



Economic and Social Council

Distr.
GENERAL

E/CN.3/1983/16
17 August 1982

ORIGINAL: ENGLISH

STATISTICAL COMMISSION
Twenty-second session
7-16 March 1983
Item 8 (a) of the provisional agenda*

DEMOGRAPHIC AND SOCIAL STATISTICS: POPULATION AND HOUSING CENSUSES

Progress report on national experiences and emerging
issues in population and housing censuses

Report of the Secretary-General

SUMMARY

The present report, submitted to the Commission for information, contains a review of the activities of the Statistical Office relating to the 1980 World Population and Housing Census Programme. It gives an inventory of the countries that have participated in the Programme in the period 1975-1981 and that are expected to participate in the period 1982-1984. The document also contains a discussion of various issues emerging from the census experience in the 1980 population and housing census decade.

* E/CN.3/1983/1.

CONTENTS

	<u>Paragraphs</u>	<u>Page</u>
INTRODUCTION	1 - 2	3
I. POPULATION AND HOUSING CENSUSES TAKEN IN THE PERIOD 1975-1982 AND ANTICIPATED IN THE PERIOD 1983-1984	3 - 7	3
II. EMERGING ISSUES IN CENSUS CONTENT AND OPERATIONS	8 - 53	4
A. Relationship between population censuses and population registration systems	9 - 12	6
B. Census content	13 - 20	7
C. Census confidentiality	21 - 28	11
D. Census editing and imputation	29 - 35	13
E. Data storage, retrieval and dissemination	36 - 46	15
F. Co-ordination between census and data-processing personnel	47 - 53	18

Annex

Dates of national population and/or housing censuses taken or anticipated during
the decade 1975-1984

INTRODUCTION

1. At its twenty-first session, the Statistical Commission endorsed, *inter alia*, "the preparation of a report on emerging issues in population and housing censuses, based on experience in the present census decade, as an aid to work on planning for the next census decade". ^{1/} The present report contains a discussion of a number of issues that emerged from the census work as a result of the methodological development and technological innovation that has occurred during the past decades. Included are issues related to census content, the concept of census confidentiality, census editing, census data storage, retrieval and dissemination, and the working relationship between the census and the data-processing personnel. Many of the issues are related directly and indirectly to the rapid advancement of electronic data-processing technology. This advancement has, on the one hand, facilitated significantly the collection and processing of census data; on the other hand, it has created a gap between the availability of modern means and methods for census processing and the lack of a workable and efficient system that can integrate these means and methods to serve the census operation well.

2. As the 1980 population and housing census decade is coming to an end in 1984, it is gratifying to learn that most countries of the world have participated in the 1980 World Population and Housing Census Programme and that the total number of countries expected to participate in the 1975-1984 census decade is larger than in previous census decades. Therefore, the present report first gives an inventory of the countries that have taken or are expected to take a census of population and/or housing in the period 1975-1984.

I. POPULATION AND HOUSING CENSUSES TAKEN IN THE PERIOD 1975-1982 AND ANTICIPATED IN THE PERIOD 1983-1984

3. During the period 1975 to mid-1982, 175 countries or areas carried out 192 censuses; of these countries or areas, 17 took two censuses. In the remaining two and a half years of the 1980 census decade, another 19 countries are expected to take a census. The total number of countries or areas expected to participate in the 1980 World Population and Housing Census Programme is, therefore, 194, which leaves 19 countries or areas that have either no plans for a census or for which no information is available concerning their census plans (see table 1 and the annex to the present report).

4. Partly owing to the promotion of the African Census Programme by the United Nations in the 1970s, 16 countries in Africa, as well as 8 countries in Asia, 2 in South America and one in North America that did not take a census in the 1970 census decade took or are expected to take a census in the present census decade. In all, 10 countries that took a census in the 1970 decade are not expected to do so in the 1980 census round.

5. Many of the 19 countries or areas that are not expected to take a census before the end of the 1980 census round have been involved or are still engaged in military conflicts which make the undertaking of a national census impossible. Of the remaining countries or areas, some collect population data regularly by means other than censuses, some are expected to take a census in 1985 or 1986, some are small islands which are uninhabitable for part of the year and some have virtually no information available about their census plans. Nine of the 19 participated in the 1970 World Census Programme. 2/

6. Of the 14 countries 3/ that are expected to take a census in 1983 or 1984, some still have provisional or very tentative census plans; technical and financial assistance is to be provided by the United Nations to 9 countries.

7. As a part of its continuing study of population and housing methods, the Statistical Office has obtained various methodological reports from many national statistical offices. The materials have been used in the preparation of the present report and will also be used in the preparation of further technical documents on census methods. The Statistical Office is also collecting the results of the 1980 round of population censuses by means of the United Nations Demographic Yearbook Questionnaires. The results are being incorporated in the Statistical Office demographic statistics data base and will appear in future issues of the Demographic Yearbook. The results of the 1980 round of housing censuses are being collected by means of the United Nations Housing and Related Environment Statistics Questionnaires and the results will appear in the Compendium of Human Settlements Statistics, scheduled for publication in 1983.

II. EMERGING ISSUES IN CENSUS CONTENT AND OPERATIONS

8. All of the issues that have emerged in the 1980 census decade have their origins in the census work of previous decades. Some of the issues are now emerging because more census data are available and there are more census users than before. Other issues have become prominent because census costs are perceived to have risen in some countries. Still other issues arose because of the perceptions held by some members of the public in several countries who felt that in responding to the census questionnaire, they might leave themselves open to possible harm or at least be subjected to an onerous burden. Many of the issues are also related to recent developments in computer data-processing technology and its wide application to census work. Although most countries have not yet completed their tabulation, publication and evaluation activities in connection with the 1980 census round, the information so far available from some of those censuses as well as from the 1970 census round has provided considerable guidance on general trends and major issues in carrying out a census. The issues discussed below were chosen with a view to their relevance in planning for the 1990 world population and housing census programme.

Table 1. Number of countries and censuses taken or expected to be taken, 1975-1984 a/

Continent	Number of Countries			Number of censuses			
	Total	Census taken or to be taken, 1975-1984	No census planned or no information	1975-1981	1982	1983	1984
Africa	55	48	7	35	5	5	3
America, North	35	34	1	26 <u>b/</u>	7	1	1
America, South	14	13	1	9	3	1	0
Asia	43	36	7	38 <u>c/</u>	2	1	1
Europe and USSR	38	35	3	36 <u>d/</u>	2	1	0
Oceania	28	28	0	34 <u>e/</u>	0	0	0
Total, world	213	194	19	178 <u>f/</u>	19	9	5

a/ Information available as of April 1982.

b/ One country took two censuses in this period.

c/ Six countries took two censuses in this period.

d/ Four countries took two censuses in this period.

e/ Five countries took two censuses and one took a population count each year in this period.

f/ Seventeen countries took two censuses in this period.

A. Relationship between population censuses and population registration systems

9. In the 1974-1985 census decade, a few countries that have a well-maintained population registration system have decided either not to take a census 4/ or to conduct only a partial census in order to enumerate only that part of the population for which detailed social and economic information cannot be obtained from the population registration system. 5/ Another country, which took a census in 1960 but decided to cancel the 1970 census and use only the population register to obtain all population data, took a census of population and housing in 1981. 6/

10. Population and housing censuses can gather the demographic, housing, social and economic information not provided by the population register. Similarly, population registers can provide the information not covered by the census. The two types of data systems are complementary. Although they often contain many identical items, it is rare that one can be a total substitute for the other. However, when a country decides to rely on the population registration system for all basic population data, information that is not available from the register must be sought from sample surveys or other types of administrative records. A country that does not have a population registration system also relies upon sample surveys and various administrative records to obtain information not provided by the population census. Whether or not one type of data collection system can satisfy the need for data depends on a number of factors such as the size of the country, the structures and operations of the statistical and administrative systems involved, the method of data storage and the accessibility of various statistical data bases to users etc.

11. In Principles and Recommendations for Population and Housing Censuses, the complementary nature of the two data systems is described as follows:

"Population censuses have been used in some countries as the starting point for the establishment of a continuous population register If a register is already in operation, results of subsequent censuses can be compared with register data as a check on the accuracy of both. As permitted by national laws and policies relating to the confidentiality of census and other data, information from each source can be transferred to the other, after investigation and resolution of discrepancies." 7/

The partial census conducted in some countries is an example of the transfer of information from the population register to the census. The methodology and experience of such a practice should be carefully studied as there may be other countries with similar systems adopting such a practice in the future.

12. Only a limited number of countries have begun to use population registration systems as the principal or the only means of data collection. Time is needed to assess the cumulative effects of this practice on the availability of population and housing data. The experience of the countries that have stopped taking censuses since the late 1970s will provide in the next few years some insight into this emerging development.

B. Census content

13. The primary consideration in the selection of topics for a population and housing census is the need for national and local demographic, social and economic information. In the process of selection, however, balanced consideration should be given to the suitability of topics, the resources available for collection, tabulation and publication and the importance of international comparability. ^{8/} Nevertheless a core number of topics are included in most censuses. An examination of the population topics covered by some 66 countries or areas for which the 1980 census round questionnaires are available (see table 2) reveals that the relationship to the head or other reference member of the household, sex, age, marital status, occupation and industry were asked in almost every census; the place of birth, educational attainment, school attendance, activity status and status in employment were asked in 80 to 90 per cent of the censuses; the place of usual residence, national and/or ethnic group and children ever born were asked in 60 per cent, and the place of residence at a specific date in the past, religion, children living, live births within 12 months preceding the census and educational qualifications were asked in over 50 per cent. The above topics, excluding religion and educational qualifications, are all labelled as "priority", "basic" or "recommended" topics in the 1980 regional census recommendations of the five United Nations regional commissions.

14. In the 53 censuses in which housing questions were asked, the location and the tenure of the house were asked by over 85 per cent of the countries; questions on the number of rooms, the water supply system and the toilet facilities were asked in over three quarters of the censuses, and information on the construction materials of outer walls, type of living quarters and type of light were asked in over two thirds of the censuses. Only about one half of the censuses included questions on the year or period of house construction, bathing and cooking facilities (see table 2).

15. While there has been almost no change in the basic topics asked in the past two census decades, there is a growing tendency to ask more questions concerning the characteristics of the household, particularly in relation to the level of living of the household or family. In some censuses, the household topics are placed in the population questionnaires and in others they are included as part of housing characteristics. Details of the 1980 census round topics are being analysed by the Statistical Office and will be included in the revision of the Handbook of Population and Housing Census Methods, scheduled for completion in 1983. ^{9/} However, two new developments concerning the measurement of the total population and the economically active population appear to be significant and are discussed below.

16. A major objective of a population census is to learn the size of the total population of a country and its geographical distribution. Total population can be measured by either the total usual residents of the country or the total of all persons, that is, residents and non-residents, present at the time of the census. The former is the so-called de jure population and the latter, the de facto population. Details of these two methods have been discussed in various United

Table 2. Number of countries by topics included in the 1980 census round

Population topics <u>a/</u>	Number of countries	Housing topics <u>a/</u>	Number of countries
Total	66	Total	53
*Place of usual residence and/or place where present at time of census	42	Building - type of Construction material of outer walls	13 39
*Place of birth	57	Year or period of construction	27
*Duration of residence	25	Location	47
*Place of previous residence	16	Living quarters - quarters type of	38
*Place of residence at a past specified date	32	Occupancy status	16
*Relationship to head or other reference member of household	64	Ownership - type of	8
*Sex	66	Rooms - number of	41
*Age	66	Water supply system	42
*Marital status	65	Toilet facilities	41
*Citizenship	14	Bathing facilities	25
Religion	34	Cooking facilities	24
Language	22	Lighting - type of	35
National and/or ethnic group	44	Conjugal family nucleus	3
*Children born alive	48	Demographic and economic characteristics <u>b/</u>	
*Children living	34	Occupants - number of	14
Age at marriage	11	Tenure	45
Duration of marriage	5	Rental	19
Live births within the 12 months preceding the census	35		
Deaths of infants born within the 12 months preceding the census	4		

Table 2. (continued)

Population topics <u>a/</u>	Number of countries	Housing topics <u>a/</u>	Number of countries
Maternal orphanhood	11		
*Educational attainment	60		
*Literacy	30		
*School attendance	54		
Educational qualifications	34		
*Activity status	62		
*Occupation	65		
*Industry	64		
*Status in employment	58		
Time worked	28		
Income	15		
Sector of employment	12		

* "Priority" topics in the majority of regional census recommendations.

a/ Topics recommended by the United Nations.

b/ Included in the population census.

Nations documents and, in particular, in Population Census Methods, published in 1949, 10/ and the Handbook of Population Census Methods published in 1954. 11/ In practice, however, countries do not usually achieve either type of count because one or another group of the population is included or excluded, depending on national circumstances. In Principles and Recommendations for Population and Housing Censuses, published in 1980, it is therefore recommended that "each country describe in detail the figure accepted officially as the total, rather than simply to label it as de jure or de facto." 12/

17. In many censuses taken in the 1980 decade, and in some censuses of the 1970 decade, a growing number of countries have tried to identify their total populations, or at least major portions thereof, in terms of three population groups: (a) usual residents present at the time of the census, (b) usual residents absent for six months or some other specific period of time, or (c) non-residents present at the time of the census. The first and the second groups together measure the de jure population, and the first and the third groups together measure the de facto population. Of the 58 countries or areas for which information on residence is available, 30 make use of the above classification, 17 exclude non-residents from the enumeration and 11 exclude usual residents absent but include non-residents present as parts of the census population.

18. The fact that half of the 58 countries or areas use the above trichotomy may be attributed to the fact that many of them are African countries which took national censuses for the first time in the 1970s and 1980s. This development is significant because the number of countries adopting this classification is increasing and more subnational, national and international comparisons of population changes can now be made on the same population basis using either the de jure or the de facto approach. The classification is particularly useful for those countries where migratory labour is important.

19. As concerns the economically active population or the labour force and its classifications, the present international standards for statistics of the economically active population, employment and unemployment are based on the recommendations of the International Conferences of Labour Statisticians, convened periodically by the International Labour Office. The Conferences formulate guide-lines reflecting national experience and practices on the concepts, definitions, methods of measurement, collection, classification, analysis and dissemination of labour force data. The international recommendations are generally considered effective as far as the classification of wage and salary earners is concerned, but less effective when applied to other categories of workers. In coping with these issues, many countries have modified their procedures for measuring employment and unemployment. Thus, to the extent that the varying modifications and adaptations are not separately identified and quantified, the resulting national statistics cannot be rendered internationally comparable.

20. The International Conference of Labour Statisticians will meet in October 1982 to discuss these issues. It is expected that any changes in the international recommendations concerning the standards for labour statistics will be reflected in the United Nations census recommendations on the measurement of the labour force and will have a significant impact on the 1990 world population and housing census programme.

C. Census confidentiality

21. Population censuses were initially conducted to collect information for use as the basis of taxation and conscription and for establishing the rights and duties of various classes of people. Individual records were needed by Governments for these purposes. In modern times, the scope of the census has been enlarged greatly and the data collected are used mostly in the form of aggregated statistics, not only for the administration of essential government services, but also for the study of social and economic trends undertaken by Governments, industry, academic institutions and private persons. Individual records are still being used by some Governments to check the accuracy of the population registration system, to compile voting lists for national and local elections and for other administrative purposes.

22. Because there are more census users and because more, and more intimate, questions are being asked in censuses than ever before, the need for co-operation from the general public is even more essential than before. The legal protection of the confidentiality of census data, that is, the guarantee that no one other than census officials has access to individual census records, has gradually become an accepted principle in many countries. The Principles and Recommendations for Population and Housing Censuses states that "the confidentiality of the individual information should be strongly and clearly established in the census legislation and guaranteed by adequate sanctions so as to provide a basis for the confident co-operation of the public". 13/

23. Most of the countries that participated in the 1970 World Population Census Programme stipulated in their census acts certain provisions concerning confidentiality. The same provisions have been or are expected to be contained in the acts concerning the 1980 census round. Of about 140 countries or areas for which 1970 and some 1980 census questionnaires were available to the United Nations, three quarters had printed on the questionnaires either "confidential", "strictly confidential" or a short sentence stating the confidential nature of the census records.

24. Although the concept of census confidentiality is quite clear and justified in many countries, it may be foreign and ambiguous in others. The general public, particularly those in countries with high illiteracy, may not understand the meaning of the census questions or be aware of the existence of legal protection for individual confidentiality. There are those who consider that since the Government has the right to collect individual information for the welfare of the people, it may also have the right to use that information either as individual records or as aggregated statistics in a way that is most beneficial to the people. Moreover, in countries where the legal system is not well developed or maintained, a simple statement of the principle of census confidentiality in the census act or on the questionnaire does not mean much should a violation of the law occur.

25. Census confidentiality is not a new idea. It has long been taken for granted in many countries and has been repeatedly stated in their census legislation. However, in the past, few countries had a comprehensive, formal and public statement of the working definition of confidentiality and the operational policies

that applied to all stages of census operations. On the other hand, official assurances of census confidentiality were not formerly questioned in as much detail by the public as at present. For whatever reasons, the situation has changed markedly - the collection of statistics in general, and by means of the population census in particular, has become a very sensitive issue and has attracted great attention in many countries.

26. In response to heightened concern about census confidentiality by both the public and the legislative bodies in a number of countries, considerable progress has been made in specifying the scope and limits of existing national census confidentiality provisions and the actual procedures to be followed to ensure adherence to the provisions. In addition, a number of countries have expanded or refined their census confidentiality provisions, often in the context of work on statistical confidentiality in general, in order to take better account of the balance between the need for information by government and other users and the need of the individual for protection against possible abuses. Based on the experience to date, it appears that countries that have taken specific steps to deal with public concern about this subject have been successful.

27. Since census (and statistical) confidentiality provisions necessarily vary from country to country, it is only possible to give somewhat general guidance on the matter at the international level. To begin with, the census office must define clearly and in specific terms what census confidentiality is. This includes the meaning of confidentiality at each stage of census work, whether all census items or only some are confidential, whether individual census records can be used for the improvement of future census and other statistical operations, the length of time that census confidentiality will be in effect and the sanctions to be imposed, and how they are to be enforced, when violations occur. Census confidentiality provisions have implications not only for census enumeration and dissemination but also for other aspects of census work, including cartographic work, house-listing and numbering, the preparation of census control lists, the post-enumeration survey, data coding, data entry, data processing and the storage of census information both as documents and in machine-readable form. Clearly, the operational policies concerning census confidentiality at each stage of the census will be different; however, they need to be established.

28. Another important aspect of census confidentiality that needs to be addressed is the level of statistical aggregation at which confidentiality should be maintained. Most countries consider that confidentiality applies only to individual personal information and that any aggregation above the individual level is not confidential. However, is the information for a small community that consists of only a few households confidential? Similarly, is the information on a small group or an ethnic minority confidential? The rapid advancement in computer technology has helped to enlarge the scope of census-taking and enables the census office to collect and process much more detailed information than previously. However, as the computer can retrieve information for any small area or small group from the census files, the topic of aggregation is another confidentiality issue that deserves serious consideration.

D. Census editing and imputation

29. During each stage of the census operations, census errors are introduced both randomly and systematically by respondents, enumerators, census coders, data-entry personnel etc. Census editing, that is, the inspection and correction of responses in accordance with predetermined rules, has therefore been an integral part of census processing. All census data are generally edited manually by enumerators and supervisors in the field and by special census editors in regional or central census offices, and further edited by electronic computers. Because the computer can do an arduous editing task more consistently and faster than can humans, most countries use manual editing only to check of the general processibility of the questionnaires and use computer editing for the comprehensive examination and final correction necessary to ensure the validity of the data.

30. The issue confronting both the census producer and the census user is how the census editing rules should be prepared and how much editing is appropriate. When the field work is poorly done, either in whole or in part, should the census returns be corrected by applying certain imputation techniques to "improve" the quality of the data? When the returns contain too many missing or unknown entries, should imputation be used to change the questionable entries to some acceptable values or should the census users be allowed to prorate the unknown according to the distribution of the known entries?

31. The correction procedures commonly used to impute or assign an entry when the questionable entry is missing, impossible, inconsistent or unreasonable, involve either stochastic or non-stochastic methods. In the latter method, all cases containing a similar error are treated identically, for example, by changing all entries of "did not work" to "worked" whenever a number of hours worked is given. The stochastic method, which uses probability to correct presumed errors in specific items, involves two different techniques: the so-called "cold-deck" and "hot-deck" methods. In the "cold-deck" method, imputation is made on a proportional basis from a distribution of valid responses. The distribution is prepared by subject-matter statisticians, using data from previous censuses and surveys or other relevant materials. Unless the needed data are available and reliable, this technique necessitates the pre-tabulation of valid responses from the current census, which may not be economically or operationally feasible. In the "hot-deck" method, valid responses from the current census are assigned to correct missing or erroneous information. In one version of the hot-deck method use is made of the valid response of the last person in the computer file with similar characteristics. In this version, the stored values used for imputation are constantly changing and they always reflect the last valid response to an item, within the distribution of related characteristics. A "hot deck" begins as a "cold deck". A set of logical responses is developed for use if the first record processed contains invalid entries. A number of other methods are used for imputation, also based on probability, although there is little understanding of the statistical characteristics of any of the stochastic approaches. Moreover, the subject of editing and imputation as it relates to errors in individual items overlaps with the techniques and policy issues related to the adjustments for persons and households missed in the census.

32. In the preparation of census editing rules and the selection of imputation techniques, it must be understood that census editing and imputation cannot add information to the census data. The editing, if badly done, may introduce serious distortions into the census results. However, computer-based editing and imputation do enable the rapid and consistent implementation of whatever rules and procedures have been decided upon. It should also be realized that census editing is not a remedy for the faulty planning or execution of a census. When the enumeration and supervision of census field work are clearly unsatisfactory, imputation cannot help. In a sound census plan, provision will be made for quality-control procedures that will result in the detection and re-enumeration of very poorly done field work prior to computer editing. Imputation should not be made merely to enhance the credibility of census data; however, census editing can improve the usefulness of the data for many users, if the rules and procedures established for editing are correct.

33. Census offices should make earnest efforts and do their utmost to reduce the need for census editing. Better field work is essential for the success of a census. The careful selection and training of the various census workers together with simplified and rational work procedures can help to reduce the need for imputation. A logical and efficient questionnaire design is also essential. Inconsistencies and ambiguities in the questions, and unlisted alternatives for the answers, are not uncommon. As more sophisticated data-capture facilities become available, some editing may be done during the data-entry phase, prior to the main data processing.

34. Automatic imputation should, ideally do exactly what a knowledgeable statistician does manually. The correct empirical approach is, therefore, to let the subject-matter statistician define all possible errors and all corresponding remedies. Once this is done, the computer expert will take over, possibly with a software package. Nevertheless, the statistician may be unable to define all possible errors and there are circumstances in which it cannot be determined whether a given answer is right or wrong.

35. During the process of census editing, it is imperative that the editing program should deliver continuous statistics on the number and types of errors and imputations and alert the statistician when the frequencies fall outside given limits. In this regard, as in others, close co-operation between the subject-matter statisticians and the data-processing staff is essential. The statistician must study the consequences of the criteria and rules and examine the editing and imputation rules. To do this, some tabulations of data must be produced and analysed prior to imputation so that the edited results can be clearly understood and explained to the users. In particular, it is important to have available tabulations with the "not stated" or "unknown" categories shown as separate items. For many countries, the elimination of the "not stated" and "unknown" categories has actually led to the loss of an indicator that can be used in the assessment of the quality of the data.

E. Data storage, retrieval and dissemination

36. Almost immediately after the completion of census enumeration, potential census users eagerly wait the publication of the census results. However, a complete national census is a huge undertaking, and several years may elapse beyond the census date before some of the tabulations of greatest economic and social interest are published. Population census data are stock data which give statistical information for a point in time or for a very short period of time immediately prior to the census. The usefulness of a census will be affected adversely if census reports are not published on a timely basis.

37. The use of computers to process census returns has brought a new dimension to the tabulation, dissemination and utilization of census data. Vastly more detailed and rich cross-tabulations are feasible. At present, it is possible for the users to obtain tabulated census results not only in published form, but also in computer printouts, on microfiche and in magnetic tape files. It is also possible to provide ad hoc tabulations to those who have a special interest in certain social, economic and demographic features of the society or in certain geographical areas. The time lag between the completion of the census enumeration and the completion of the census tabulation can be reduced if a careful and appropriate processing plan is developed. Detailed census records can be stored and retrieved in a way that very much facilitates their use.

38. Depending upon the needs of the users, census data may be stored at different levels of aggregation, ranging from individual records to table images. As there is increasing interest in storing census data in a permanent data base, there is reason to ask whether the time has not come to create the data base first and to make the tabulations, or at least some of them, the first use of the data base. In some countries, this may be a natural consequence of the decentralization of processing and the dissemination of selected census results under a centralized national plan.

39. In recent years, there has been increasing use made of the census files to tabulate small-area statistics. It is possible to prepare detailed statistics, cross-classified by various social and economic variables, only through the use of computer. Because of their volume it is not always feasible to print and publish all small-area data even though they are extremely useful for local planning and government administration. However, the data can be stored in and retrieved from the magnetic tape files, using different tabulation programs for such purposes.

40. The release of census data by means of computer printouts, microfiche and magnetic record files has greatly facilitated more complete and rapid access by users to census results. However, the traditional publication of census reports is still the most important form of data dissemination in many countries. It remains the only source of census information for most government departments, universities, research institutions and individuals.

41. An attempt was made to examine the length of time taken to produce the reports on censuses carried out in the periods 1955-1964 and 1965-1976. From the available reports, three indicators were obtained for each census: the number of years

elapsed between the census year and the year of publication of the first census report, the number of years between the census year and the year of publication of the last census report, and the number of years between the publication of the first and last census reports. Information on hand for the construction of the above indicators was limited; in particular, it was sometimes difficult to determine the year of publication of the last census report, since there may have been other reports issued subsequently. 14/

42. Information on the dates of publication was available for 137 censuses taken in 1965-1976 and 63 censuses taken in 1955-1964. Almost all countries were able to publish a preliminary report in the year of the census enumeration, and about half produced the first report in the same year or in the year after the census enumeration. Of the 137 countries, over half published the last reports within 3 to 4 years after the 1965-1976 enumeration, but half of the countries in the 1960 census round took 4 to 5 years to issue their last reports (see table 3). The available data are sufficient to show the patterns of the timing of census publications and the changes in country practices in the censuses taken in 1965-1976 as compared to 1955-1964.

43. The last reports for about one third of the 1965-1976 censuses were published in the same year or in the year after the first report (excluding the preliminary report) was published. The last reports for another 50 censuses, a little over one third, were published 2 to 3 years after the first report; or a further 40 censuses, about 30 per cent, it took much longer to complete the last publication: 28 were published within 5 to 6 years and the longest took 8 years. Therefore, even though half of the last census reports were published within 3 to 4 years after the completion of the enumeration, 40 countries took 5 to 6 years to issue the last report and another 19 took 7 years or more to issue their last reports. However, it took somewhat longer for the 1955-1964 census reports to be published. For only 13 of the 63 censuses were the last reports published in the same year or the year after the first report was issued. For 15 censuses, almost one quarter of the total, the last report was published in the third year after the first report was issued, and for another 16 censuses the last report was published 6 years or over after the issuance of the first report. In all, for only 3 censuses of the 63 were the census publications completed within 2 years after the census enumeration, 29 were published in 4 to 5 years and 16 in 8 years or more. Of these 16 censuses, 2 took 10 years, 3 took 12 years, one took 13 years and another took 17 years.

44. The length of time required for the publication of census reports is related to the size of the country, the size and the level of detail of the tabulation and publication plans, the data processing and printing facilities and the personnel available for the task. Thus, a country with a small population may publish all of its reports within a few months after the completion of the census, while one with a large population and inadequate data-processing and publication facilities will require more time to issue a set of comprehensive census reports. When there are many subnational tabulations and publications, the process of preparation and the length of time required for dissemination can be very long. Unexpected factors such as political instability, administrative changes, financial difficulties etc., may also contribute to long delays in processing, publication and dissemination. This was the case in the few countries that published their last 1960 census reports 7, 8, 10, 12 or 17 years after the census enumeration.

Table 3. Number of countries by number of years elapsed between the census year and the year of publication of the first and last census reports, 1965-1976 and 1955-1964 censuses

Number of years elapsed	Between census year and first census report	Between first report and last report	Between census year and last report
(A) 1965-1976 censuses			
0	11	28	6
1	61	19	24
2	41	25	26
3	19	25	22
4	4	9	17
5	1	18	23
6	0	10	15
7	0	2	3
8+	0	1	1
Total	137	137	137
(B) 1955-1964 censuses			
0	1	7	0
1	25	6	2
2	20	12	1
3	11	15	11
4	2	3	16
5	1	4	13
6	1	3	1
7	2	7	3
8+	0	6	16
Total	63	63	63

45. For many countries, the publication of census results in printed volumes is the only means available for the dissemination of census data, even at present. Countries that have acquired computer processing capability recently may not yet have a workable and efficient system for the tabulation, storage and retrieval of census data. However, many other countries are able to disseminate their census results in the form of computer printouts, microfiche and magnetic tapes in addition to the traditional printed reports. Because of increased data-processing capability, more detailed cross-tabulations are now prepared and more census items are collected and tabulated. The volume of tabular results has increased dramatically.

46. The burden of printing census data is heavy and the time required is lengthy. For the 1980 census round, many countries are still not in a position to take advantage of some of the newer forms of data dissemination. In only a limited number of countries do users have easy access to computer processing facilities, so the effective utilization of magnetic tape files is still minimal. The use of microfiche has also been limited, because the necessary equipment is not readily available in many countries. However, the release of certain census results in the form of computer printouts is one way in which key users may obtain needed data within the shortest possible time after the census enumeration. In summary, it is essential that census offices prepare a comprehensive tabulation and dissemination plan that will take into account all possible and feasible means of preparing and disseminating census results.

F. Co-ordination between census and data-processing personnel

47. Relatively few countries processed their 1960 round population and housing censuses (1955-1964) with the help of electronic computers, but in the 1980 census decade (1975-1984) almost all countries have used or will use computers. The change in processing technology has expanded the capacity for census editing and tabulation and has reduced the time needed for the editing, tabulation and, in some cases, the printing of tables. The experience accumulated in the use of computers for processing census data must still be considered limited, since most developing countries have had only one such experience. Because of the huge volume of data to be processed, much of it inaccurate and incomplete, the continual pressure for ever earlier release of census results and the frequent changes and improvements in the available computer technology, the processing of census data remains a very difficult part of census work.

48. Unfortunately, a gap still exists in many countries between the subject-matter statisticians who work on the census and the data processors who work to make the computer serve the census well. The need to bridge the gap and to achieve better co-ordination between the two cannot be overemphasized. A very important reason for the gap is each group's lack of full understanding of the other's field of specialization. In some countries, particularly the developing countries with limited computer processing capacity and experience, the computing staff, even when located in the

statistical office, has to serve the needs of many different users, so that statistical processing is just a part of the work. To keep up to date in the field of data processing is extremely demanding. Very few of those working in data-processing units have a clear and full understanding of the characteristics and the magnitude of population census work, which is carried out only once each decade. The subject-matter census workers generally do not have an adequate understanding of what a computer can and cannot accomplish. They tend to ask too much or too little of the data-processing operation. They are often asked by data processors to alter census designs and plans in a way that will make data processing easier but which may be unsatisfactory from the point of view of the subject matter or in the view of the user. Moreover, the lack of qualified staff and of adequate resources for carrying out processing work has affected adversely the co-ordination and co-operation between the census and data-processing staffs in many countries.

49. Computer data processing is closely related to almost every aspect of population and housing census work. The areas that are directly affected include questionnaire design, the coding of census answers, census editing, the control of the flow of questionnaires during processing, the initial verification of tabulated results, data storage, retrieval and dissemination, census publication etc. Some of the areas have been discussed above. The issues discussed below deal with the management of the flow of census documents during data entry, the tabulation plans and other issues related to the basic methods used for planning the data processing.

50. By adopting a method of computer processing, the census staff has to change the approach used for data compilation from one of decentralization to one of centralization. This is because in most countries the electronic data-processing equipment available for census users is limited and concentrated in one or a few computing centres. Under the centralized approach, the local census offices do not carry out extensive data compilation but only simple manual tabulations; the major parts of the processing are carried out in the national census office or the national data-processing centre. This tends to create a concentration of numerous census materials in the data processing centres and the national census office for a temporary, but fairly long period of time. This situation occurs more frequently in the large countries where there is an overwhelming number of census materials. However, it is not always realized that the storage and management of questionnaire forms is an important part of the work of census data processing which has to be planned and carried out on an integrated basis with the rest of the census. The subject-matter and general statistical staff are often not used to working jointly with the data processing staff. Disorganization in the handling of census questionnaire files has led to confusion and disruption in some censuses. Moreover, the provision of adequate storage space for the questionnaires is often neglected by both census and data processing personnel and the problem is only discovered when inadequate and insufficient arrangements have seriously hampered the census work. Close co-operation and a clear division of labour between the data processing and other aspects of census work must be established at the time of census-planning, and appropriate working procedures and a data-flow management system should be

developed gradually and improved as the census work progresses. Provision must also be made so that the original census questionnaires are accessible if needed by the data-processing units for reference or reprocessing.

51. Because of the rapid increase in processing speed and memory capacity of computers and the continuous reduction of their costs, it is anticipated that there will be more computer equipment for use by countries in the 1990 census round. A return to the decentralized approach in census data processing is thus emerging. The decentralized approach gives regional and local census offices and computing centres more responsibilities in the processing of regional and local census data, including data entry, editing, tabulation and even dissemination. The national offices will be responsible for processing only national census results on the basis of regional census data files. Under such an approach, co-ordination between the census and data-processing staffs will be more extensive since more subject-matter census officials and data processors will be involved in the census work at a lower administrative level. Some of the management problems of both the census and data-processing personnel at the national level are expected to be reduced and the working efficiency improved. On the other hand, new issues and problems generated by the decentralized approach will emerge.

52. Census tabulations is another area in which close co-ordination is important. In planning census tabulations, subject-matter statisticians will determine the content and, after consulting the data processing staff, decide on the formats of all statistical tables. When considering whether an existing table-generating computer software package will be used or a tailor-made program is to be developed, the census and data-processing staffs must actively collaborate in order to ensure that the final decision takes account of the needs and circumstances of the country. Furthermore, the results of the tabulation must be examined immediately and jointly by the two offices and any anomalies should be corrected at once. A regular working procedure for carrying out the consultation and examination should be established. There have been cases where the subject-matter census staff were not informed of questionable tabulated results or did not respond to requests for examination of the tabulation and, as a consequence, processing was unduly delayed or incorrect census results were released.

53. In countries where all census data are processed centrally, the issue of co-ordination during the processing phase may be less problematic than in countries where processing is carried out in regional centres. However, when countries do not have adequate qualified census and data-processing staffs, co-ordination is even more critical. Thus, training of national census and data-processing staffs deserves special attention in census-planning, particularly if the decentralized processing approach is being considered for the next census.

Notes

1/ Official Records of the Economic and Social Council, 1981, Supplement No. 2 (E/1981/12), para. 98 (b) (i).

2/ The names of the 19 countries or areas are as follows; if a census was carried out in the 1970 census decade, the year is indicated in parentheses: Albania (1969), British Indian Ocean Territory, Chad, Colombia (1973), Democratic Kampuchea, Democratic People's Republic of Korea, Democratic Yemen (1973), Denmark (1970), Djibouti, El Salvador (1972), Gaza Strip [Palestine] (1967), Ghana (1970), Holy See, Lebanon, Namibia, Nigeria (1973), Qatar (1970), Svalbard and Jan Mayen Islands, Zimbabwe (1969).

3/ Angola (1983), Burma (1983), Congo (1984), Costa Rica (1983), Ecuador (1983), Ethiopia (1983), Gambia (1983), Honduras (1984), Liberia (1984), Libyan Arab Jamahiriya (1983), Malta (1983), Saudi Arabia (1984), Sierra Leone (1984) and Zaire (1983).

4/ Denmark established a "Central Population Register" for all population data and a "Central Register of Buildings and Dwellings" for all housing data. Finland conducted its 1975 and 1980 censuses by collecting various demographic and economic information from different registers.

5/ For example, Sweden enumerated only the population born in 1964 and earlier. Census information for those born after 1965 was obtained from the population register.

6/ The decennial census of Iceland was cancelled in 1970 but was resumed in 1981 because the National Register did not provide information on subjects such as economic activity, educational attainment and housing.

7/ United Nations publication, Sales No. E.80.XVII.8, para. 1.42.

8/ Ibid., paras. 2.1-2.7.

9/ United Nations publication, Sales No. E.70.XVII.7 and addendum.

10/ United Nations publication, Sales No. 1949.XIII.4.

11/ United Nations publication, Sales No. 1954.XVII.4.

12/ United Nations publication, Sales No. E.80.XVII.8, para. 2.45.

13/ Ibid., para. 1.50.

14/ Data for the year of census publication were obtained from various sources, including the Dag Hammarskjöld Library and Doreen S. Goyer, The International Population Census Bibliography: Revision and Update, 1945-1977 (New York, Academic Press, 1980).

Annex

DATES OF NATIONAL POPULATION AND/OR HOUSING CENSUSES
TAKEN OR ANTICIPATED DURING THE DECADE 1975-1984

In accordance with Economic and Social Council resolution 1947 (LVIII) of 7 May 1975, the 1980 World Population and Housing Census Programme is to be carried out during the decade 1975-1984.

The table below gives the actual date for each country or area that has already taken a population and/or housing census in the 1980 Programme and the anticipated date for each country or area for which it can be assumed that a census is likely to be held before the end of 1984.

Unless otherwise noted, the dates refer to complete (100 per cent) enumeration, even though some topics may have been investigated on a sample basis. The dates shown reflect the information available to the Statistical Office as of 1 April 1982. The following indications and symbols are used:

- (date) = Anticipation by the Statistical Office, on the basis of established pattern of census taking
- (....) = Reasonable anticipation that a census will be held during the decade, but no established pattern on which to forecast a date
- = No basis for anticipation at this time
- P = Population census
- H = Housing census
- T = The census was reported taken (for the years 1981 and 1982 only)
- A = Provision by the United Nations of a resident technical adviser or financial assistance.

Country or area	Census date	
	1975-1979	1980-1984
AFRICA		
Algeria.....	II 1977 P A	-
Angola.....	-	II 1983 PHA
Benin.....	20-31 III 1979 P A	-
Botswana.....	-	VIII 1981 PHAT
Br.Indian Ocean Terr.....	-	-
Burundi.....	16-30 VIII 1979 P A	-
Cape Verde.....	-	2 VI 1980 PHA
Central African Republic	8-22 XII 1975 P A	-
Chad.....	-	....
Comoros.....	-	VIII 1980 P A
Congo.....	-	(1984) PHA
Djibouti.....	-	....
Egypt.....	22-23 XI 1976 PHA	-
Equatorial Guinea.....	-	1981 PHA
Ethiopia.....	-	II 1983 PHA
Gabon.....	-	12 VIII 1981 P AT
Gambia.....	-	1983 PH
Ghana.....	-	....
Guinea.....	-	III 1982 P A
Guinea-Bissau.....	IV 1979 P A	-
Ivory Coast.....	30 IV 1975 P A	-
Kenya.....	25 VIII 1979 P A	-
Lesotho.....	12 IV 1976 P A	-
Liberia.....	-	1984 PHA
Libyan Arab Jamahiriya..	-	(1983) PHA
Madagascar.....	1974/1975 PHA <u>a/</u>	-
Malawi.....	20 IX 1977 P A <u>b/</u>	-
Mali.....	XII 1976 P A	-
Mauritania.....	22 XII 1976 PHA <u>c/</u>	-
Mauritius.....	-	1982 PH
Morocco.....	-	1982 P A
Mozambique.....	-	1-15 VIII 1980 P A
Namibia.....	-	....
Niger.....	XI 1977 P A <u>d/</u>	-
Nigeria.....	-	(....)

Country or area	Census date	
	1975-1979	1980-1984
Réunion.....	-	4 III 1982 PH T
Rwanda.....	VIII 1978 P A	-
St. Helena.....	31 X 1976 PH	-
Sao Tome and Principe...	-	1-15 IX 1980 P A
Senegal.....	16 IV 1976 P A	-
Seychelles.....	1 VIII 1977 PH	-
Sierra Leone.....	-	XIII 1984 P A
Somalia.....	7-20 II 1975 P A g/	-
South Africa.....	-	6 V 1980 PH
Sudan.....	-	XI 1982 PHA
Swaziland.....	25-26 VIII 1976 P A	-
Togo.....	-	22 XI 1981 PHAT
Tunisia.....	8 V 1975 PHA	-
Uganda.....	-	18 I 1980 PHA
United Rep. of Cameroon.	9 IV 1976 PHA	-
United Rep. of Tanzania.	26-27 VIII 1978 P	-
Upper Volta.....	1-7 XII 1975 P A	-
Zaire.....	-	1983 PHA
Zambia.....	-	25 VII 1980 PHA
Zimbabwe.....	-	(.....)
AMERICA, NORTH		
Antigua and Barbuda.....	-	IV 1982 PHA
Bahamas.....	-	12 V 1980 PH
Barbados.....	-	12 V 1980 PHA
Belize.....	-	12 V 1980 PHA
Bermuda.....	-	12 V 1980 PH
British Virgin Islands..	-	12 V 1980 PHA
Canada.....	1 VI 1976 PH	3 VI 1981 PH T
Cayman Islands.....	8 X 1979 PHA	-
Costa Rica.....	-	V 1983 PH
Cuba.....	-	11 IX 1981 PHAT
Dominica.....	-	7 IV 1981 PHAT
Dominican Republic.....	-	I 1981 PHAT
El Salvador.....	-	.....
Greenland.....	26 X 1976 PH	-
Grenada.....	-	30 IV 1981 PHAT
Guadeloupe.....	-	4 III 1982 PH T
Guatemala.....	-	23 III 1981 PHAT
Haiti.....	-	30 VIII 1982 PH
Honduras.....	-	(1984-1985) PHA
Jamaica.....	-	8 VI 1982 PHA

Country or area	Census date	
	1975-1979	1980-1984
Martinique.....	-	4 III 1982 PH T
Mexico.....	-	4 VI 1980 PH
Montserrat.....	-	12 V 1980 PHA
Netherlands Antilles....	-	(1981) PH
Nicaragua.....	-	1982 PH
Panama.....	-	11 V 1980 PH
Puerto Rico.....	-	1 IV 1980 PH
St. Kitts-Nevis-Anguilla	-	12 V 1980 PHA
Saint Lucia.....	-	12 V 1980 PHA
St. Pierre and Miquelon.	-	4 III 1982 PH T
Saint Vincent and the Grenadines.....	-	12 V 1980 PHA
Trinidad and Tobago.....	-	12 V 1980 PH
Turks and Caicos Islands	-	12 V 1980 PHA
United States.....	-	1 IV 1980 PH
U.S. Virgin Islands.....	-	1 IV 1980 PH
AMERICA, SOUTH		
Argentina.....	-	22 X 1980 PH
Bolivia.....	29 IX 1976 PHA	-
Brazil.....	-	1 IX 1980 P
.....	-	1 I 1981 H T
Chile.....	-	IV 1982 PH
Colombia.....	-	(.....)
Ecuador.....	-	VI 1983 PH
Falkland Is. (Malvinas) ..	-	7 XII 1980 P
French Guiana.....	-	4 III 1982 PH T
Guyana.....	-	12 V 1980 PHA
Paraguay.....	-	VII 1982 PHA
Peru.....	-	12 VII 1981 PHAT
Suriname.....	-	1 VII 1980 PHA
Uruguay.....	21 V 1975 PHA	-
Venezuela.....	-	19 X-20 XI 1981 PH T
ASIA		
Afghanistan.....	23 VI 1979 PHA <i>f/</i>	-
Bahrain.....	-	6 IV 1981 PHAT
Bangladesh.....	-	6-8 III 1981 PHAT
Bhutan.....	-	I 1980-I 1981 P T
Brunei.....	-	1981 PHA
Burma.....	-	1983 P A
China.....	-	1 VII 1982 PHA
Cyprus.....	IX 1976 P <i>f/</i>	-
Democratic Kampuchea....	-	.....

Country or area	Census date	
	1975-1979	1980-1984
Democratic Yemen.....	-	(1985) PHA
East Timor.....	-	....
Gaza Strip [Palestine]..	-	....
Hong Kong.....	-	II-III 1981 PH T
India.....	-	1 III 1981 P T
.....		1980 H
Indonesia.....	-	31 X 1980 PHA
Iran.....	XI 1976 PHA	-
Iraq.....	17 X 1977 PH	
Israel.....	-	1982 PH
Japan.....	1 X 1975 P	1 X 1980 P
.....	1 X 1978 H	1 X 1983 H
Jordan.....	11 XI 1979 PHA	-
Korea, Dem. People's Rep.	-	....
Korea, Republic of.....	1 X 1975 PH	1 X 1980 PH
Kuwait.....	20-21 IV 1975 PHA h/	IV 1980 PHA
Lao People's Dem. Rep....	1 II-31 III 1975 PHA i/	(1984)
Lebanon.....	-	....
Macau.....	-	16 III 1981 PHT
Malaysia.....	-	10 VI 1980 PH
Maldives.....	31 XII 1977-1 I 1978 PHA	-
Mongolia.....	5 I 1979 PHA	-
Nepal.....	-	22 VI 1981 P AT
Oman.....	✓	1981 P A
Pakistan.....	-	III 1981 P AT
.....		XI 1980 HA
Philippines.....	1-10 V 1975 P A	1 V 1980 PHA
Qatar.....	-	....
Saudi Arabia.....	-	(1984) PH
Singapore.....	-	VI 1980 PH
Sri Lanka.....	-	1 III 1981 PHAT
Syrian Arab Republic....	-	IX 1981 PHAT
Thailand.....	-	1 IV 1980 PHA
Turkey.....	26 X 1975 PH	12 X 1980 PHA
United Arab Emirates....	31 XII 1975 PHA	15-16 XII 1980 PHA
Viet Nam.....	1-10 X 1979 P A	-
Yemen.....	1 II 1975 PHA	-

Country or area	Census date	
	1975-1979	1980-1984
EUROPE		
Albania.....	-	....
Andorra.....	1 II 1975 P	-
Austria.....	-	(1981) PH
Belgium.....	-	1 III 1981 PHT
Bulgaria.....	2 XII 1975 PH	-
Channel Islands.....	-	5 IV 1981 PHT
Czechoslovakia.....	-	1 XI 1980 PH
Denmark.....	<u>k/</u>	<u>k/</u>
Faeroe Islands.....	22 IX 1977 PH	-
Finland.....	31 XII 1975 PH <u>l/</u>	1 XI 1980 PH <u>l/</u>
France.....	20 II 1975 PH	4 III 1982 PHT
German Democratic Rep...	-	31 XII 1981 PHT
Germany, Federal Rep.of.	-	27 IV 1983 PH
Gibraltar.....	-	1 XI 1981 PHT
Greece.....	-	5 IV 1981 PHT
Holy See.....	<u>m/</u>	<u>m/</u>
Hungary.....	-	1 I 1980 PH
Iceland.....	<u>n/</u>	31 I 1981 PHT
Ireland.....	1 IV 1979 P	5 IV 1981 PHT
Isle of Man.....	4-5 IV 1976 PH	5 IV 1981 PHT
Italy.....	-	XI 1981 PHT
Liechtenstein.....	-	2 XII 1980 PH
Luxembourg.....	-	31 III 1981 PHT
Malta.....	-	1983 PH
Monaco.....	II 1975 PH	-
Netherlands.....	-	(1981) PH
Norway.....	-	1 XI 1980 PH
Poland.....	XII 1978 PH	-
Portugal.....	-	16 III 1981 PHT
Romania.....	5 I 1977 PH	-
San Marino.....	30 XI 1976 PH	-
Spain.....	-	28 II 1981 PHT
Svalbard & Jan Mayen Is.	-	....
Sweden.....	1 XI 1975 PH	8-14 IX 1980 PH <u>o/</u>
Switzerland.....	-	2 XII 1980 PH
United Kingdom		
England and Wales.....	-	5 IV 1981 PHT
Northern Ireland.....	-	5 IV 1981 PHT
Scotland.....	-	5 IV 1981 PHT
Yugoslavia.....	-	31 III 1981 PHT

Country or area	Census date	
	1975-1979	1980-1984
OCEANIA		
American Samoa.....	-	1 IV 1980 PH
Australia.....	30 VI 1976 PH	30 VI 1981 PHT
Canton & Enderbury Is....	-	1 IV 1980 P p/
Christmas Island [Aust.]	-	30 VI 1981 PHT
Cocos (Keeling) Islands..	-	30 VI 1981 PHT
Cook Islands.....	1 XII 1976 PHA	1 XI 1981 PH
Fiji.....	13 IX 1976 P A	-
French Polynesia.....	29 IV 1977 P	-
Guam.....	-	1 IV 1980 PH
Johnston Island.....	-	1 IV 1980 P
Kiribati.....	1978 P	-
Midway Islands.....	-	1 IV 1980 P p/
Nauru.....	22 I 1977 PH	-
New Caledonia.....	23 IV 1976 PH	-
New Zealand.....	23 III 1976 PH	24 III 1981 PHT
Niue.....	29 IX 1976 PH	1981 PH
Norfolk Island.....	-	30 VI 1981 PHT
Pacific Islands.....	-	15 IX 1980 PHA
Papua New Guinea.....	-	22 IX- 3 X 1980 PHA
Pitcairn Island.....	g/	g/
Samoa.....	3 XI 1976 PHA	XI 1981 PHAT
Solomon Islands.....	7 II 1976 P	-
Tokelau.....	25 X 1976 PH	-
Tonga.....	30 XI 1976 PHA	-
Tuvalu.....	27 V 1979 P A	-
Vanuatu.....	15-16 I 1979 P	-
Wake Island.....	-	1 IV 1980 P p/
Wallis & Futuna Islands..	26 III 1976 P	-
UNION OF SOVIET SOCIALIST REPUBLICS		
USSR.....	17 I 1979 P	-

Notes

a/ For provincial capitals, 1 December 1974; for Antananarivo and remaining urban areas, 17 February 1975; for rural areas, 1 June 1975.

b/ Questions on water supply and radius were asked.

c/ Enumeration of sedentary population, 22 December 1976-5 January 1977; of nomads, January-April 1977.

d/ Enumeration of northern nomads, May and July 1977.

e/ Nomads were enumerated by sampling.

f/ The census of housing was conducted in urban areas only.

g/ A "micro-census" of population (a partial census) was carried out on 1 April 1973. Another population census was reported taken in September 1976. The coverage of both censuses is unknown.

h/ The census of housing was conducted in March.

i/ Partial census, covering the city and plain of Vientiane, the cities of Luang-Prabang, Houeisai, Sayeboury, Savannakhet and Pakse.

j/ A sample survey of population was conducted in five towns in April 1975 and in 11 towns and some rural areas in 1978.

k/ Annual population figures are available from the Central Population Register and housing figures from the Central Register of Buildings and Dwellings.

l/ Questionnaires were preprinted with answers obtained from various registers such as the Central Register of Population, Taxation Register, the Register of Completed Education etc., and the respondents were required to correct any inaccurate information.

m/ No formal census was conducted. Population figures are compiled regularly from administrative records.

n/ Annual population figures for 1961-1980 are available from the National Registry.

o/ The census enumeration covered only population born in 1964 and earlier.

p/ No formal census was conducted. Population figures were compiled on 1 April 1980 from administrative records.

q/ A count of each family group by name, sex, age and whether permanent or expatriat resident is made on 31 December each year.