, mostly pan-body dwelling houses. Thus have appeared on the housing - scape of Freetown, informal settlements located at the slopes of the hills (George Brook, Mount Aureol and Kissy Brook), the foreshore (Kroo Bay, Susan's Bay, Moa Wharf etc.) and on the stream valley terraces (Red Pump and Kissy Brook).

The response of the public and the private (informal) housing developers could have been different if there were sustained and equitable economic growth and development in recent years. Since 1980, the entire economy has not been growing to create the wealth at the individual level (for people to spend in providing for themselves good quality housing and gradually improving their unsatisfactory housing conditions) and at the public level (to enable government to support large public programmes for housing the urban lower income households). The decline in the growth of the economy has severely reduced public funds and this has severely limited the capacity of government to invest in housing. Consequently housing for the lower income households in Freetown has continued to deteriorate.

Factors which have constrained the rural and the urban lower income households to adequately meet their housing requirements can be broadly classified under institutional. These include the high prices of not only the imported but the locally manufactured building materials, the lack of formal financing mechanism for housing and the high building standards in operation in Freetown. Locally manufactured and imported building materials are available in adequate quantity throughout the country. But their prices are not easily affordable by the majority of the population. The price of one bag of cement (50kg), has risen from Le1.50 in 1974 to currently Le4,500.00 (the current monthly salary of the majority of civil servants). The price of a bundle of corrugated iron sheet, Le65,000, is almost equivalent to the annual salary of most senior civil servants. The prices of other essential building materials have escalated beyond the affordability levels of the majority of households in Freetown.

Formal financing institutions (commercial banks, insurance companies etc.) exist in Freetown. But the lending policies of these institutions preclude lower income households mainly because these households cannot satisfy the conditions, to be fulfilled before the loan is granted.

Of the conditions, the most difficult one to be satisfied is the type of collateral the financing institutions require - a legally owned property (land, house etc.) and a guarantor to be approved by the financing institution itself.

Building regulation in force in Freetown are provided by the Freetown Improvement Act, Cap 66, as amended. Of the regulations that the lower income households find difficulty in satisfying are the types of building materials that should be used - mainly cement blocks - in the construction of the walls of a dwelling house and the requirement that provision has to be made for internal water supply, flushed toilet and internal kitchen.

Land presents a formidable constraint in Freetown. In Freetown, the amount of land available and suitable for housing development is limited due to the presence of the two physical barriers - the sea in the north and the hills in the south. Due to intense competition and demand for the limited amount of land, based on personal experience, land prices are too high to be conveniently affordable by the lower income households.

#### 9.7 Conclusion and Policy Implications:

The housing situation in the country is far from satisfactory. The majority of the households do not enjoy adequate services and facilities and the majority of the dwelling units are structurally sub-standard. Most of the households in the Provinces do not have access to safe drinking water. It is only in Freetown that the majority of the households have access to good quality drinking water. The sanitation system is very poor throughout the country. Pit latrine and the bush/river serve as the main types of toilet in Freetown as well as in the Provinces. A pit latrine is not a poor sanitation system *per se*, but it poses health problems in the intermediate urban centres in general and in Freetown in particular, where densities of population and development are high and the system is shared by different households of different hygienic standards.

Energy (domestic) consumption levels are very low. Wood and kerosene serve as the main sources of fuel for cooking and lighting respectively. The over-dependence on wood as the main cooking fuel in Sierra Leone poses environmental problems, in particular the destruction of the tree and the denudation of forests and the consequent impact on the climate and the loss of other biological species.

The majority of the housing units have their wall constructed of mud in the Provinces and in Freetown 31 per cent of the dwelling units are of Pan-body construction. Although zinc is the predominant roof material, there are a considerable number of dwelling units whose roofs are constructed of thatch. Mud and thatch are good insulating building materials. But considering the high amount of rainfall experienced in Sierra Leone, these building materials disintegrate under the impact of the rain, unless the materials are regularly maintained. Units using zinc in Freetown are not properly constructed, especially those constructed in the informal settlements. Under the impact of high temperature and high amount of rainfall the pan-body structures deteriorate in appearance. Due to the thermal quality of zinc, those units constructed with zinc also do not offer comfortable indoor living environment since the zinc gets hot during the day and cold at night. Thus about a third of the households in Freetown do not live in dwelling units that offer security against the weather elements, and comfortable indoor environment.

Added to this is the current rebel incursions and the subsequent mass destruction of property and life, including dwelling units. The displacement of large numbers of people from the five affected districts ( Bo, Kenema, Pujehun, Kailahun and Kono ) has adversely affected not only the neighbouring districts and towns, but also the entire economy and social life of the country.

##### 9.7.1 Housing Policy:

Thus there is need to formulate a National Housing Policy and Programme. The policy document is required not just because such a document has not been prepared but it is required to provide the direction for dealing with the unsatisfactory housing situation in Sierra Leone. The policy document will also provide guidelines to national and international funding agencies in the housing sector while at the same time providing the basis for tackling the underlying problems of the housing situation. The policy should address major issues as building materials, housing finance, institutional and legislative framework and urban slums and informal housing and the question of land policy. More effort should be made to introduce alternative building materials that is cheaper. Cement and zinc have become very expensive and if households are to build more durable dwelling houses, cheaper alternative building materials should be found.

As we near the end of the 20th Century, the majority of Sierra Leoneans still lack access to adequate quantity and good quality drinking water and efficient system of human waste removal. Water and sanitation are essential for healthy living. If by the end of the 20th Century, the majority of Sierra Leoneans are to enjoy these basic services, measures should be taken to rehabilitate the pipe-borne water supply systems that operated in almost every district by 1980. Provision of wells will enable households to have access to the quality of water that is better than that obtained from rivers. However, the provision should be concentrated in those settlements with less concentration of people and these settlements are rural centres and not urban centres. Sanitation is also another critical area, but more so in the urban centres in general and in Freetown in particular. For health reasons, pit latrines are not efficient sanitation systems in urban areas like Freetown. The need to provide a central sewage system in Freetown is now over-due.

The over-reliance on wood as the main cooking fuel has already proved environmentally and economically disturbing. The indiscriminate cutting of the trees for fuel-wood has resulted in the disappearance of the trees around most urban centres in general and Freetown in particular. The environmental consequences of the continued over-dependence on wood as the source of fuel for cooking will become disastrous unless alternative sources of fuel for cooking are found.

Freetown indeed is a renters' city, inspite of the poor housing conditions. The problems are that the majority of the households are unable to construct or buy their own dwelling units and there is complete lack of large public and private housing development to cater for the needs of the majority of the households. To encourage home-ownership in Freetown, Government should reconsider its housing strategy of constructing "low cost" houses for rental occupation. Households should be encouraged to purchase public housing on mortgage basis. Private (national and international) housing developers should also be encouraged to not only engage in large scale housing development but that the dwelling units so produced should be for sale on mortgage or other financial arrangements. Home ownership should be introduced in Freetown and households in the Provinces should be encouraged to continue owning their own dwelling units

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