

Annex I

SOURCES OF DEMOGRAPHIC DATA

A. Introduction

It has been universally recognized that a flow of reliable data on the population size, composition, distribution and changes therein is very essential to the understanding of the interaction between population and socio-economic factors and for formulating and implementing appropriate policies and programmes. Information about the size, composition and distribution of a population is usually obtained from censuses or demographic surveys while data on components of population change such as births and deaths are usually collected through the vital registration system.

In Nepal, the main source of demographic data is the periodic national censuses. Demographic sample surveys were carried out only recently and the vital registration system is yet in its formative stages. Thus, the periodical censuses have provided the data base needed for obtaining estimates not only of size and composition of the population but also for deriving various demographic indicators such as mortality, fertility and migration rates.

B. Population Censuses

1. *History of Censuses*¹

Nepal has a long history of censuses or census-like activities. Although no historical record is available regarding any population census in the past, counting of houses was practiced prior to the Lichhavi period. The existence of *guthis* or co-operative societies in the Kathmandu valley which sought help from each and every

household in time of need is a clear indication of such a practice.

After the Anglo-Nepal peace treaty of 1816 and the subsequent demarcation of Nepal's boundary with India, the government seems to have maintained records of the number of houses in different districts.² It has also been noted that:

"Most probably, following the footsteps of the British Administration in India, Nepal has witnessed under the Rana Administration in India, (1846-1950) four population counts. However, there is evidence that these types of censuses had taken place even before the takeover of Jung Bahadur, the first Prime Minister (1846-1977). These kinds of censuses if they really did exist, would certainly have been no more than head counts, anciently used to be taken for taxation and other administrative purposes."³

The first population census from which data are available was carried out in 1911.⁴ The government notification of 1910 regarding this census is not available. Since the then Prime Minister, Chandra Shumshere, displayed a very keen interest in this census, it is regarded as being more reliable than those subsequently taken up to 1942. The second census was conducted in 1920 after a lapse of nine years. The main reason for this census was to prepare an inventory of slaves in the country. The third census was taken in 1930 when a war with Tibet was imminent and there appears to have been gross underenumeration at the census. The fourth census was taken in 1942.

It may also be noted that although a census schedule of some sort was used to record the name of the head of the household, age, sex, occupation, etc. of household members at the censuses conducted before 1942, the final results from these censuses were merely aggregates, that is, head counts only. The four censuses taken between 1911 and 1942 had been carried out through the Zamindari or landlord system.

"The schedules were distributed to the Jimmawals and Patwaris (the landlord agents who were responsible for collecting the land revenue), who by their own means, used to carry out this task with every one in his jurisdiction. However, it is beyond any doubt, that none of these censuses, due to the apparent weakness of the system and supervision can be considered as complete or accurate."⁵

In 1950, when preparation for a nationwide population census was in progress, the uprising against the Rana regime brought the census to a standstill. The democratic Government that came into power as a result of this uprising realized that there was a need for a population census, particularly when there were frequent requests by international organizations for data on the population of Nepal. Since the men and materials required for undertaking a nation-wide census were inadequate, a census of eastern Nepal (which included the eastern hills, the eastern inner Terai and the eastern Terai, with the exception of Mahottari) was carried out in 1952, and the enumeration of the rest of the country including Mahottari was carried out in 1954. The government notification regarding the 1952 census stated that the objective of the census was to obtain reliable data on the population of the country for the formulation of the national development plans. The census Act of 1952. It also had comprehensive instructions to the supervisors regarding the census period, the

methods of filling up the census schedule, definitions, training for the enumerators, administrative responsibilities, etc. The population census of 1952/54 was regarded as the benchmark of the modern scientific census in Nepal and it made use of internationally accepted concepts and definitions and was comparable to censuses of other countries.

"In spite of the difficulties concerning the lack of equipment of any kind, transportation and the acute circumstances the census encountered, this work is, impartially, an outstanding landmark which denoted only a stubborn devotion for acquiring population data."⁶

The sixth census of Nepal was taken in 1961, about two years after the setting up of the Department of Statistics, and before the landlord system was completely abolished. In fact, the Statistics Department made use of the Mukhiyas and Patwaris as enumerators or to assist the field supervisors. The latest national census was carried out in 1971. This census collected very detailed and comprehensive data on social and economic and female fertility characteristics.

It will be noted from the above discussions that censuses in Nepal lacked defined periodicity; they were not carried out at regular intervals. Although the intention of the Government, according to the notification issued in respect of the first census held in 1911, was to conduct censuses at interval of 10 years, the concept of decennial censuses did not materialize until 1961. The second census was carried out after an interval of nine years in 1920, and the interval between the second and third census carried out in 1930 was 10 years. The fourth census was taken after a lapse of more than 11 years in 1942. The fifth census of 1952/54 could not be conducted simultaneously throughout the country and was characterized by an interval of 10 years in eastern Nepal and 12 years in western Nepal.

Similarly, between the fifth and the sixth census taken in 1961 there was a gap of nine years in the enumeration relating to eastern Nepal and seven years in regard to western Nepal. However, the seventh census took place exactly after a decade in 1971.

It may also be noted that up to 1930, no specific and permanent department was set up to conduct population census and maintain the records of the census. A population census office was usually established on an *ad hoc* basis for the purpose of the census only and dissolved after the completion of the work. A Population Office (*Janasankhya Goswara*) was set up in 1938 for the purpose of conducting the 1942 census. In 1944, the Department of Industrial and Commercial Intelligence (*Audyogik Byaparik Samachar Sangraha Adda*) was set up to prepare an inventory of natural and human resources in the various districts for development planning. Since this Department and the Population Office were dealing with the collection of statistics, both were amalgamated in 1950 to form the Department of Statistics (*Sankhya Bibhag*). In 1960, the Department of Statistics was re-named the Central Bureau of Statistics (*Kendriya Tathyanka Bibhag*).

2. Enumeration Procedures

Until 1930, the task of enumeration in the district was assigned by the centre to the district revenue offices which entrusted the task to revenue-collecting agents (e.g. jimwal, jimindar, talukdar, patwari, etc.) in the respective districts. The agents used to summon the household members to fill in the census schedule and obtain the signature of the household head on the schedule. The agents were also empowered to recruit literate persons to fill in the schedules without payment of any remuneration. From the various schedules, the revenue agents compiled the total population for their respective villages. These

figures were sent to the revenue offices for the district totals to be compiled. The total for the country was compiled at the centre on the basis of the returns received from the regional offices.

For the 1942 census, the regional offices were authorized to employ additional clerks with a view to completing the enumeration and compilation in time. However, there appears to have been no specific programme for training the revenue collecting agents in the methods of filling in the census schedule.

Prior to the 1952/54 census, five officers of the Department of Statistics received training in census methods at the international Training united Nations in New Delhi. On their return, these five officer conducted a trial census in the two of Banepa and prepared the schedules and instructions for carrying out the final census.

"In preparation for the census, 200 supervisors were trained in the central office in Kathmandu and sent into the field. Operating out of 1657 centres located all over the country, they selected, trained and supervised 17,000 enumerators. Most of these were the local state rent collectors. The enumeration involved the transportation from and to Kathmandu of about 19 tons of census schedule forms and publicity materials. Practically all these were carried by porters over difficult mountain trails where a single one way journey might take up to four weeks."¹⁷

For the purposes of the 1961 census enumeration, the country was divided into 18 census zones, which were further divided into 102 sub-zones comprising 456 census areas. The enumeration area was the village and the total number of villages was about 28,000. Each zone was in charge of supervisors who were recruited from the districts concerned. This census employed 300 supervisors and 15,933 enumerators.

"The enumeration had been carried out in two stages. In the first stage the supervisors were instructed to prepare a household list comprising the name of the head of the households, the number of family members by sex, and the name of the village and the serial number of the household. This state were completed between 12-19 May 1961. The second stage the actual enumeration which took place from June 4 to June 21, 1961. The household list for each village was used as a guidance to the enumerator.⁸

The census was carried out on a *de jure* basis.

With a view to effecting efficient supervision and control of the field-work relating to the 1971 census, the 14 administrative zones of the kingdom were further divided into 17 census areas comprising 75 districts. The census operation in each of the 17 census areas was directed and conducted by an officer appointed by the Central Bureau of Statistics. The supervision of field-work in each of the 75 districts was performed by an official special appointed for that purpose.

A list of all town and village panchayats was prepared with the co-operation of the Home Ministry. All houses in town panchayats and in big village panchayats were numbered six months prior to the census operation. Each town panchayat was divided into blocks corresponding to some extent to the wards division, and within each block houses were serially numbered. The census employed about 13,000 enumerators and 500 supervisor. The enumerator were recruited from among the local people of the panchayats, e.g., panchas, school teachers, students etc. In view of the large number of enumerators required, the dispersion of localities and the low rate of literacy, the minimum qualification required for recruiting an enumerator was his ability to read and write.⁹ An enumerator had to cover three wards of a panchayat. The

remuneration for filling up personal details of an individual was 5 piece.

The 1971 census was conducted in two phases. During the first phase, which lasted for about 45 days, the *Kharidars* filled in the individual schedule. On the last day, which was observed as the C-day, the *Kharidars* or supervisors and the enumerators together went around the enumeration unit making final adjustments for births and death occurring during the enumeration period. The census was conducted in a modified *de jure* basis, i.e., efforts were made to record persons by their usual residence.¹⁰

3. *Items Included in the Census Schedule*

The items included in the census schedule have varied from one census to another. The schedule used in the 1911 census was a simple one and contained items like name of household head, caste, age groups by sex (below 16 years, 16 to 50 years and above 50 years), active and inactive population by sex, literacy and occupation (agriculture, trade and commerce, student, services).

The 1920 census schedule contained, in addition to the items included in the 1911 census schedule, such topics as position of those in services within and outside the country, active and inactive persons retired from national services, active and inactive persons retired with pension and without pension from services abroad, and details regarding invalids. The schedule also collected information regarding servants and *bandha* labourers¹¹ and slaves.

The items included in the 1930 census schedule were the same as those in the 1920 census schedule except that particulars regarding slaves were not collected because slavery had already been abolished in 1926. The 1942 census schedule was simple. However, ages were recorded according to four broad age groups: below 15 years, 15 to 30 years, 30 to 50 years and

over. There was an additional column to collect information about emigrants by sex.

The most remarkable feature of the 1952/54 census was the importance given to the enumeration of females by age, religion, literacy, level of education, absence within and outside the country, occupation, absence within and outside the country, occupation, etc. There were several notable additions in the census schedules of 1961 particularly in regard to details of age groups, place of birth and nationality of persons enumerated. For the first time urban centres and literacy were defined. The 1971 census schedule contained in addition to the items included in the 1961 schedule questions on number of children still living by age of mother, and number of

Table 107. Topics included in the population schedules in the censuses of 1952/54, 1961 and 1971

Topics included in the schedule	1952/54	1961	1971
1.Names and casts of family members	X	X	X
2.Relationship to the head of family/household	X	X	X
3.sex	X	X	X
4.Age	X	X	X
5.Place of birth	-	X	X
6.Citizenship	-	X	X
7.Religion	X	X	X
8.Mother tongue	X	X	X
9.Marital status	X	X	X
10.Number of children every born	-	X	X
11.Number of children still alive	-	-	X
12.Births occurring during the last year	-	X	X
13.Literacy	X	X	X
14.School enrolment	-	-	X
15.Years of schooling completed	-	-	X
16.Economic activity	X	X	X
17.Economic status	X	X	X
18.Status of the unemployed	-	-	X

the censuses were merely aggregates and no cross classification by various characteristics was ever carried out. A detailed tabulation of the census data was carried out for the first time on the 1952/54 census results.

"When the enumeration was complete, the Department of Statistics was faced with the

students enrolled in schools at the date of the census. The most notable feature of the 1971 census schedule is the inclusion of the definitions and instructions at the beginning of the different items included in the schedule. The items included in the census schedules of 1952/54, 1961 and 1971 are summarized in table 107.

4. *Processing and Tabulation of Data*

The processing of the census data is a very important part of the census. Prior to 1971, processing and tabulation of data was done manually. Prior to 1952/54, the information available from

necessity of sorting and tabulating the 8.5 million individual data slips by hand as it possessed no office equipment of any kind. This operation alone lasted over two years and was done by the census supervisors when they returned from the field."¹²

The information obtained in the 1961 census was also processed manually. "Millions of individual items had been verified, edited, coded and processed. This process was completed in four and a half years."¹³ The census of 1971 was the first to use computer processing. As the census schedule was precoded,¹⁴ the report was made available as early as 1974.

As noted earlier, no reports were published in respect of the censuses held prior to 1952/54. The 1952/54 census report gives a short account of the methodology adopted and discusses the results contained in 17 tables. The total population by regions and districts for all censuses since 1911 is also included in order to give a comparative picture of population growth by regions and districts over the years. The data of the 1961 census were tabulated and presented in three volumes which together contained 57 tables. For the first time most of the characteristics were tabulated by urban/rural residence. The 1971 census data were analyzed and published in 46 tables. The notable feature of the 1971 census tabulations is the availability of district and zonal data on different characteristics cross-classified by sex and age groups. Another notable addition is the panchayat and ward level population data by sex and also ranking of panchayat by size.

5. *Summary and Conclusions*

Nepal has conducted several censuses since 1911, and the cumulative experience of past censuses can be of great help in the preparation of new censuses. The experience gained in one census could form the basis for formulating and improving methods and techniques to be adopted in subsequent censuses and thereby help to collect more accurate and comprehensive data. Population censuses are usually taken at intervals of ten years.

"Within such a long period, changes in the upper echelon, and qualified statisticians who participated in the census operation, may

unavoidably take place. Therefore, a post-enumeration report describing methodology, difficulties encountered in the field and treatment of omissions and vague entries is of prime importance not only for the analysis of the census concerned, but also as a guideline for other censuses. Complete records of field reports, training courses, instructions for the enumeration, editing, verification, coding and processing should be kept at the census office and they should be arranged in such a manner that information on any aspect of the census operation can be found easily."¹⁵

Unfortunately, no reports relating to the censuses taken up to 1942 were prepared and published and hence it is not possible to obtain any information relating to the methods and procedures adopted in the earlier censuses. However, beginning from 1952/54 it is possible to obtain a fairly good idea of the census operations, though no post-enumeration methodological reports were prepared in respect of the 1961 or 1971 censuses.

"On the department level, the Central Bureau of Statistics has gained enormous experience regarding the planning, organization and administration of census operations. The 1971 census has added a considerable volume of detailed statistics on the population distribution by zones, districts and towns and villages and on the personal educational, and economic characteristics of the population. Various types of classifications and coding systems specifically prepared for the use of the computer are available at the C.B.S. Other census materials which are very important for the census operations such as maps, list of villages and towns, census schedules and instructions were kept at the department."¹⁶

The most important objective of a national population census is to provide comprehensive and comparable data on the various characteristics of the population over the years.

but as pointed out by Kansakar,¹⁷ despite the fact that Nepal has conducted seven censuses during the present century, it has not been possible to obtain consistent, accurate and comparable data on population for several reasons. In the first instance, as was pointed out earlier, the censuses were not conducted at regular intervals; the time intervals between the various intercensal periods have not been equal. Censuses conducted at regular intervals make it possible to appraise the past, accurately describe the present and estimate the future. Lack of synchronization of census year results in the difficulty of assessing demographic changes between different censuses.

Secondly, there has been no uniformity in the nature of the information collected at the various censuses; there have been considerable changes in the schedules used. Thirdly, the procedures adopted for enumeration have varied from census to census. Fourthly, there has been no continuity of experience in census taking as for a long time there was no single permanent organization entrusted with the responsibility for taking censuses on a continuing basis. The ever-changing organizational structure of the Central Bureau of Statistics has been the main reason behind the lack of planning and failure to preserve the comparability of the data processed since 1952/54. Fifthly, since its inception, the Department of Statistics has not had an adequate cadre of personnel with academic backgrounds in demography and statistics. Sixthly, a very serious problem in the analysis of population data at the district level is the frequent changes in district boundaries. Changes in the district boundary accompanied by non-availability of data on areas included or excluded due to boundary changes makes intercensal demographic analysis virtually impossible.

It is however, encouraging to note that the Central Bureau of Statistics is aware of the many defects of the past censuses and has taken particular note of the fact that the population is insufficiently prepared for the census and that the information

collected at the census at great expense is insufficiently utilized because of the delay in bringing out the results and the highly technical nature of the presentation. A recent UNFPA sponsored mission has recommended that in view of the great complexity and magnitude of the census, the emphasis should be on producing very simple, but very high quality results that would be widely used. The mission also further recommended that data users should be consulted in formulating the questionnaire and should be informed of the tabulation plan and that a consultative group on the census including data users should be set up in Nepal.¹⁸

C. Civil Registration

Although the Village Panchayat Act of 1962 for the first time required the registration of vital events, the law was not implemented in all seriousness. However, on the basis of this Act, the Central Bureau of Statistics started a pilot registration project in 1964 to collect data on vital events, but the project was not successful. After the 1974 World Population Conference held in Bucharest which urged countries to pay attention to the collection and analysis of demographic data, the Birth, Death and Other Personal Events (Registration) Act was passed in 1976. This was followed in 1977 by a household listing act which provides for the listing of household members as an adjunct to the registration system. These two acts together provide the necessary legal basis for a registration system but are being currently reviewed with a view to introducing further improvements.

The two acts make compulsory the registration of births, deaths, marriages, divorces and change of residence of Nepalese citizens, with a fine imposed for non-compliance. A Registrar's Office at the central level has been established under the Home and Panchayat Ministry and a Registrar-General was appointed for the purposes of implementing the provisions of the Act. The Government has designated as local registrars the

secretaries of the village panchayats, and chief administrative officers of the town panchayats where the Act has been put into operation.¹⁹

Although information is expected to be collected on births, deaths, marriages, divorces and changes in residence, the Registrar General is at present emphasizing the registration of births and deaths since the others items are considered not useful and feasible to register at this stage. Heads of households are expected to notify the events to the secretaries of panchayat committees, i.e., the local registrars, in the prescribed forms. The local registrars record these events in a register, issue a certificate and forward the notification form to the Registrar-General's office in Kathmandu for compilation and analysis. The household list is also similarly filed centrally in the office of the Registrar. There is a proposal to establish statistical cells at the district level for checking the quality of registration.

The registration of vital events commenced in July 1977 and by June 1978 as many as nine districts with a total population of about 3 million were covered by the scheme, and plans were being made to extend the process to another 12 districts during the period July 1978 to June 1979. If this rate of implementation is maintained, the entire population will be covered in about 10 years. At present it is estimated that the coverage of events in the various districts ranges from 10 to 100 per cent, the average being around 60 per cent. While this could be considered an impressive achievement during the first year of operation, the coverage is not adequate to yield reliable estimates of birth and death rates even in respect of the districts covered.

It has, however, to be noted that the vital registration system in Nepal is gathering momentum and hence it is essential to keep up this tempo and consolidate the gains achieved. With this end in view, the UNFPA needs assessment mission recommended:²⁰

(a) That the questionnaire should be kept as simple as possible by reducing its physical size and deleting questions on ethnic groups and occupation of person registering;

(b) that arrangements should be made with the Ministry of Health to effect notification of vital events to the panchayat secretaries through health centres:

(c) That in order to improve the quality and quantity of reporting, a strong communication and training programme be undertaken (i) to train the registrars in the data collection aspects of their work as well as improving their relations and techniques to motivate people in their areas to provide accurate information; and (ii) to create sufficient awareness among the people to encourage them to register vital events;

(d) That at the end of the first year of the project an expert should be assigned the task of analyzing the results and should make recommendations for improvement;

(e) That at least one full-time qualified demographer should be appointed to the office of the Registrar-General.

D. Sample Surveys

The inaccuracies of the census data and the lack of a vital registration system make the accurate measurement of fertility and mortality levels in the country difficult. With the implementation of a large-scale family planning programme, the need for realistic demographic baseline data for evaluation proposes has become more pressing. Hence, a number of sample surveys have been carried out from 1974 to collect new data as well as to update the existing information. The scope and objectives of these surveys are discussed in the sections that follow.

1. *Four District KAP and Fertility Survey, 1975*

In order to assess the progress made by the experimental family planning programmes, with respect to fertility, contraceptive use, and change in knowledge, attitude and practice of family planning, a survey was undertaken by the Nepal FP/MCH Project in 1975. As well as generating baseline data which could be used on a longitudinal basis, the objective of the survey was to obtain answers to the following questions:

- (a) What are the current levels of fertility and family planning practice and how do they differ between the hills and the Terai?
- (b) What changes in fertility and practice of family planning have occurred over time which could be attributed to the various experimental programmes over and above the changes which would have been expected had the programmes not been operating?
- (c) What are the differences in changes in fertility and family planning practice and to what extent can any change be attributed to programme effects between the hill and Terai areas?

The survey was carried out in four districts: Kaski and Gorkha in the hills; and Parsa and Dhanusha in the Terai. The integrated FP/MCH programme was in operation in the Kaski and Parsa districts, while the experimental programmes were being implemented in the other two districts. Both Gorkha and Dhanusha were selected on the basis of their similarity to Kaski and Parsa respectively. Among the factors used for matching each of the districts were population size and density, number of hospitals and health posts, ethnic composition and proportions of males and females with no education.

Five panchayats from each district were selected and in order to have comparable sample size, a different number of wards were selected for different districts on the basis of a proportional probability sample design. An interview schedule

was administered to all currently married women aged 15 to 44 in all households of each of the selected wards. These women were treated as a panel and re-interviewed regularly on an annual basis (an at any other time during the year when programme-specific problems arose). The items of information collected from these women included a complete pregnancy history with incidence of infant and child mortality, stillbirth and abortion. Social, economic and demographic characteristics, norms of family size including desired and ideal sizes, family planning knowledge and practice, and the amount of time the husband has been out of the household.

Extreme care was taken to ensure that data collection was carried out reliably. The ratio of interviewers to supervisors was maintained at 5 to 1 and each supervisor was responsible to a FP/MCH Project headquarters staff. All interviews were checked in the field by the supervisors and headquarters staff and a 10 per cent re-interview of the total samples was conducted by the supervisors to assess consistency of response. In addition, all women who reported an interval of more than three years between any two births were re-interviewed and their pregnancy history reconstructed to minimize as far as possible the under-reporting of pregnancy events.

This survey was again undertaken in 1976 in four districts, out of which two, Gorkha and Dhanusha, were the same ones where the survey was carried out in the previous year, while the other two districts were replaced by Syangja in the hills and Rupandehi in the Terai. These two new districts were also selected on the same basis as the two districts selected in 1975. The survey carried out in 1976 used the same questionnaire and the same field procedure used in the survey of 1975.

2. *Nepal Fertility Survey, 1976*

Recognizing the importance of reliable data in regard to the levels of fertility for the country as a whole and for regions within the country, the FP/MCH Project carried out the Nepal Fertility Survey on a national basis in collaboration with the International Statistical Institute/World Fertility Survey of London. The field-work of this survey was carried out for a period of three months from 1 April to 30 June 1976.

The main objectives of the survey were as follows:

(a) To provide data to estimate the level of fertility for the country as a whole and its differentials by major geographic regions (the hills and the Terai), with some indication of at least the direction of difference for the mountains as well.

(b) To provide data to evaluate the progress of the national family planning programme in terms of the level of knowledge and actual practice of contraception prevailing in the country and the major geographic regions, and the extent to which fertility is affected by such contraceptive use.

A three-stage sample design for the rural population and two-stage sample design for the urban population was used. The systematic selection of 33 districts was made with probability proportion to size (PPS) from the 1971 census population. Two panchayats were chosen systematically on the basis of PPS from the selected district. Wards were selected from each of the selected panchayats. Since the variation in the size of wards was substantial, those with either 20 households or less were deleted from the sample and those with 100 households or more were subdivided into sub-wards. With this procedure, a total of 96 wards were selected from the panchayats.

Sampling of the urban sector was conducted only with the intention of assessing the representation of the urban population. Out of nine town

panchayats within the selected 33 districts, 200 households were selected and distributed into 10 batches with constant probability. This resulted in 4 batches (80 households) in Kathmandu, 2 batches each in Biratnagar and Pokhara, and 1 each in Birgunj and Hetauda. Households were selected from a listing made in 1973 for the household budget survey conducted by the Research Division of Nepal Rastra Bank.

The aim of the sample design was to include approximately 5,000 households with the expectation that about 5,000 women would be eligible for interview. "Eligible" women were defined as ever-married women between the ages of 15 and 49 years who were *de facto* residents of sample households on the night prior to enumeration. In actual implementation, a total of 5,976 households were identified in selected sample areas and of these about 95 per cent were interviewed successfully. The total number of eligible women interviewed successfully was 5,940 for the whole country.

The survey used two questionnaires: the household questionnaire and the individual (or main) questionnaire. The primary purpose of the household questionnaire was to identify women eligible for the individual interview. The design of the individual questionnaire was similar to the World Fertility Survey Core Questionnaire, but with appropriate modifications to conform to the country's objectives as well as to the culture and values of the people. Since "eligible" women were supposed to be interviewed immediately after the completion of the household interview, the household schedule and the individual questionnaire were bound together.

The first report of the survey²¹ which has been published contains 29 text tables and 83 appendix tables, including those on nuptiality and exposure, fertility, fertility preferences, and knowledge and use of contraception. A seminar was held in 1978 to discuss possible topics to be analyzed during the second phase. One conclusion was the need to analyze further clinic

accessibility, the effect of breast-feeding on fertility, etc.

3. *The Demographic Sample Survey of Nepal, 1974/75, 1976 and 1977/78*

A sample survey of the population containing questions on age, sex, births, deaths and migration was conducted in 1974/75, 1976 and 1977/78. The main objective of the survey, which was a collaborative effort by the Government of Nepal and the United Nations, was to build up a series of annual vital rates and other demographic indicators on the levels and trends of fertility and mortality in addition to the estimate of the annual volume of interregional and external migration and finally to estimate the population growth rate.

A national sample was drawn on a cluster basis from all wards proportional to population size in the different ecological regions of the country. The sample consisted of 191 wards with a population of approximately 75,000. The urban sample consisted of 5 wards (3 in Kathmandu, 1 in Lalitpur and 1 in Bhaktapur). The rural sample involved 15 districts in the country, 69 village panchayats, and 186 wards (2 wards per panchayat in Kathmandu valley, 3 wards per panchayat elsewhere). To achieve a better geographic representation, two districts, Solokhumbu and Jumla, were chosen by purposive selection from the mountain region. The accessibility of these two districts by air routes played a major role in this selection.

The experience of the 1961 and 1971 censuses has shown that a single-round retrospective inquiry, in which respondents are asked to recall births and deaths occurring during the 12 months preceding the date of the inquiry, does not yield satisfactory results. It would appear that only about 50 per cent of total births and 70 per cent of the total deaths were reported in the censuses due to lapse of memory, underreporting of births and deaths and omission of infants who died shortly after birth. In order to overcome these errors, the

demographic sample survey used the multi-round follow-up method. According to this method, a sample of population enumerated at a certain point of time is revisited at equal intervals for recording changes in births, deaths and moves which occurred in the initial population in the sample. Taking into account the difficulties which the enumerators may encounter in traveling from one sample unit to another and the low educational levels of the respondents, particularly in the rural areas, the number of topics investigated in the survey were kept to the minimum required for estimating vital rates.

The survey was followed by a quality control check of a sub-sample of all households. The quality control sample was systematically drawn by applying a sub-sample fraction of 1/10. The control check was carried out independently of the survey schedules by transcribing in the new schedules the name, age and sex of all members of the household as at the base date. Enquires were then made about any changes in the status of each individual and any change in the composition of the household during the last complete year. Upon the completion of the quality control check, entries in both schedules were marked and correction factors were worked out.

The results of each round of the survey have been tabulated and published. The report of the 1974/75 round of the survey²² contains fifteen tables showing the age and sex distribution of the population by urban-rural residence, age-specific birth and death rates, and the external and internal migration ratio. The results of the survey also formed the basis for the computation of abridged life tables for males and females. Similar information was analyzed and published in 22 tables in the report relating to the second round of the survey conducted in 1976.²³ The results of the third round of the survey conducted in 1977/78 have been published in 25 tables.²⁴ Because of the fluctuations in the level and trend of age-specific death rates, it was considered not

useful to construct life tables from the data of this round of the survey.

As noted earlier, the survey was conducted by the Central Bureau of Statistics with financial assistance from UNFPA. Although it was expected that the survey would be carried out annually even after UNFPA assistance was phased out, it was discontinued for lack of resources.

E. Other Sources

1. The FP/MCH Project Survey Activities

As noted in Chapter VII on population policy and family planning, the FP/MCH Project has a research and evaluation division which has undertaken several data-gathering activities. In addition to the collection and analysis of clinic service statistics which give information on the background of clients as well as their use of family planning, the Division also conducted the Nepal Fertility Survey referred to earlier and a KAP fertility study.

The KAP fertility study was undertaken with assistance from the United States Agency for International Development and UNFPA continuously over a period of four years from

1974 to 1978. This study was designed *inter alia* to evaluate the performance of different types of clinics (under both the FP/MCH Project and the Integrated Community Health Project) which provide family planning services. Based on this study, numerous specialized reports on various aspects of programme performance have been prepared.

2. The Malaria Eradication Organization

The programme of the malaria eradication organization has demographic data (number of people, age, sex) and household listings relating to the population served by the programme, namely, those living up to an altitude of 4,000 feet. The programme employs 7,400 field-workers and about 450 supervisors and conducts a "census" every year in December. Although not collected for demographic purposes, the information has in the past been used as a sampling frame for other surveys conducted in the areas covered by the programme. Some interests have been shown in adding more questions on migration to its questionnaire and in undertaking migration studies since migration is an important problem in the area served by the programme.