

**ORGANISATION AND METHODOLOGY OF
1993
POPULATION AND HOUSING CENSUS
OF THE GAMBIA**

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ORGANISATION AND METHODOLOGY OF 1993 POPULATION AND HOUSING CENSUS OF THE GAMBIA

CHAPTER 1

INTRODUCTION

1.1 Background of the Census

A population census is defined as the total process of collecting, compiling, evaluating, analysing and publishing or otherwise disseminating demographic, economic and social data pertaining, at a specified time, to all persons in a country or in a well-delimited part of the country. A housing census is the total process of collecting, compiling, evaluating, analysing and publishing or otherwise disseminating statistical data pertaining at a specified time, to all living quarters and occupants thereof in a country or in a well-delimited part of a country. The 1993 Population and Housing Census of The Gambia was in accordance with these definitions. Further, it contained all the essential features of a census, namely individual enumeration, universality within the country and simultaneity.

1.2 Census Operations in The Gambia

The 1993 Population and Housing Census of The Gambia (referred to as the 1993 Census of The Gambia in the following pages) was the tenth undertaken in the country's history. It was the third one since Independence. Records show that a census was taken in 1881 and every tenth year thereafter. Owing to the war, however, the 1941 census could not be held. It was deferred until 1944 when a count of Banjul (then Bathurst) was taken. The 1951 census covered only Banjul and Kombo St. Mary. The population of the rest of the country for that year was based on estimates made by travelling commissioners. The 1961 census had to be deferred to 1963 due to general elections. That census marked the first complete and simultaneous count of the country's population. The 1963, 1973, 1983 and 1993 censuses employed the canvasser method in which enumerators visited individual households and completed questionnaires for each household in the country. In the household questionnaire detailed particulars in respect of usual members present and visitors to the household were collected.

The 1963 census and censuses prior to it were carried out by the Ministry of Local Government, as this Ministry with its Divisional Commissioners was the only one with a tested machinery for carrying out censuses. In these censuses one of the officers of the Ministry was designated as the Census Controller and the Divisional Commissioners were designated as Census Commissioners. Each Census Commissioner was responsible for organising census activities in his area under the co-ordination of the Census Controller. From the 1973 census onwards, the Central Statistics Division took over the responsibility of conducting the decennial census.

1.3 Position Regarding Population and Related Statistics

Population is basic to the production and distribution of material wealth. In order to plan for and carry out economic and social development, administrative activity or scientific research, it is necessary to have reliable and detailed data on the size, distribution and composition of population. The population census is a primary source of these bench-mark statistics covering not only the settled population but homeless persons and nomadic persons as well.

In The Gambia the vital registration system is not functioning satisfactorily since

there is large scale under-registration of births and deaths. Due to lack of resources, demographic surveys are also not conducted. Hence the census data are a potential source of demographic indices relevant to planning and research.

1.4 Objectives of the 1993 Population and Housing Census

The objectives of the census are to count all the people in the country and to provide the Government with their number in each Local Government Area and District, by age, sex and several other characteristics. These figures are required for various aspects of economic and development planning. The ultimate aim of such planning is to provide a better way of life for the people of The Gambia, and to conquer what have been called the Five Giants: Disease, Ignorance, Squalor, Idleness and Want.

For effective direction of the census field operations, a Divisional Census Office in each Local Government Area Headquarters was opened. Each of these Divisional Offices was headed by a Divisional Census Officer (D.C.O). The D.C.O. with the assistance of field staff had overall responsibility for implementing the census field programme in his/her jurisdiction as laid down by the Census Commissioner in Banjul.

For the first time in the history of The Gambia, middle level officers of the Central Statistics Department who were statisticians with field experience were deputed for the post of Divisional Census Officers in the Divisions. The names of these officers are given in Appendix.

In the 1983 Census, retired civil servants were functioning as Divisional Census Officers. It was found that they could not cope with the arduous and demanding task that census taking required. Consequently supervision work suffered. To overcome this situation, the arrangement of deputing the departmental staff was made in the 1993 Census and this worked well. The duties of the D.C.O's included, *inter alia* the following:-

- (i) Update all census maps relating to their areas
- (ii) Sensitise the population to the aims of the census and the need to obtain their co-operation - drawing on the influence of Seyfolou, Alkalolou, community leaders, teachers, etc. They have to distribute census posters, arrange to exhibit census films and hold village meetings and discussions.
- (iii) Identify suitable persons in educational institutions in the area who may be engaged as census supervisors and enumerators.
- (iv) Plan and organise all pre-enumeration activities so as to ensure timeliness and accuracy of census enumeration and
- (v) Implement all directives related to the Census that may periodically emanate from the Controller.

On the request of the Census Controller, the Permanent Secretary, Ministry of Local Government and Lands sent a circular No. LG391/635/01/(4) dated 15th December 1992 to the Commissioners to perform the followings functions:-

- (i) Write to all Seyfolou in the Division apprising them of the forthcoming census and securing their co-operation and assistance in publicising it.
- (ii) Introduce the D.C.O. to all the Seyfolou in his area.

- (iii) Assist the D.C.O. in securing suitable office space and accommodation.
- (iv) Make periodic spot checks of the work of all the census staff in the Division.
- (v) Arrange payment of salaries to Census Staff in the Division as well as rental for the Divisional Census Office. A warrant for this purpose would be sent. As regards Banjul and the K.M.C. areas, only items (iii) and (iv) above applied to the respective heads.

Each Local Government Area was divided into a number of Districts and each of these was placed under the supervision of a District Census Officer (called C.D.O. to distinguish from Divisional Census Officer). The names of District Census officers are given in Appendix. Each district was in turn divided into convenient Supervision Areas. A Supervisor had to supervise up to a maximum of five Enumeration Areas. The enumeration in the Enumeration Areas was carried out by enumerators recruited for this purpose.

Planning for education obviously requires a knowledge of the number of children of school age who are likely to require schooling at various levels. The Government cannot know where to build the necessary schools or how many school teachers must be trained unless it knows where the need is great in terms of the number of children who should be going to school.

Housing is a major problem, particularly in urban areas where people are often living in terribly crowded conditions. If new houses are to be built in order to relieve this overcrowding, the Government must know the number of people living in these conditions who will be requiring such houses.

The Government wishes to improve and extend the medical services of the country so as to eliminate diseases and to reduce the number of children dying in infancy and early childhood. But if medical services are to be planned properly, the Government must know the number of people involved, the number of children being born and the rate at which they are dying.

For all these purposes, it is not enough just to know how many people there are at the time of the Census because figures of this sort get out-of-date very quickly. We must know also how fast the population is increasing, so that we can tell the Government how many people there will be, not only this year but also next year, in five years, in ten years time, etc. We therefore wish to obtain information not only of people now living, but also of the number of children being born and the number of children who have died.

1.5 Legal Basis for The Census

In the Gambia, legal provision for conducting the census is contained in the Statistics Act, 1972. The Act empowers the Government Statistician to conduct or direct population censuses. It makes provision for the appointment of census officers, for the completion of the forms, and for the protection of confidentiality. Major decisions such as the census date and the questionnaires to be canvassed, were taken by the Cabinet. This ensured that all Ministries were conversant with census proposals and had the opportunity for offering comments and guidance.

CHAPTER 2

CENSUS ORGANISATION

2.1 Census Hierarchy

For the 1993 Census, the following was the organisational set up:- The Census Controller (The Director, Central Statistics Department) was responsible for the entire field operation. He was assisted by the Deputy Census Controller (Head of the Demography Section, Central Statistics Department). At the Local Government Area Level, the Divisional Commissioner was, as in the past, the official head of all census operations in his capacity as Census Commissioner in the Division concerned. In Banjul and Kanifing Municipal Council Areas, however, the Mayor of Banjul and the Chairman of K.M.C. are respectively the heads of census operations in their areas.

2.2 Census Divisions

For effective direction of the census field operations, a Divisional Census Office in each Local Government Area Headquarters was opened. Each of these Divisional Offices was headed by a Divisional Census Officer (D.C.O). The D.C.O. with the assistance of field staff had overall responsibility for implementing the census field programme in his/her jurisdiction as laid down by the Census Commissioner in Banjul.

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Census Committees

(i) Technical Advisory Committee

As part of the preparatory activities for the 1993 Population and Housing Census, a Census Technical Advisory Committee was constituted and charged with responsibility of a constant review of technical aspects of the census. The Committee with the Director, Central Statistics Department as Chairman consisted of the representatives of the following Ministries/Departments:- Ministries of Economic Affairs, Health, Education (Planning Unit) and Works; Department of Physical Planning, Action Aid and Department of Lands and Survey, and Manpower and Human Resources Unit. The first meeting of the committee was held on January 29, 1992. The Committee was consulted both in respect of Census questionnaire and tabulation aspects from time to time.

(ii) Publicity Committee

Wide publicity is very important for the successful conduct of census. Accordingly, a committee was formed to guide in the matter of publicity for the 1993 Census. With the Director, Central Statistics Department as Chairman, it consisted of the representatives of the following Departments: Information Office, Film Unit, Radio Gambia, Book Production and Material Resources Unit and Non-formal Education. The Committee held several meetings. Three sub-committees were formed each to look into a different medium of publicity, to review the various publicity materials and draft programmes of publicity.

The sub-committees were formed respectively for Radio, Print medium and Films. The Publicity Committee recognised at its very first meeting in October 6, 1992 that (i) care should be taken to identify suitable media for different target groups and (ii) in view of the fact that a majority of the population are farmers, appropriate time to reach them should be taken into consideration. The different publicity measures taken for the 1993 Census are furnished under the Section 4.5 Publicity, in Chapter 4 of this report.

CHAPTER 3

PREPARATORY STAGE OF THE 1993 CENSUS

3.1 Preliminary Work Done

A project request for the 1993 census was prepared in September 1988 and submitted subsequently in May 1989 to UNFPA for consideration. The UNFPA project GAM/89/PO3 commenced in September 1990, the project duration being 1990 - 1994. The details of the UNFPA/other donor contribution will be found in Chapter 8, Census Budget and Technical Assistance.

Initial preparations for the census were started following the approval of the project request. The project document outlined the strategy as follows:- The objectives of the census could be achieved through a number of inter-relative activities which may be classified into three major phases - Pre-enumeration, Enumeration, and Post-enumeration.

The pre-enumeration activities would be carried out in two stages. The first stage activities would ensure the completion of some administrative arrangements and training programme before the formal launching of the project. The activities of the second stage of the pre-enumeration phase would include cartographic preparations and determination of procedures as well as the preparation of documents and training of census personnel. These activities were expected to provide the necessary machinery and instruments for the enumeration phase. The enumeration phase is the critical stage in the census programme. It involves the collection of information on selected topics from the population. The exercise would involve house to house canvassing by specially trained enumerators. The final phase would be processing, evaluation, analysis and publication of the results as well as the organisation of a seminar/workshop to discuss the data in order to promote their effective dissemination and applications.

The cartography unit which was set-up for the 1983 census by taking a cartographer on deputation from the Survey Department and providing support staff from the ranks of Central Statistics Department became virtually defunct after the enumeration with return of the cartographer to parent office. The maps were however, preserved by a staff member who also attended to casual mapping activities. Certain cartographic equipment (drafting tables, stereo sketch etc.) purchased under the 1983 census project which were lent to Survey Department and Physical Planning Division had to be bought back.

A mission was undertaken by ECA Census Cartography Adviser (Dr. R.R. Tripathi) during July 22 to August 9, 1990 to assist the Central Statistics Department in preparing a work plan for the pre-enumeration cartographic work for the 1993 census as well as a detailed list of cartographic equipment and other materials required. The terms of reference of the mission were:-

- (i) To review 1983 census maps to assess the extent of their suitability to next census and required updating.
- (ii) To initiate preliminary cartographic activities preparatory to cartographic field work and Enumeration Area delineation and mapping.
- (iii) To review the work plan of cartographic activities given in the project document and make amendments based on assessment of mapping status and requirements.

After discussions with the officials concerned and field visits the mission made the following recommendations:-

- (i) The Census Cartography Unit should be re-established by deploying two cartographic assistants to it initially to take up necessary preliminary activities.
- (ii) Procurement of certain cartographic equipment and material should be taken up early to ensure their timely delivery to enable Central Statistics Department cartography staff accomplish relevant preparatory measures with the help of these equipment and materials.
- (iii) Revised work plan of cartographic activities should be adhered to.
- (iv) The budget provisions relating to cartographic fellowships should be rephased to the year 1993 - 94 so that cartography staff may be trained on publication of maps and other post-enumeration cartographic activities.

Other Missions During Preparatory Stage

The UN/DTCDC Technical Adviser on computer Methods (Mr. Peter Trulp) undertook a mission in December 1990 and submitted his report giving some valuable suggestion on planning for data processing work for the 1993 census.

The Demographic Statistics Adviser, Statistics Division of Economic Commission of Africa (Mr. E.A. Colecraft) undertook a mission to The Gambia during March 4 to 8, 1991. The mission observed that there has been a satisfactory progress in the preliminary census activities. Another mission was undertaken about the same time (March 4 - 11, 1991) by Technical Adviser on Demographic Statistics, Statistical Office, U.N., New York (Dr. Sam Suharto) and Programme Officer, Country Programming and Evaluation Branch, U.N., New York (Mr. Mousa Olayan). Both the missions mentioned above synchronised with the Tripartite Review meeting held on March 7, 1991. The second mission also made several recommendations relating to budget revision, training, further visits of Regional Adviser, Cartography, etc.

T.P.R. Meeting of March 7, 1991

The program of preliminary work of 1993 Census during 1990 as summarised by the Director, Central Statistics Department at the TPR was as follows:-

- (i) In-house census planning Group has been established. This group has been conducting a review of experiences of the 1983 population census.

The objective of this study was to improve upon the weakness of the last census, in particular reducing the errors in census data collection.

- (ii) Efforts were made to make an inventory of the available maps. Updating of the Enumeration Area (E.A) maps had also been started.
- (iii) In the area of training, four fellows were on training abroad. The break-up was as follows:- two fellows were studying at the ISPC, US Census Bureau in Washington DC for a one - year diploma Course on survey and census methodology; one fellow was studying in U.K. for a six week computer programming course; and one fellow was studying at the Cairo Demographic Centre for a one-year Diploma Course in Demography.

TPR took note of the reduction of the ceiling of the UNFPA budget for 1991. It approved the postponement of some project activities to 1992 while some other activities were to be funded by UNDP contribution.

A follow-up mission was undertaken by the Regional Adviser in Census Cartography, (Dr. R.R. Tripathi) from March 21 to April 12, 1991 with the following objectives:-

- (i) To review the progress on various cartographic activities initiated during the previous mission and provide necessary technical assistance, as desired necessary and,
- (ii) To organize training for the field mapping staff and start cartographic field work.

The Director, Central Statistics in the course of his briefing the mission stressed the need to start the cartographic field work during the course of the present mission although in the revised work plan presented by the Central Statistics Department at the TPR meeting, this activity was rescheduled to commence in November, 1991. Accordingly the main part of the mission was devoted to the inspection and inventory of equipment and installation of ammonia printing machine, acquisition and printing of base maps, preparation of the training and reference manual for cartographic field staff, recruitment and training of field staff and commencement of cartographic field work. Field mapping was taken up first in urban areas taking into account available transportation facilities and other logistical support. The cartographic field work was started on April 12, 1991 in a settlement of Kanifing with field mapping staff comprising five mappers and three supervisors/trainers who were given practical training. The field work broadly involved up-dating the 1983 Enumeration Area (E.A) maps, numbering compounds and determining approximate size of the EA's and appropriately entering new boundaries on the maps. The exercise was indeed very demanding and time consuming.

A mission was undertaken by the ECA Sampling Adviser (Mr. J.O. Onsembe) and Trade Statistician (Mr. E.P. Chingánda) during August 22 to September, 1991. The objective of the mission was to conduct a national training course on census evaluation and statistical quality control for the technical staff of the Central Statistics Department who would be closely involved in the 1993 census. The course was organized under the project RAF/88/PO3 - Census Training Programme in Sub-saharan Africa. Twelve officers (3 females and 7 males) from Central Statistics Department participated in the training. The topics covered in the training were:- Basic Sampling Methods, Types, Sources and Effects of Error, Quality Control Programme and Census Evaluation Techniques.

Another follow-up cartography advisory mission (third in the series), was undertaken by the Regional Adviser in census cartography, (Dr. R.R. Tripathi) during June 14 to July 4 1992, to review the cartographic work. Completed maps in respect of about 16 settlements of Kanifing on 1:2500 scale were reviewed and several points were brought to the notice of the chief cartographer by the mission. The mission recorded as follows:-

The strength of field staff was raised from 5 to 14 in June 1991. By the end of 1991, field mapping was completed in Banjul and urban areas of Kanifing as well as some other larger rural settlements of Kombo North and Kombo South districts. However, in early 1992, the field teams were deployed to rural areas in order to

complete the same before the start of the rainy season. To ensure timely completion of field mapping in all the rural areas, about 14 additional field staff of the SDA project were also associated with cartographic field work. The last leg of rural field work in about five districts of Mansakonko and Basse regions was completed during the course of the mission. The field -mapping in the remaining areas including Brikama and Gunjur was expected to start on July 6 and completed in a month's time. Some of the cartographic equipment and materials which were put under procurement process by the then DTCD in April 1991 were finally delivered to the Central Statistics Department in July 1992. These equipment and materials were inspected by the Regional Adviser and found in order and according to specifications.

The purchase of six additional vehicles (Toyota double-cab pick-ups) was initiated in February 1992 under the project budget. They were, however, expected to arrive in July 1992 at Banjul from Japan. The cartographic field work, however, went on uninterruptedly with the support of SDA project vehicles.

In November 1991 Technical Adviser on Data Processing from UN/DTCD Headquarters (Mr. Peter Trulp) undertook a mission to discuss computer requirements and type.

During March 30 - April 6 1994 Technical Adviser from UN/DTCD Headquarters (Dr. Sam Suharto) undertook a mission to participate in the TPR meeting of April 6, 1992 and also review the project activities. The mission made a valuable contribution in reviewing the budget consequent on UNFPA Country Director's cut of the budget for 1992 and also in reviewing the progress of census work. The mission suggest that a household listing prior to the census night would help in speeding up the **defacto** count during the enumeration. This suggestion was subsequently adopted in the census.

The TPR held on April 6, 1992 approved a revised work plan for 1992 and a revised UNFPA budget for \$306,941 for 1992. A two-month data processing consultancy mission was carried out in February - March 1992. The consultant installed five P.Cs which were procured under the census project early in 1992. He also imparted some basic training to the Central Statistics Department staff on the use of P.Cs and selected software.

Census Date

With the approval of the cabinet the census reference moment was fixed as the mid-night of Thursday April 15, 1992. Prior to this, the Ministry of Education on the request of Director, Central Statistics Department, approved the extension of the upcoming Easter holidays for schools by about two weeks upto April 30, 1993. This was necessary since a minimum of two weeks was needed before and after the census date to enable Central Statistics Department prepare for census in terms of training of enumerators and their deployment in different locations to successfully enumerate all household in The Gambia.

3.2 Pilot Census

A pilot census is conducted prior to the census mainly to pretest the proposed questionnaire in order to get a feedback on the suitability of intended census questions, of their formulation and of the instructions given, as well as the suitability of the questionnaire design and the time requirements in enumeration. It is also used for reviewing data processing arrangements.

For the 1993 census of The Gambia, a pilot census was planned to be held in June 1992. It was, however ultimately held in July 1992. It was carried out in 20 E.As

selected by stratified sampling as follows:- Urban Areas, 5 E.As, Semi-urban Areas 5 E.As, and Rural Areas 10 E.As. Updated E.A maps were used in this exercise. A systematic review of the findings of the pilot census was made by the Demography Section and Data Processing Section and necessary changes were made regarding the contents and formats of questionnaires, forms and other census materials and arrangements for enumeration. Editing, coding and data entry of pilot census schedules provided some useful guidelines. Following is a brief report prepared by Ms. Amie Gaye on the Pilot census which was helpful in the organisation and implementation of the census:-

Training of Enumerators

On the 16th June 1992 training of field enumerators started with 30 participants and 2 trainers. At the beginning of the training, participants were enlightened on the objectives of the Population and Housing Census in general and the Pilot Census in particular. Their role as field enumerators and how they are to go about their duties to ensure quality data collection was also emphasized.

During the three days of the training, participants were taken through all the Census questionnaires; GPC 1, GPC 2, Forms A, C and G. The rationale behind each of the questions was explained as well as how to go about asking the questions and recording the responses. At the beginning of each session, a recapitulation of the previous session was done.

Mock interviews were conducted in Wollof and Mandinka to assess how best the questions could be interpreted (especially the sensitive questions). Each of the enumerators was also given a copy of Form A to conduct actual interviews in their areas of residence. These questionnaires were assessed and the problem areas discussed thoroughly on the last day of training.

On the fourth day, a multiple choice examination based on the training was conducted and 20 participants were selected as field enumerators and 2 with field experience as supervisors.

Field Work

It would have been ideal for field staff to be deployed to the field immediately after the training. Unfortunately, this could not be done due to deficiency in logistic support. Enumerators had to stay away for 2 weeks and reported on the 6th July for a day's refresher session.

The enumerators were divided into 4 teams of 5 members each headed by a field supervisor. They were deployed on 7th July for the field enumeration which lasted for 10 days.

Problems Encountered In The Field

1. One of the enumerators failed to report at his point of embarkment and was therefore left behind. He paid his way from his pocket and was later refunded by the office. His supervisor never met him in his place of work.
2. Due to inadequate publicity of the Pilot Census, It was difficult for some Alkalos to house some of the enumerators who went to the provinces.
3. Owing to the fact that the general public was not well sensitized on the objectives of the Census and for that matter the Pilot Census, some

enumerators met refusals and some of them had to make promises to solicit the respondents co-operation.

- 4 Listing sheets (GPC 2) was not filled prior to enumeration due to resource constraint. The first three days of field work was therefore devoted to filling them. Hence some enumerators were unable to make a complete coverage of their enumeration areas.
- 5 Some localities falling within the same E.A. were far apart and enumerators had to travel long distances from one locality to the other. This perhaps also accounted for the incomplete coverage of certain E.As.
6. Some refused to allow male enumerators to question their wives.
7. Language barrier was another constraint.
8. Some enumerators were never visited by their supervisors. The supervisors claimed that some of the localities were far apart and they did not have enough fuel to cover all their areas of supervision.
9. No workplan was prepared by supervisors; so it was difficult to trace some of the enumerators.
10. Some of the enumerators went to the field without their manuals.
11. Shortage of forms by enumerators were encountered and they had to wait for their supervisors to come and supply them with the forms.
12. To crown it all field workers went to their various places of work without being paid any advances.

Common Problems with the Data Collected

GPC 2

Total number of persons in the compound were being recorded as the sum of GPCs 3, 4 and 5 instead of GPCs 3 and 4.

FORM A:

1. Identification Particulars: (a) Total number of buildings in compounds were being recorded as households by one of the enumerators.

(b) Another was using lower case letters to identify the different households in a compound. For example 01a, 01b etc instead of 01, 02.
2. GPC 3: (a) The concept of visitors was not understood by most of the enumerators. As a result visitors were treated as usual members of household. They appear on GPC 3 instead of 4 and "guest" written as their employment status.

(b) Visitors appear on GPC 4 as they should but they are left out on the inside pages of the Form A by few of the enumerators.
3. The concept of reference period (usual members present on census night) was not understood by some of the enumerators, hence usual

members of household who were absent from home for school, work etc. were recorded as usual members absent on census night by some of the enumerators during the first day of enumeration.

4. Estimating respondents' age was another problem area since some respondent make reference to events that are not part of the office's calendar of events. For example reference was made to the day Armitage High School was opened etc.
5. Relationship: (a) All wives were recorded as temporary head by some of the enumerators even where the head of the household was present.

(b) Other relative and Non relative confuses some of the enumerators; for example son's wife was treated as non relative by some enumerators.
6. Type of union for women in polygamous homes were given code 1 (monogamous) instead of 2 (polygamous).
7. For duration of stay, some enumerators were recording the age of the respondents in completed months instead of the length of time they have lived in the area of enumeration.
8. Skip instruction in questions was not being observed by some of the enumerators.
9. The instructions on how to record duration of stay was not understood by most enumerators. Instead of recording the duration in complete months they recorded the upper limits in the instructions.
10. Children of migrant parents were recorded as being in the area of enumeration for the length of time that their parents have been there even when the children have not attained that age yet.
11. Literacy: Most enumerators didn't observe the age limit for administering this question. As a result persons aged below 10 were asked this question.
12. Full time education: The columns provided for full time education in question 14b is too small if one has to code 70 and specify the level attained. Under the same column, some enumerators were recording the range instead of the level attained eg 11-16 instead of just 16.
13. Type of activity: The age limit was not observed in some cases and the skip instruction neglected.
14. Occupation: The occupations of persons were not recorded in some cases.

Home makers were being recorded as working for 30 days, their main occupation as cooking and their employment status as unpaid family worker.

The name of establishment was not reported by some enumerators. This would make industrial classification extremely difficult in some cases.

- 15 Number of children born: A lot of inconsistencies have been observed in the records of this section. In some of the records, the sum of children living in the household, living elsewhere and dead does not tally with number of children ever born.

Some children recorded as living in the household with their mothers is not reflected in the records of persons in the household.

Some births recorded as occurring within the last 12 months preceding the pilot census were more than 12 months old.

16. Housing conditions: This section was better completed by most enumerators than other sections. The only problem was that some skips were not observed. It is also unreasonable to say that a household of 45 members living in a compound with 3 building structures each with more than 2 rooms occupy only 2 rooms.
- 17 Deaths within the household during the last 12 months: The reference period for this question was not observed by some of the enumerators at the beginning of the enumeration period as a result deaths in the past irrespective of duration were recorded.

Form G Building and Compound Particulars

Only buildings for residential use were being recorded at the beginning of the Pilot Census. Kitchens and other structures for non-residential use were not being recorded.

All enumerators complained about their payments

Recommendations

1. The need for group cohesiveness should be stressed so that no field workers are left behind. One should bear the cost of transportation if left behind.
2. All possible attempts should be made to arrange for adequate logistic support including advances to field workers so that they could be deployed to their various areas immediately after training.
3. GPC 2 should be prepared a week before interviewing.
4. All the problem areas are to be emphasized during the training for the actual Census and all field workers should be urged to read their manuals thoroughly.
5. The four main columns of question 19 should be lettered a, b, c and the letters for the sub-columns (i.e a to h) be removed. In addition, above column (a) should be printed $(a) = (b)+(c)+(d)$ in order to avoid inconsistency in fertility records.
6. Supervisors are urged to maintain close supervision during the first few days of enumeration and more time should be spent with enumerators who are having more problems in filling the questionnaires.

7. Care should be taken during E.A. demarcation so that localities falling under the same E.A. would not be too far apart wherever possible.
8. The general public should be well sensitized on the objectives of the Census so that field enumerators will not encounter much problems.
9. There is need to mobilize the support of Chiefs, Alkalos and other influential personnel at village level during the publicity campaign.
10. Wherever possible, the local languages spoken by an enumerator should be taken into account when posting enumerators to various areas to avoid the problem of language barriers.
11. Supervisors are advised to prepare a workplan and a copy of this should be given to each of their enumerators.
12. Some important and locally popular events that occurred in specific areas and are not part of the Office's Calendar of events should be incorporated in the list of events.
13. For the census, it is recommended that a week's training be conducted with 4 days dedicated to classroom training and 3 days to the field to facilitate a better understanding of the census instruments by the enumerators.
14. It is recommended that the census office for the Kanifing Municipal Area be setup immediately and mappers be deployed there to begin the EA boundary verification and description.

CHAPTER 4

PRE-CENSUS ACTIVITIES

4.1 Manpower

Recruitment of mappers for cartographic field work was the first step to be undertaken in the matter of manpower planning for the 1993 census. Cartography Unit for 1993 census had to be re-established almost from scratch as already mentioned. The only staff member looking after cartographic activities had to proceed on one year training course in census and survey methods at ISPC, Washington in August 1990.

It was initially estimated in early 1991 that about 12 mappers would be required to carry out country-wide field work in about 15 months' time. Accordingly provision for 12 mappers for a period of 15 months in 1991/92 was made in the UNFPA census project budget to support the cost of fieldwork. However, due to budgetary ceiling, the TPR meeting (March 7, 1991) recommended deferment of field mapping to late 1991.

It was decided to start the cartographic fieldwork in April 1991 with a limited staff (4 mappers) and subsequently recruit additional field staff in early 1992. This arrangement was expected to result in the fullest utilization of the services of the regular staff deployed for cartographic work and also timely completion of enumeration maps. Eight candidates applied for field mappers in April 1991. They were given instructions on the tasks and procedures of field mapping and basic elements of map reading and then given a short screening test by the Regional Cartographic Adviser. Based on the performance in the test, four candidates were selected for appointment as mappers and asked to attend the training with other Central Statistics Department staff deployed to cartographic work. The strength of field mapping staff was raised with the recruitment of additional field mappers in June 1991. Of the 14 field mappers, appointed totally 2 were engaged in drafting and compilation of base maps at the head office while the rest were grouped into four teams, each deployed to base map updating and quick counting of population for E.A delineation. The chief cartographer returned from his training and was in position in early October 1991.

For the posts of Divisional Census Officers initial thinking was to recruit from the open market, candidates with five GCE o'levels, seven years experience in administration/statistical work and age thirty years and above. Later it was decided to depute officers from the rank of Statistician/Cadet Statistician for these key posts, They were in position in December 1992 in the headquarters of LGAs. Each of them was given an extra monthly allowance of D500.00 for a period of five months from January to May 1993.

The Census District Officers (CDOs) were drawn from the rank of mappers and other middle level officials. Some of the CDOs were also drawn from among experienced and hard-working teachers. The number of DCOs and CDOs deployed is given in the Appendix. In general, supervisors were selected from among teachers and enumerators from among students after screening tests. In some cases students who did excellently well in the test were selected as supervisors. The number of supervisors and enumerators deployed is given in the Appendix.

4.2 Data Collection Procedure

Census data was collected by canvasser method, the enumerator visiting every household. As the 1993 census was a *de facto* one, enumerators were instructed to enumerate each and every person who spent census night (i.e April 15, 1993) in a

household, an institution or out of doors in each Enumeration Area. They were also to enumerate people dwelling in a household if they were temporarily absent on census night but were somewhere else in The Gambia where they could not have been enumerated (e.g someone who was out fishing all night). As midnight of April 15 was the reference moment for the census, persons who died shortly before that midnight were not to be enumerated. Children born prior to that midnight were to be included in enumeration.

The preliminary work of numbering compounds and buildings and collecting particulars relating to them as part of Housing census was done during April 10 to 13. Enumeration of out-door sleepers and other floating population was done on census night itself. The following procedure was adopted in enumerating persons in normal households who formed the bulk of the population:-

A first visit was made by enumerator to households during April 15-16 in a quick round to note down usual members and visitors present on census night and usual members absent on census night. This was followed by a second visit by enumerator to collect other particulars in the census schedule for usual members present and visitors. The enumeration ended on April 29. In Kanifing and Brikama L.G.As a section of the enumerators did enumeration on April 30 also. The preliminary quick round by enumerators immediately after census night to note down persons present on census night in household was introduced for the first time. The purpose of this innovation was to help respondent recall without difficulty persons who were present in household on census night.

4.3 The Census Schedules

The preparations for the 1993 Census which commenced in January 1991 gathered momentum during the latter half of the year 1992. The UNDP provided the services of Chief Technical Adviser on Population Census in September 1992. The first item of preliminary work related to mapping of Local Government Areas, Districts, Settlements (towns and villages). Enumeration Areas were delineated afresh by mappers after careful field work. Thus, the country was completely covered by a network of E.As which encompassed distinct areas and had identifiable boundaries.

Questionnaires were initially developed by the staff of the Demography Section taking into account past experience, the needs of the country to be served by the census data, U.N. recommendations, the willingness of the people to respond to the topics and the ability of the enumerators in understanding the concepts and definitions. Draft questionnaires were placed before TAC for consideration and suggestions made by TAC taken into account.

Based on the pilot census experience, the questionnaires were further revised and submitted to the Government. The questionnaires finally approved by the Cabinet were:-

- (i) Form A: Household Questionnaire with four parts. This was the main questionnaire designed to ascertain the number of persons present on census night in household and also collect demographic, social and economic data of every such person enumerated. Information on housing conditions was also included in this.
- (ii) Form B: Group Quarters Questionnaire. This questionnaire was used to collect census data pertaining to inmates of institutions like hospitals,

- hostels, prisons etc. as well as the floating population which included outdoor sleepers, those in hotels, rest houses etc. on census night.
- (iii) Form C: Building and Compound particulars. This questionnaire was filled in for all buildings and compounds in the country. It was canvassed by enumerator in the first round, after house numbering so as to get an inventory of compounds and buildings which was a necessary pre-requisite for conducting the census. As this questionnaire formed part of the Housing Census, information on construction materials and use of each building was also included in it.

In addition to the above questionnaires a special Graduate and Diploma Holder Card was distributed so as to be filled in by the respondents who are Graduates and Diploma Holders. All the four questionnaires may be found in the Appendix.

Following forms were also designed to guide the enumerators:- (i) GPC 1 called E.A population abstract (ii) GPC 2 called Listing sheet for supervisors. The following forms were prescribed for monitoring work of enumerators:- (i) GPC 6 Supervisor's Record Book (ii) GPC 7 Supervisor's Return Sheet. A separate form GPC 8 called Population scrutiny sheet was prescribed for District Census Officers to record 1993 census figures in the field after checking.

Following improvements were made in the 1993 census schedules over the schedules of the previous censuses:-

- (i) The format of the questionnaire was changed so as to record information about each person horizontally in the same line which proved more convenient to enumerators.
- (ii) Broadly the questions, concepts and definitions adopted in the 1983 Census were retained for the sake of comparability. However, some modifications had to be made in the 1993 census. Important among them are as follows:-
- (a) In general more questions were pre-coded in the 1993 census schedules than in 1983 with a view to minimising data processing time.
- (b) In Form C, "Burnt Brick" was included as construction material of wall along with cement block whereas it was under "Other" in 1983. "Concrete" was included as a separate item under construction material of roof. In use classification of buildings, Education, Health, Religion and Recreation were separated.
- (c) The following new questions were added in Form A in 1993:- Type of union for ever married persons to know the extent of monogamous and polygamous unions in the country and to cross classify with fertility, mortality etc; previous residence and duration of stay in respect of migrants with last place of residence were asked to throw light on migration phenomenon; question on death in household in the last twelve months was included to get mortality estimates; under the question on the highest grade attended, more levels like middle school, undergraduate/studying for a Diploma, Graduate/Diploma holder and Post Graduate were added.

- (iii) Sufficient thought was given for the design and formulation of questions so as to elicit the correct answers. The instructions to enumerators and supervisors were expanded considerably and emphasis was laid on the need to ask probing questions wherever necessary, e.g. questions on economic characteristics, fertility etc.
- (iv) A special Graduate/Diploma holder questionnaire was canvassed for the first time to collect information which will prove useful for man-power planning.

4.4 Printing of Census Schedules and Forms

Census questionnaires forms A, B and C, GPCs 1, 2, 6, 7 and 8 as well as the manuals were prepared on the computer by the Data Processing Section. These were got printed at the Government Press, Banjul lithographically in sufficient numbers. Imported paper procured under the UNFPA budget was used for this purpose. It should be mentioned here that as the required number of forms were sent to the field from time to time by closely monitoring the field work, the enumeration work proceeded smoothly without any problem of dearth of forms. There was no wastage of forms either.

4.5 Training

Divisional Census Officers were given the authority to identify trainers and to arrange for training venues within their respective areas. In addition each census division was given a lecturer from Gambia College who helped with the training of trainers. Most of the trainers were graduates and senior teachers from Secondary Technical and High School with long of experience in teaching. The purpose of this training was to create awareness among the trainers on the objectives of the population and housing census, the rationale behind each of the questions, how best to interpret the questions in the various local languages to obtain the information sought as well as how to identify Enumeration Area (EA) boundaries. Mock interviews were conducted among the trainers and field trips conducted in order to give the trainers practical field experience in identifying EA boundaries. A special manual for trainers was prepared and distributed for their guidance.

Training of Supervisors and Enumerators

Supervisors and enumerators were also trained intensively for a period of one week in groups of thirty in a class by the trainers. The training was co-ordinated by DCOs and the Gambia College Lecturers. Supervisors and enumerators were supplied each with a copy of Enumerator's manual which clearly defined concepts as well as how questions are to be asked and answers recorded. In addition each supervisor was given a copy of the Supervisor's manual which primarily outlined the duties of the supervisor. Supervisors were trained separately from enumerators. They also had a mock interview and practical field trips. As the training progressed, a participant would be called forward and a case of a hypothetical household with its usual members, visitors etc were presented to the participant who explained to the class how the information should be presented. Problem areas were then solved by other participants or the trainer.

At the end of the training an assessment in the form of examination based on the training was conducted and the best participants selected. In the process some people

who were being trained as supervisors became enumerators and enumerators who did extremely well and had leadership abilities became supervisors. Following was the Training Calendar:-

Training of Trainers : March 25 - 31

Training of Enumerators and Supervisors

Intensive Training : April 1 - 5

Practical Training : April 6

Test : April 7

Result and Posting : April 8

Transportation to Concerned EAs and Identification : April 9

Commencement of Filling Forms : April 10

Some of the improvements made in the training programme of the 1993 census were as follows:-

- (i) The need to ascertain truthful information regarding nationality was specially emphasised in the instructions and training classes to enumerators with a view to getting a correct count of foreigners.
- (ii) Training of enumerators and supervisors was decentralised so as to have in each training session in each Division not more than 30 to 35 trainees. This helped in training the field staff more efficiently both in theory and practice. Specially trained trainers drawn from the teaching faculty of The Gambia College were deputed to assist the Divisional Census Officers in the training programmes.
- (iii) Special emphasis was laid on imparting training in the regional languages so that enumerators and supervisors might grasp the instructions with ease. The services of the staff of the Department of Non-formal Education were availed of for training the Divisional Census Officers in translating important census terminologies in different languages. Audio cassettes containing recorded instructions in languages prepared by that Department were used by Divisional Census Officers in their training sessions. Only enumerators knowing local languages were posted in the respective areas.
- (iv) Instruction manuals and census questionnaires were printed by the Government Printer in adequate number and on time. The distribution of these and other census materials was so organised that there was no complaint from any quarter about their inadequacy during the census operations.

4.6 Publicity

Publicity campaign forms a most important aspect of the census operations. This is all the more important in African countries where people have to be made aware of the utility of census in development planning efforts.

The publicity committee for the 1993 census played a crucial role in the matter of census publicity. The sub-committee members spared no pains to do their best in respect of each medium of publicity allotted to them. The efforts to appoint a Publicity Officer did not, however, fructify since there was no proper response to the advertisement inviting applications for the post presumably because the grade offered (Grade 8) was too small. Later, Grade 12 was considered appropriate for this post, but since there were no funds forthcoming for publicity this proposal had to be dropped. Nevertheless, this did not seriously affect the publicity campaign as the Demography Section Staff ably co-ordinated the work themselves.

There was no provision for publicity in the UNFPA budget and several attempts made towards the end of 1992 to get it included in the Revised Budget did not yield results. Publicity was therefore organised within available Government funds. The result of all this was publicity campaign could not start off, even in January 1993 except for a few radio spots which did not cost much.

In the course of January 1993, the Divisional Census Officers with the help of the Divisional Commissioners organised meeting for each of the 35 District Authorities in the L.G.As (other than Banjul and Kanifing). In Banjul and Kanifing the Municipal Council Staff were contacted by the Divisional Census Officers. At these meetings the authorities concerned were informed in detail about the forthcoming census. Their co-operation was sought in sensitising the people. The Divisional Census Officers undertook special tours of District and met each and every Chief or Seyfo in charge of district and most of the Alkalos or heads of villagers.

The Controller of Census toured the Divisions and impressed on the Divisional Commissioners the importance of the census and the key role they had to play in this national task. When the Deputy Controller of Census and the Census Adviser went on intensive tour of the districts towards the end of January 1993 they found that almost all the Chiefs and the Alkalos met were aware of the upcoming census in April 1993. Some of the Chiefs said that census was nothing new for them and their people as they have seen earlier censuses. An illustrative booklet on the 1993 census was circulated personally among the Chiefs. The Chiefs were requested to allay any fear in the minds of the people that census would be used for taxation purposes and to impress on them the benefits of the census for planning for development.

Radio Broadcast was resorted to in a large measure not only because it was less expensive but it was very effective in that census message reached every nook and corner of the country. Beginning from December 1992 publicity was given through messages, radio spots, panel discussions in English and local languages. Radio Gambia, Radio 1 and Radio Syd from Banjul and transmission from Basse did a remarkable service in this regard. The following programmes were broadcast:-

- (a) Talks by census officials in different languages explaining census questions and how to answer them.
- (b) Panel discussions involving representatives of user Ministries/Departments, UNFPA, Officers of Central Statistics Department

and Radio Gambia Official to highlight the census programme and utility of answers to each census question. In these discussions questions on census received from listeners over phone were answered on the spot.

- %w) Interview of census officials by Radio Gambia representative on various local languages programme.
- (d) Broadcasts by His Excellency The President.
- (e) Repeated broadcasts of various spot announcements on the census, especially during the census period and a week before.
- (f) Broadcast of a play incorporating highlights of the census in languages.

One poster was produced for the census in colour. This was displayed in all villages and in strategic points in towns. Measuring 64cm by 45cm, it contained The Gambia flag at the top. At the centre was a big circle with the inscription "The Gambia Population and Housing Census, April, 1993" and the picture of an enumerator enumerating with the Gambia river and country in the background. The English message in black and white in the poster read as follows:- "Make sure you and your family are counted". Using Arabic scripts, the messages in Wollof, Mandinka, and Fula were also incorporated in the poster.

Regular newspaper advertisements were arranged by the Information Department. The local press published interesting news items and articles on census apart from these advertisements. A census video film was specially produced by the Film Unit. It was shown all over the country for a period of twenty days in April 1993, beginning from April 5. A list of villages where the film should be shown was carefully drawn up. In towns it was shown in strategic points. Video vans lent by Health Education Unit and Agricultural Extension Unit were used for this purpose. The film contained visuals on scope and purpose of the census, how the census is conducted and need for people's co-operation in census. It also contained messages from Ministers exhorting the people to co-operate in 1993 Census operations.

A circular letter from the Census Controller to heads of Offices/Organisations was sent seeking the co-operation of them, their staff and their families in successfully enumerating them in the census. The President's address to the Nation on the radio at the commencement of enumeration was very helpful in enlisting the co-operation of the people and creating enthusiasm among enumerators and supervisors to do their work diligently.

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⁴ Note for Office:- Sections 4-7 Logistics Transportation, supply of materials etc., 4.8 stationery and equipment and 4.8 Cartographic work may please be drafted by Mr. Alhaji Ali D. Ceesay (sections 4.7 & 4.8) and Mapping Section (section 4.9) respectively. Mapping section may please take into account details furnished in chapters 3 and 4.

CHAPTER 5

THE ENUMERATION PHASE

5.1 Preparation

Materials for enumeration were procured by the Accounts Section in Banjul. These were despatched to each Division in sufficient number by special vehicles accompanied by staff members. Enumerators' materials consisted of Pens, Forms A, B and C, GPCs 1 and 2, E.A. Map and Enumeration Area Description, Identity Card and Enumerator's Manual. Supervisors were given spare forms A, B and C, Pens, Supervisor's Manual, sufficient numbers of Form GPC 6 (Supervisor's Record Book) and GPC 7 (Supervisor's Return Sheet) and Identity cards. Materials for enumerators were packed in a thick folder. Same was done for supervisor's materials. Enumerators and supervisors were deployed to their places of work on April 9 - 10, 1993 with their kits accompanied by mappers who helped them in identifying E.A. boundaries.

5.2 Enumeration

The whole country was finally divided into 1601 enumeration areas (EA) and were grouped into about three hundred and twenty supervisory areas. Each enumerator was responsible for one EA and each supervisor for five enumerators. The supervisors were also supervised by the District Census Officers who co-ordinated the field activities at district level. Enumeration started with the preliminary housing census schedules (Form Cs) from 10th through 13th April. During this period, compounds and building structures were numbered and particulars relating to them were collected. The population census was a *de facto* one with midnight of Thursday 15th April 1993 as its reference moment. Special arrangements were made to cover institution and vagrant population as at that time. This was started just before midnight with the help of the Tactical Support Group (TSG) who provided security along the beaches and other areas suspected to be dangerous. The President and household members were enumerated by the Census Controller and his staff on April 15.

5.3 Problems and Perspectives ^{*5}

- (a) Following were the major problems in enumeration reputed by DCOs. Logistics: Deploying enumerators was a big problem because enough vehicles were not available to transport the field staff. Training allowance was not paid in time in some places. This made it difficult to control those who had failed in the examination and wanted to be paid immediately. In some areas Law enforcement Officers had to be called in for help. In one area, persons who had failed in the examination and lived far from the training center wanted to be transported back.
- (b) Enumeration Procedure: Enumeration in two stages created problems where households had moved by the time the enumerator went for a second visit. Some of these households could not be traced which meant that detailed information could not be collected about the household members. A few enumerators who attempted to fill in the remaining parts

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Provided by Ms. Amie Gaye

themselves were promptly detected and revisits arranged to the households concerned.

- (c) Concepts: The concept of temporary head of household was not clearly understood by some enumerators. There were instances where all wives were reported as temporary heads irrespective of whether their husbands spent the census night in the household. In other cases too, enumerators gave code 3 (i.e the code for spouse) to heads of households who spent census night in their households but were absent at the time that the enumerator called and code 2 (i.e temporary head) to their spouses.
- (d) There were no cases of refusal or non-response. In Kanifing, however, there were a few cases of refusal to allow the enumerator inside the house. The DCO had to visit these households herself and point out the legal provisions which made it obligatory on the part of the head of the household to give the required census enumeration. Such problems were in general absent in rural areas.

CHAPTER 6

POST-ENUMERATION, PHASE 1

6.1 Receipt of Questionnaires, Scrutiny, Storage and Movement Control.

Immediately on the completion of the census, the enumerators' records were collected by the supervisors and handed over to the CDOs/DCOs concerned along with the supervisors records. Each enumerator's record was in a separate folder on the top of which all identification particulars of the E.A. with the name of the enumerator was written. The DCOs carefully packed these records in boxes and sent them to the headquarter in vehicles ear-marked for this purpose.

The questionnaires were returned from the field to The Headquarter at Central Statistics Department in Buckle Street in Banjul during the first three weeks of May. In the headquarter a Record Room or storage Unit had been prepared with racks to store the big bulk of questionnaires. All forms were scrutinized, counted and checked according to instructions made for this purpose by demography section and all essential forms (Form A and Form B) Population Questionnaires, Form C - Building / Compound Questionnaire, Graduate Questionnaires) were bundled into Enumeration Area (EA) folders and transferred to the Record Room. Here the questionnaires were arranged LGA wise and within each LGA, in the order of Enumeration Area Number.

All EA-folders was attached with an Index Slip on which all activities and movements of the folder was registered in order to keep track of all movements / activities (phases) the questionnaires went through. The same registration was done in a separate Main Register File in order to enable one to locate in which phase a specific EA folder was at the moment. All the movements were registered when an EA folder left the Record room as well when the folder was returned to the Record Room for storage. All folders were to through the following phases:

Form A/B:

- Verification
- General Coding
- Coding Industry and Occupation
- Data-entry
- Verification of Data-entry (rekeying)

Form C:

- Verification / coding
- Data-entry
- Verification of Data-entry (rekeying)

Graduate Form:

- Verification / coding
- Data-entry
- Verification of Data-entry (rekeying)

Initially three Record / Storage Clerks were posted to be responsible of the record Room and for the carefully register on the Index Slips of the folders and in the Main Register File.

6.2 Provisional Results

Commencing from the first week of May 1993, a separate team in the headquarters was entrusted with the work of manually compiling the provisional results

at district level. The team quickly scrutinised GPCs 1 and 2 and abstracted the sex-wise population figures. Where necessary, the enumeration forms were also referred to. The provisional population totals were incorporated with a brief analysis in Provisional Report (1) in June 1993. An address to the nation on the Provisional Results of the 1993 census by the President of the Republic of the Gambia was broadcast in early July 1993 by the Radio Gambia. The provisional results put the population of The Gambia at 1,025,867. The final figure turned out to be 1,037,208 which is higher only by about a percent. Two more provisional reports, Provisional Report (2) on Foreign Nationals in The Gambia and Provisional Report (3) on Population Growth in Districts and Urban areas were released in October 1993 and December, 1993 respectively. For Provisional Report (2) the manual tabulation was done referring to answers to the question on Nationality in Forms A and B.

6.3 Editing/Verifying, Coding and Data-entry of Form C's.

Editing/Verifying and Coding are important preliminary steps in data processing. They constitute the link between the raw data collected by the enumerators and input for the computer programs through which statistical tables are generated. Editing/Verifying is primarily aimed at cleaning the data for coding, keying-in and analysis. Verifiers/Coders were appointed in May-June 1993. The number of staff appointed for editing/coding is given in the Appendix.

The questionnaires went through the different phases of data processing in the order of: Form C's, Form A/B's and Graduate Forms. Form C's were selected to be processed first, due to the relative simple questionnaire which would imply a minimum of training of staff involved before the data processing could commence.

The verification/coding manual for Form C was finalized in June '93, by a working group. Verifiers and Coders were thoroughly trained with the help of the verification/coding manual and the verification/coding commenced after two weeks training. Form C is relatively simple, so verification and coding was done in one and the same process. Data-entry personnel was allocated in August '93 and due to the low magnitude of building data only six data-entry operators were allocated. Training of data-entry personnel started in September '93 continuing for two weeks. Two weeks training was sufficient to enable the data-entry operators to feel comfortable with the computers, data-entry program and to boost their keying speed and accuracy to an acceptable level.

Due to lack of public electricity and breakdown of air conditioners data-entry of Form C started early October '93. The data-entry operators showed a significant progress in their keying speed with no, or very little influence on the quality of data and data-entry including rekeying was finalized in the beginning of December '93.

6.4 Editing/Verifying, Coding and Data-entry of Form A/B's.

The verification/editing manual for Form A/B was finalized in August '93 by a working group after several meetings and discussions due to the complexity of the questionnaire. (Verification manual included in appendix). Verification commenced after one week training of verifiers/editors. The questionnaires were verified / edited in order of Local Government Area starting out with Banjul.

Verifiers checked the questionnaires for completeness and consistency. Experience during the first two weeks of verification revealed some discrepancies and poor accuracy executed by some of the enumerators filling the questionnaires in some parts of the field. This resulted in a higher workload for the verifiers than expected, and the

quality of data required the verifiers to consult with supervisors, senior staff and census advisors on a regular basis. After verification, questionnaires were returned to the Storage Unit for registration and storage.

The team of verifiers was headed by a supervisor who reported the progress in speed and quality of the editing process to the head of the Demographic Section on a weekly basis. A worknorm was set for each verifier, and following this norm the verification process was accomplished during the last week of May 1994.

The coding manual for Form A/B was finalized in September '93 by a working group, again after several meetings and discussions, and after one week of training, coding of questionnaires commenced. (Coding Manual included in appendix).

Coding was divided into two separate processes:

a) General Coding and b) Special Coding.

General coding is coding of questions regarding birthplace and previous residence. Special coding is coding of the questions occupation and industry. It was decided to have a special team concentrating on the codes for occupation and industry in order to increase the accuracy of coding these questions. Each coding section was headed by a supervisor who reported the progress in speed and quality of the editing process to the head of the demographic Section on a weekly basis.

It was necessary to transfer six persons from the coding section to the editing/verification section, in order to speed up the editing process which at times were remarkably slow.

To compensate the workload of the persons transferred, five additional coders was be engaged as of March 1, 1994, and the coding task is was finalized in the middle of June 1994.

When the Data-entry of Form C's (Building and Compound Particulars) was accomplished, the data-entry operators were trained in data-entry of Form A/B which is much more complex than form C. A data-entry manual was developed for this purpose. (Data-entry manuals included in appendix). The training started in the middle of January and commenced commenced for three weeks. Data-entry of Form A/B started in the middle of January 1994 with 11 data-entry operators working in one shift.

Due to finalize data-entry in time (April '94) according to the original workplan, it was planned to have two shifts of data-entry operators (2 x 14 persons) since a great part of the data have to be rekeyed for verification purpose. However, this was not possible at this time due to budget constraints. The department soon realized that with the heavy workload of processing the bulk of census questionnaires steps had to be taken to facilitate funding of more personnel for the data processing activities. The World Bank was approached with regard to financing the salaries for temporary appointed dataprocessing staff up to an amount of US\$ 30.000.

The World Bank came to our assistance at a very crucial moment when there was a shortfall in the census budget to implement the dataprocessing activities in full scale. With World Bank funding, it was from the middle of March '94 possible to extend the number of data-entry operators from 11 to 28. Also the number of verifiers and coders was increased at this time, so the process of data-entry would not catch up with the verification/coding process.

The Data Processing Advisor produced different scenarios combining number of

keystrokes to be keyed, number of data-entry operators allocated, number of working hours per week, giving different alternatives accomplishing the task of data-entry. The Department of Central Statistics adopted a model with 28 data-entry operators working in two shifts six days a week, one shift from 8 am to 3 pm and one shift from 3 pm to 10 pm.

Totally 51 million keystrokes had to be entered in data-entry (see calculation in appendix). With each data-entry operator keying an average of 3.000 keystrokes per hour, working six hours per day six days a week, it would be possible to enter the 51 million keystrokes in 101 workingdays, corresponding to 5 months. The estimated number of keystrokes per hour (3000) was a conservative estimate and during the phase of data-entry the average number of keystrokes per hour reached as high as 5-6000 keystrokes per hour which was acceptable the number of keying errors taken into consideration. In order to ensure the quality of data, almost half of all data on Form A/B (average of 49 %) was verified (rekeyed) on the computers. Rekeying of data from a specific enumeration area was done by a different operator than the one who did the actually data-entry.

The process of data-entry was supervised by a programmer as supervisor and was closely monitored by the Head of the Data Processing Section and the Data Processing Advisor. The second data-entry shift (evening shift) was beside the supervisor monitored by a Senior Staff Member of the Demographic Section. Each of the shifts was allocated a technician in case of any technical problems or breakdowns. The technicians also assisted in the distribution of EA-folders among the data-entry clerks.

General for the data-entry of all forms, the procedure of distribution was the same. An estimated number of EA folders for one shift was requested from the Storage Unit to the Data Processing Section, where dedicated staff took care of the distribution among the data-entry clerks. EA folders which were only partly finished at the end of the day, were carefully marked and stored in special dedicated shelves for each data-entry operator, in order to continue keying the same folder the following day. A special register was invented to keep track of data-entry and verification (rekeying). When an EA folder was assigned to a data-entry operator, data regarding EA number, date of issue, operator-id, terminal number and number of batches (towns/villages within one EA) was recorded and at finalization of the EA, the date was reported again. A number of EA's were picked out at random for verification purpose (rekeying) and the error rates were monitored so data-entry operators with remarkable high error rates could be traced and steps taken to lower the error rate were introduced.

As soon as data-entry of one Local Government Area (LGA) was finalized, preliminary tables showing population figures by each LGA and by each Village were produced in order to check the completeness of the datafile. These figures on LGA and village level were scrutinized and checked up against a manual count which took place during producing the preliminary results. This check was very fruitful, since many discrepancies appeared. The discrepancies were of the nature of missing EA's, missing villages, villages mixed together, data from one EA keyed in a wrong EA, compounds skipped, person records skipped, data from several villages keyed in as one village.....etc. Corrections were made and in some cases data was mixed up in such a way, that a rekeying was necessary. After corrections were implemented in the LGA data file, tables were reproduced in order to check that all discrepancies had been eliminated.

Another important issue with regards to the Data Processing is the numbering of Geographic Localities, Districts, Villages and EAs. At time of the mapping exercise a numbering system was created in order to distinguish the different Geographic

Localities. At the time of Data processing this numbering caused some problems because some Geographic Localities were given the number zero (0).

The CENTS tabulation program will not work if geographic codes has the value 0. So a renumbering computer program was developed to renumber all geographic codes. In short the renumbering was done after these rules:

- 1) LGA value increased by 1
- 2) District (DIS) value increased by 10
- 3) Village (VIL) value, the district part, i.e. the two first digits increased by 10
- 4) Enumeration Area (EA) value, the district part, i.e. the two first digits increased by 10

Also the Urban / Rural code (URRU) was imputed according to the list given in the manual "Circulars and Instructions" located in the Data Processing Section. Further details and printout of renumbering program is to be found in the manual "System File" located in the Data processing Section.

The census data processing software was the IMPS Version 3.1, (Integrated Microcomputer Processing System) which is developed and provided by the US Bureau of Census in Washington. It includes all modules necessary for the data processing of censusdata. During data-entry, the data-entry program provides detailed information regarding the performance of the individual data-entry operator.

In order to keep good track of the general / individual performance and progress, performance data was extracted and weekly reports statistics and graphs were produced showing the total number of keystrokes, average number of keystrokes per hour and the attendance of each data-entry operator. It was a good tool both to encourage the data-entry operators and to enable a strict monitoring of the data-entry personnel. Besides it provided the necessary information for a weekly progress report, which was submitted to the Head of the Demographic Section.

The activities of verification/editing, coding and data-entry was coordinated by the Head of the Demographic Section. The supervisors and head of sections reported the progress and obstacles in work to the Head of the Demographic Section on a weekly basis. A weekly reporting and feedback enabled the head of sections to coordinate the work and reallocate human resources between the different sections in order to utilize the allocated staff the best way, keep the workflow going and avoid bottlenecks. With strict control, continuous feedback and considered reallocation of the 70 temporary staff members, the department succeeded in accomplishing the complex task of transferring data from the questionnaires into computerfiles timely at the end of June 1994 which was the deadline according to the revised workplan.

6.5 Editing/Verifying, Coding and Data-entry of Graduate Cards.

A team of 6 staff members went through short intensive training in separating the Graduate Cards from the file folders. At time of separation the Graduate Cards, the corresponding Form A was checked if the person was stated as a Diplomaholder or Graduate.

If there was any discrepancies between the information on the Graduate Card and the information for the same person in Form A, the correct information was passed to the data processing section, where the computer data file was corrected accordingly. When all graduate cards were separated, a data-entry program was developed and two data-entry operators managed to enter and verify (rekey) all the graduate cards (around 2.100 Graduate Cards) within one week.

6.8 Tabulation Plan

A draft Tabulation Plan on Population was prepared by the Demography Section in consultation with Census Adviser during July - August 1994. Several internal meetings were held for this purpose. Dummy Tables were prepared by the Data Processing Section for the following topics:-

A-Series:	Tables on Statistics for Settlements and Enumeration Areas	- 5 Tables (including Appendix)
B-Series:	Tables on Buildings/ Structures	- 6 Tables (including Appendix)
C-Series:	Tables on Economic Characteristics	- 26 Tables
D-Series:	Tables on Demographic and Social Characteristics	- 7 Tables
E-Series:	Tables on Education Characteristics	- 8 Tables
F-Series:	Tables on Fertility and Mortality Characteristics	- 25 Tables
H-Series:	Tables on Housing and Household Characteristics	- 23 Tables
M-Series:	Tables on Migration Characteristics	- 19 Tables
	TOTAL	= 119 Tables

Along with data-entry of Population Data Form A/B, a tabulation plan for Compounds, Buildings and Structures was developed by the Demographic Section. The Data Processing Section created the tables and developed the necessary computer programs to produce the statistical tables. Tabulation of Building and Compound Particulars for Form C's was completed for all geographic areas and tables were scrutinized and preliminary analyzed by the Data Analysts in cooperation with the Census Advisor. Few discrepancies were found and edit specifications were developed. Based on the edit specifications a CONCOR (CONSistency and CORrection) program was developed to impute and correct the discrepancies in the data file. After imputing / editing data, final tables were generated and the analysis could start. The analysis was done by the Data Analysts in consultation with the Census Advisor and a report on Compounds and Building/Structures was compiled and published in September 1994.

The following tables in the B-serie Building/Structures were produced:

Table B1: - Number of Compounds, Buildings / Structures and Rooms

Table B2: - Distribution of Buildings / Structures by Use

Table B3: - Distribution of Buildings / Structures by Construction Material of Roof and Wall

Table B4: - Buildings / Structures Classified by Number of Rooms

The final Tabulation Plan, listing of Population tables, C,D,E,F,G,H and M-series are to be found in the Appendix.

During a one week mission in November 1994 by the Regional Data Analysis Advisor, the draft analysis plan was revised and completed. This of course had influence on the tabulation plan which was revised at the same time.

The Data Processing Section worked on preparing the table formats for the final tables including the tabulation programs. Edit specifications were produced by the Data Analysts in cooperation with the Census Advisor and the Data Processing Advisors. Based on the edit specifications a CONCOR program was developed to and discrepancies in the data file was impute and corrected. The Data Processing Regional Advisor conducted a two week training in February for the Data Analysts on the use of IMPS for generation of the tables. Most tables were generated during this training and the preliminary analysis could commence. During the preliminary analysis some discrepancies was revealed to the extend that the CONCOR program had to be changed and new imputations invented. After a mission of the Regional Data Processing Advisor and the World Bank Data Processing Consultant in early April 1995, all tables were produced ready for the data analysis.

A draft Tabulation Plan on Graduates was prepared by the Demography Section in consultation with Census Adviser. The following Dummy Tables were prepared by the Data Processing Section:

Table Tablename / Description

G1	Level of Education of Degree and Diploma Holders
G2	Diploma Holders by Subject of Study, Non-technical
G3	Diploma Holders by Subject of Study, Technical
G4	Graduate Degree Holders by Subject of Study, Other than Technical Degree
G5	Post Graduate Degree Holders by Subject of Study, Other than Technical Degree
G6	Technical Degree Holder by Subject of Study
G7	Diploma Holders by Subject of Study and Industrial Category of Work
G8	Diploma Holders by Income Group and Subject of Study

Tables G1 to G6 will be tabulated separately on urban and rural level.

Tables G7A, G8A will be repeated individually for holders of Non-technical Diploma, Technical Diploma, Graduate Degree other than Technical Degree, Post Graduate Degree other than Technical Degree and Technical Degree. The two tables G7A and G8A will not be tabulated separate on Urban and Rural.

6.11 Post Enumeration Survey

For the first time, a Post Enumeration Survey (PES) was conducted in The Gambia in 1993 soon after the census enumeration (second fortnight of May 1993) to evaluate the 1993 Census. It was conducted in 25 sample Enumeration Areas. The Divisional Census Officers who were trained on P.E.S. procedures were in charge of the work in their respective Divisions. The field work was done by selected enumerators and supervisors who were thoroughly trained before they were deployed for the work. Instructions for field work and matching were prepared and distributed. The net error rate according to the P.E.S. was 2.71 per cent. Details of the coverage error and content error in the Census as revealed by the PES could be had from the Report on Post Enumeration Survey released in February 1994.

6.6 Site Preparation and Equipment.

The site for the data processing of the 1993 Housing and Population Census is located on the fifth floor in the Central Bank Building in Buckle Street in the heart of Banjul, where the Central Statistics Department under Ministry of Finance and Economic Affairs is located.

The Data Processing Advisor was allocated the project GAM/89/PO3 from April 13, 1993.

Rooms for the following activities were identified:

- Receipt of questionnaires
- Scrutiny of questionnaires
- Storage of questionnaires
- Verification
- Coding
- Special coding
- Data-entry

Furniture (shelves/rags for storage of questionnaires, verify/coding tables, computer tables and ordinary chairs (dining table type)) was produced and procured locally according to the specifications made Data processing Advisor Mr. Van Mels on his mission in April 1992. Also the list of stationary recommended by Mr. Van Mels in his report have been procured and received.

All the equipment which was located in the Quadrangle building was relocated to the Central Statistics Department in the Central Bank Building.

A report on Computer Site Preparation was prepared by the Data Processing Advisor including a list of activities to be initiated and a list of equipment to be procured by the Central Statistics Department. This report is included in the Appendix.

Since no plan for these activities had been prepared by any of the previous Data Processing Advisors to the department, and hence no budget provisions have been made to meet the expenses for the procurement of the basic equipment for site preparation, commencement of these activities was pending the availability of funds. Since May 1993 following the visit of the UNFPA Desk Officer Mr. Bernard Cocquelin, The World Bank was approached through UNFPA for funding these activities but all efforts turned out with negative result.

In a meeting held on November 9, 1993 between National Coordinator of Population Affairs, Secretariat of the National Population Commission, Project Manager National Health Development Project (NHDP), Director, Central Statistics Department, Country Director, UNFPA, Dakar, UNFPA-NPO, Banjul and Mr. Edward Brown (the World Bank NHDP Project Manager) the site preparation issue was raised and it was agreed to take action that an amount of about \$ 25,000 was to be utilized for purchase of equipment for the computer site preparation.

Specifications for the necessary equipment was submitted to the Project Manager of NHDP, and minor items to a value less than \$1,100 was procured directly while major items exceeding a value of \$ 1,100 was to be processed through major tender board. After approval of the tenderboard committee, the procurement and delivery of the major items took place in the period of March '94 to May '94.

With lack of provisions in the budget for site preparation, this activity has been delayed unnecessary long due to the slow process of obtaining approval from The World Bank to fund the activity and secondly due to the long process of procurement of equipment through major tender board.

Despite the deficiency of funds for adequate Computer Site Preparation, it has been possible to commence the data processing although the process have been delayed due to constraints involved not having the necessary basic facilities as mentioned in the Site Preparation Report.

The equipment was being protected to the extend it was possible with the current computer site facility, though deficient electrical installation / electricity supply resulted in several overloads of electrical circuits with hazardous incidents with melted plugs, burned wall outlets and numerous number of burned fuses.

The electrician in charge of the Central Bank Building, inspected the current electrical installation at CSD, and expressed that it was inadvisable to install computers and air conditioners in the same electrical circuits, which has not been designed neither to run air conditioners nor computers with a workload to this extend. It has not been possible to change the electrical installations.

In general the voltage in the office was very low (185-190 volts) and at times to low to enable the UPS/Stabilizing units to start up, and all other equipment had to be turned off, in order to boost the voltage up with an additional 2 or three volts, so the UPS's could start.

The capacity of the two installed air conditioners was not sufficient to keep the humidity and temperature at an acceptable level; Furthermore, due to their inadequate capacity, these air conditioners were running continuously, which resulted in an overload of the A/C units with a following breakdown of both two units.

Another dramatic result of the insufficient control of temperature and humidity, was the experience of several computer backup diskettes with corrupted data (bad sectors), which was caused by the hazardous climate to which data storage medias, computer harddisks, diskettes, tapes and computers are exposed to, under the current conditions. To be on the safe side, all the census data was copied/backed up to several backupversions on diskettes, tapes and harddisks.

During the Data Processing process, two technicians were allocated to the Data Processing Unit. They were trained on-the-job by the Data Processing Advisor and were responsible for all preventive maintenance of computer equipment and airconditioners at the Computer Site. They were capable of repairing simple electricity circuits, installing and test of computer equipment (hardware), installation and test of computer software. Each of the two data-entry shifts were allocated a technician in case of any breakdowns as well as the Data Processing Advisor was on call if any major failure / obstacle occurred during the evening shifts of data-entry.

The following computer equipment have been received through the Economic Management Capacity Building Programme (EMBCP) GAM/90/001:

2 486/66 computers

2 486/33 computers

8 386/33 computers

12 SVGA monitors

1 HP IV laser printer

3 Epson 1170 matrix printers

6 UPS 500w

6 Stabilizers 500w

3 Keyboards

2 Printer sharing switch boxes

2 Toolkits

Misc. diskettes, backup tapes, toner for printer, printer ribbons, and computer stationary.

The UPS units and stabilizers provided by the EMBCP was procured locally and due to the quality of this equipment the department procured spare units of better quality. The data processing equipment received from EMCBP was not addressed specific to the census project GAM/89/PO3 as such, but to the Central Statistics Department, in order to provide the sections National Accounts and Foreign Trade the necessary equipment to perform their tasks.

A complete list of equipment (hardware and software) is to be found in the appendix.

CHAPTER 7

POST - ENUMERATION, PHASE 2

7.1 Evaluation and Analysis Plan

To involve national experts in the 1993 Census data analysis, a workshop for the analysis, is proposed to be held in July 1995 for two weeks. Preparatory activities for analysis workshop like scrutiny and validation of tables, recruitment and training of national consultants for census analysis, hardware and software organization etc. were underway in early 1995. The Demography Section in consultation with Regional Adviser on census data analysis, CST, Dakar prepared a draft Census Evaluation and Data Analysis plan in early November, 1994. This was later reviewed by the Census Adviser who offered some comments. A set of dummy tables which could be used for the analysis were prepared by the Demography section in consultation with Census Adviser in January 1995. The Regional Adviser on census analysis is expected to conduct an analysis workshop in July 1995 according to revised workplan.

7.2 Printing, Publication and Dissemination of Results

Three Provisional Reports have already been brought out in 1993 as already mentioned. A report on "Compounds and Buildings/Structures in The Gambia" was brought out in 1994. The following analytical reports are proposed to be brought out based on the evaluation and analysis plan:-

- (1) Spatial Distribution of the Population and Socio-Cultural Statistics
- (2) Fertility and Mortality
- (3) Education characteristics
- (4) Migration
- (5) Economic Characteristics
- (6) Gender Statistics
- (7) Housing and Household Characteristics
- (8) Distribution of Population in Settlements.

It is expected that all the reports could be released before the end of 1995. It is also proposed to bring out a Gazetteer of Towns and Villages/Settlements and an Atlas of Population Characteristics later in 1996.

Printing of the reports will be mainly done by the Government Printer. In additions computer printouts of tables and reports could also be supplied to data users on demand as part of dissemination programme. A Dissemination Seminar/Workshop is proposed to be held for five days in December 1995.

CHAPTER 8

CENSUS BUDGET AND TECHNICAL ASSISTANCE

8.1 Census Budget

According to the Project Document (GAM/89/P03) signed on July 11, 1991 contributions to be made by UNFPA/Other donors and the Government were US \$1,254,410 and Dalasi D1,157,754 respectively.

The allocated budget as on June 15, 1994, when the UNFPA Project was almost nearing completion, was \$1,252,670. This is made up of \$623,861 from multi-bi funds (Netherlands Government etc) and \$628,809 from UNFPA regular funds. These budgets may be seen at the Appendix.

Since the amount for payment to enumerators and supervisors was inadequate, an amount of D980,020 was advanced by the World Bank for financing population census expenditure from the Women-in-Development Project in May 1993.

The Government provided the following amounts the annual budgets (Dalasi):-

	1991-92	1992-93	1993-94
Staff Renumeration	90,000	115,000	125,000
Training	50,000	50,000	
Miscellaneous	10,000		30,000

The total amount released by the Government during 1991-94 works out to D470,000.

8.2 Technical Assistance

With UNFPA funding, a UN Census Adviser and a UN Data Processing Adviser were appointed for the project. The Census Adviser (Mr. Nott Rama Rao) was initially appointed for one year from September 1992. His term was extended up to March 31, 1994 in two spells with the approval at the TPR meetings and the Government. When his services were required for three more months for tabulation and analysis beyond that date, it could not be done by the U.N. as there were no funds. In the circumstances the World Bank funded his consultancy for three months (two months in July-August 1994 and one month during December 1994 -January 1995).

The Data Processing Adviser (Mr. Lars Sorensen) functioned for one year during April 1993 to April 1994. His services were extended by UN upto June 13, 1994. Due to paucity of funds, UN could not extend his services for two more months as desired by the Government. With the help of World Bank funding, he was appointed for three months in three spells during July - September 1994, December 1994 and February 1995 as Data Processing consultant to complete data processing work.

Apart from technical assistance, the Census Adviser and Data Processing Adviser contributed to national capacity building by working in close collaboration with the staff of Demography and Data Processing sections and training them through discussions in meetings and training seminars and workshops.

The Country Support Team (CST) based in Dakar gave technical backstopping in data processing and data analysis. The regional adviser in data processing (Mr. Robert De Clercq) undertook several missions for working on edit specifications and CONCOR (automatic corrections). He also trained the national experts who would undertake the 1993 census data analysis, in the use of Quick Tabulation and CENTS Software (IMPS). The regional adviser in Analysis (Mr Dackam Ngatchou) undertook a technical advisory mission during October 31 to November 1994 along with Mr. De Clercq. Analysis plans were drawn by the mission in consultation with staff of Demography Section. It was decided to conduct a workshop or analysis of 1993 Census Tables for two weeks in July 1995. Analysis will be done by national experts with the assistance of CST adviser.

Several Missions (listed in appendix) were undertaken by Technical Experts from UN DESD and ECA from time to time which were very useful in putting through the census work and also in national capacity building. The Country Directory, UNFPA, Dakar also undertook several missions during the project period to review the progress of work.

8.3 Review and Suggestions

At the project formulation stage, technical support for the 1993 census was considered necessary since it was anticipated that due to the high turn-over of staff at Central Statistics Department all the senior staff involved in the planning and organisation of the 1983 census would not be available for the 1993 Census. Further, CSD had not conducted any household survey since the 1983 census. It was therefore, thought that even for the middle level staff who were involved in the 1983 census and who might be around for the 1993 Census, this exercise might be almost a new experience in a large scale statistical enquiry.

In retrospect, the Technical Assistance provided as detailed in the previous section proved very useful not only in accomplishing the work but also in training the staff of CSD in census taking, data processing and analysis. For future censuses it would be advisable to retain trained staff of the department and keep technical assistance to a minimum so that it will be cost effective.

CHAPTER 9

CONCLUSIONS AND RECOMMENDATIONS

9.1 Conclusions

The 1993 Population and Housing Census went on smoothly on the whole. There was co-operation from all quarters. The main bottleneck was budget constraints. Further, there was no provision for an important item like publicity either in the UNFPA budget or the Government budget. This has resulted in confining publicity close to the census period. In fact, publicity for census should begin at least two to three months before the Census date if not earlier, and it should gather momentum close to the census date and enumeration period. Budget constraints had affected site preparation for computer operations. The system of deputing departmental Officers to Divisions as Divisional Census Officers worked very well. These Officers were statistically experienced and energetic and carried out their duties with a missionary zeal. The support given to them by the Divisional Commissioners on administrative matters was indeed laudable. The new census procedure introduced, namely, filling in Form A in two stages, though technically sound in a *de facto* census, posed practical problems. Firstly enumerators had difficulty in contacting again persons and even households listed in the first stage. Some householders also felt that they could give all the information required, in the first stage itself instead of waiting for the enumerator to come again.

9.2 Recommendations and Guidelines for the next Census

Census Budget should anticipate all possible items of expenditure and also provide for escalations in cost in the future. As already mentioned census publicity was not provided for in the budgets. The pay for enumerators and supervisors were provided in the UNFPA budget at the rate of D20 and D35 per day respectively. This was found to be grossly inadequate in 1993.

The non-availability of sufficient funds for paying enumerators and supervisors posed a question even as late as January 1993 as to how the census could be conducted. Thanks to the timely intervention of the World Bank authorities who arranged to release additional funds from the WID Project for this purpose, the census could be put through by paying enumerators @ D40 and the supervisors @ D60 per day. There was delay in preparation of site for data processing activities and in recruiting data processing clerks because of funding shortage.

The enumeration machinery consisting of teachers and students is good enough. Training, however, should start a week earlier than now. In the next census, Optical Mark Recording (OMR) technology could be tried in enumeration if necessary funds and material could be procured. During the intercensal period research could be carried out regarding its feasibility.

As regards concepts, "temporary head of household" which creates confusion could be dropped in the future. Divisional officers could start functioning about six months prior to the census date so that preliminary items of work could be planned and organised systematically. Transport bottleneck has also to be removed by deployment of more vehicles especially during the enumeration period and arranging supply of sufficient fuel.

As regards training of staff, there is a great need to enhance local capacity building by deputing staff for demographic and data processing training. As far as

possible staff trained in census should be retained for the next census. It is suggested that cartographic work should be updated in the inter-censal period so that a rush-job need not be done before the census.

But for the support of the donor agencies, namely, UNFPA, the Netherlands Government and the World Bank it would have been difficult to put through the census. It is very necessary that these donor agencies should continue their support in the next census also by providing assistance both in the form of financial assistance and technical back stopping.

APPENDICES TO BE ATTACHED

- Appendix 1. List containing names of Divisional Census Officers with their Division names.
- Appendix 2. List containing names District Census Officers with their District names.
- Appendix 3. Number of Supervisors and Enumerators by L.G.A. (with break up of Male/Female if possible).
- Appendix 4. Census questionnaires Form A, Form B, Form C and the Graduate and Diploma Holder Card.
- Appendix 5. Number of verifiers and coders appointed with the period of appointment.
- Appendix 6. UNFPA Budget GAM/89/PO3.
- Appendix 7. List of Consultancy Missions to the Central Statistics Department for the 1993 Census
- Appendix 8. Verification Manual
- Appendix 9. Coding Instructions / Manual
- Appendix 10. Data-entry Manual (Form A/B)
- Appendix 11. Data-entry Manual (Form C)
- Appendix 12. Computer Site Preparation Report
- Appendix 13. List of Computer Hardware and Software used for the Data processing of the Census
- Appendix 14. Final Tabulation Plan