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The United Nations Demographic Yearbook: In need of improvement*

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SUMMARY

The United Nations *Demographic Yearbook* system consists of a set of instruments and procedures for collecting, processing and disseminating national population statistics for the United Nations and the world. Its most visible product, the *United Nations Demographic Yearbook (DYB)*, is a unique source of national population statistics, for over 230 countries or areas in the world. Published annually, since the 1948, when the system was established, the *Demographic Yearbook* provides statistics on population size and composition, fertility, mortality, infant and foetal mortality, marriages, divorces and international migration.

In recent years a number of different outputs of the system (CD Rom, Internet presentation, databases) have been introduced, in response to significant changes that the statistical community has witnessed in at least three major categories: (a) increasing demand for relevant, accurate and up to data statistics; (b) changes in concepts, methods and standards for collection and dissemination of statistics, and (c) new approaches in information technology that are triggering sweeping changes in the processing, storing and retrieving of numerical data. The challenge, therefore, that the *Demographic Yearbook* system is facing is to effectively address these changes, with the major goal of ensuring that the official national population statistics reported to the United Nations through the *Demographic Yearbook* system remain comprehensive, relevant, timely, and readily accessible to interested Member States, researchers, libraries and the public at large.

This paper focuses on major cornerstones in the development of the *Demographic Yearbook* system and emphasizes, in general, the main issues that need to be addressed with respect to data collection, coverage and completeness and data dissemination.

I. THE *DEMOGRAPHIC YEARBOOK*: A BRIEF HISTORY

1. One of the major organs of the United Nations, the Economic and Social Council, owing to the global nature of its work, established two intergovernmental bodies in 1946: the Statistical Commission and the Population Commission. Based on guidance provided by these two bodies, the responsibility for the collection, compilation and dissemination of demographic statistics and related work on improving statistical methods used by Member States in collecting and compiling statistics was assigned to the Statistics Division of the Department of Economic and Social Affairs.¹ Initial terms of reference placed the Statistical Division in a central role in promoting worldwide system of statistics, including the statistical activities of the Governments, governmental organizations, non-governmental organizations, specialized agencies and others.

2. As one of its major activities, the Statistical Office established a framework for the collection, compilation and dissemination of official demographic statistics on a worldwide basis, with the *Demographic Yearbook* taking a central place. The earliest effort to provide an accurate picture of the world population and the process of population change in all countries and regions of the world, in terms of size, characteristics and geographical distribution, was

¹ The Division was known then as the Statistical Office of the Department of Economic Affairs.

undertaken jointly by the Statistics Division and the Population Division and resulted in the first issue of the *Demographic Yearbook* in 1948.

3. The work on this first issue was in response to the recommendations made by the Economic and Social Council in 1947, requesting that the United Nations publish “a demographic yearbook, containing regular series of basic demographic statistics, comparable within and among themselves, and relevant calculations of comparable rates...”² This action of the Economic and Social Council stemmed from the report of the first session of the Statistical Commission, which recommended that: “demographic data concerning the different countries in the world be assembled and published by the United Nations”.³ In addition, the Population Commission, at its First Session, stated that “the regular provision of accurate, comparable and comprehensive statistical and other data concerning population and population movements is of greatest importance to the United Nations and to specialized agencies” and recommended “... in addition to any inclusion of population statistics in general annual or other periodic publications of the United Nations, the publication by the Secretary General of a demographic yearbook.”⁴

4. The Population Commission, on the same occasion, identified 48 general topics for inclusion in the *Demographic Yearbook* and prepared the corresponding outline.⁵ The topics were divided into seven categories:

- a. Area and population
- b. Economically active population
- c. International migration
- d. Natality
- e. Mortality
- f. Morbidity
- g. Marriage and divorce

5. It became apparent that not all statistics for these topics would fit in each of the annual issues of the *Demographic Yearbook* and it was decided that special issues providing detailed statistics would alternate every five years. Consequently, 29 of those 48 topics were covered in the first issue of the *Demographic Yearbook*, in 1948, such as population totals and estimates, sex and age distribution, marital status, illiterate population, annual percentage rate of the population change, population of major cities, urban and rural population, and statistics on births, deaths, infant deaths, marriage statistics and international migration statistics.

6. The sources of most of these statistics were population censuses between 1900 and 1948. However, there were many countries and territories that had never conducted a population census. Moreover, in a number of the African and Asian countries and colonies the censuses covered a small proportion of the population. The other major sources of data were civil registration records.

² Resolutions adopted by the Economic and Social Council, E/437, page 21.

³ Report of the Statistical Commission to the Economic and Social Council, E/264, page 17.

⁴ Report of the Population Commission to the Economic and Social Council, E/267, page 8.

⁵ For the full list, please see Annex 1.

7. Collecting the data using specially designed set of *Demographic Yearbook* questionnaires was then established as the most appropriate technique. Since then, the questionnaires have been sent annually to all national statistical offices. The information collected through the questionnaires has, however, never been complete in coverage and has had to be supplemented with statistics extracted from national statistical publications.

8. The second issue of the *Demographic Yearbook*, 1949-1950 focused on marriage and fertility. Mortality statistics was the focus of the third issue, 1951. In the 1952 issue of the *Demographic Yearbook* (the fourth) accent was on geographical distribution of population derived from the 1950 and 1951 population censuses, while the fifth issue, in 1953, focused fertility statistics.

9. The work on these first issues of the *Demographic Yearbook* highlighted extensive differences in the concepts, definitions, methods, and classifications used in countries. Putting these statistics together, then, required attaching explanations and clarifications that were crucial for better understanding of the data and their comparability. The footnotes reproduced national definitions, where available, and other information related to the completeness (including or excluding certain proportion of the population or territory, for example), accuracy (whether data are revised or provisional) and comparability (differences in classifications, for example) of the data presented.

10. The *Demographic Yearbook*, therefore, from the very beginning provided the statistical community with a clear view on many differences in the methods of collecting, processing and disseminating statistics on population, and sought to bridge these differences with technical notes and footnotes. By exposing deficiencies in basic demographic statistics from countries, the *Demographic Yearbook* also triggered a number of activities aimed at improving international comparability and national capacities. As early as 1947, for example, the Statistical Commission suggested statistical sampling for filling gaps in population statistics needed for international bodies. In response, the Statistics Division prepared a set for recommendations for the preparation of reports on sampling surveys and to propose standard terminology for use in sampling surveys.⁶

11. Deficiencies in the coverage and quality of vital statistics in developing countries as presented in the *Demographic Yearbook* were, from the very beginning, so significant that the need for developing standards became imperative. Thus, the Statistical Commission in 1953 adopted the *Principles for a Vital Statistics System: Recommendations for the Improvement and Standardization of Vital Statistics*.⁷ It was designed as a guide to countries that were either planning to establish the civil registration system as the main source of vital statistics, or were already producing vital statistics from the civil registration system. These initial recommendations were revised in 1970 and issued in 1973 as *Principles and*

⁶ The first *A Short Manual on Sampling*, United Nations Publication, Sales no. F.61.XVII.3 was first issued in 1961, and was followed by a set of other manual over the decades. The up to date and revised version of manual for demographic sample survey is being worked on in the Demographic and Social Statistics Branch.

⁷ United Nations publication, Sales No. 53.XVI.8.

*Recommendations for a Vital Statistics System, Revision 1.*⁸ It reflected the experiences of developing countries that recognized the need to develop the capacity to measure levels and trends of fertility and mortality in the absence of complete and accurate civil registration systems; the emphasis was put on censuses and surveys as an interim source of information. The second revision *Principles and Recommendations for a Vital Statistics System, Revision 2*⁹ was adopted in 1999, to update and revise this major guidance instrument, especially from the point of the use of information technology for maintaining civil registration and producing vital statistics.

12. Similarly, the *Demographic Yearbook* induced an extensive methodological work in the area of population and housing censuses by highlighting the shortcomings and inconsistencies in national census practices. One of the major anchors in providing guidance to national statistical authorities regarding population and housing censuses are the *Principles and Recommendations for Population and Housing Censuses, Revision 1.*¹⁰ This most recent revision, issued in 1998, is accompanied by a set of handbooks on various census topics including managing censuses, editing data, use of geographical positioning systems for census mapping.

13. These actions, activities and programmes were initiated by the presentation of data in the *Demographic Yearbook*, with the expectation that they would, in time, result in improved national statistics and limit the need for technical notes in the *Demographic Yearbook*. This assumption is, however, one of the very few that proved incorrect. Today, the *Demographic Yearbook* carries more technical notes and footnotes than ever before, even as the number of countries covered has increased. “But the messy problems that the *Demographic Yearbook* calls attention to are closer to the realities of what the world’s statistical systems actually generate – and if one needs a single source in which to locate a specific birth rate or age-sex composition rather than smoothed data, broad-brush comparison, or global patterns, there is much to be said for consulting the *Yearbook*”.¹¹

II. DEMOGRAPHIC YEARBOOK SYSTEM TODAY

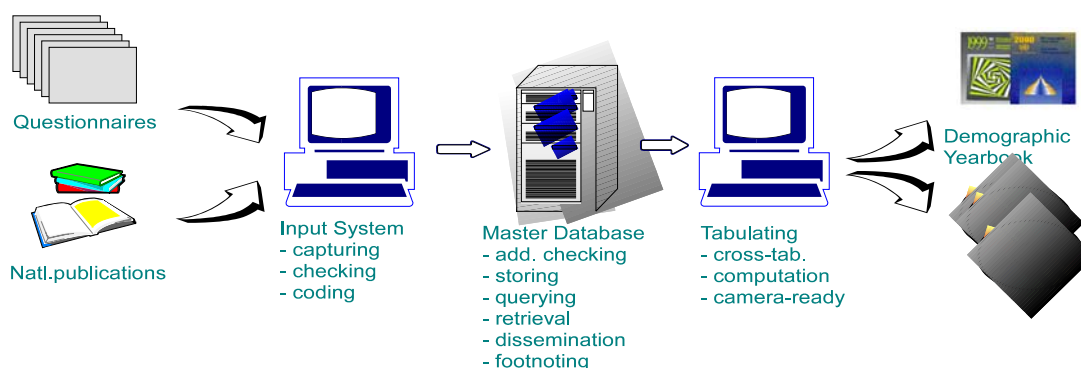
14. The *Demographic Yearbook* system consists of a set of questionnaires disseminated every year to all national statistical offices; procedures to capture and process statistics received in reply to the questionnaires; procedures to store and retrieve data in a master database; and tabulating, footnoting and publishing population statistics using different formats. The flow and components can be graphically presented as:

⁸ United Nations publication, Sales No. E.73.XVII.9.

⁹ United Nations publication, Sales No.E.01.XVII.10.

¹⁰ United Nations publication Sales No. E.98.XVII.8.

¹¹ *Population and Development Review, Volume 27, Number 2*, The Population Council Inc., New York, 2001.



A. Content of Questionnaires

15. In the fourth quarter of each year, the United Nations Statistics Division sends out to countries the *Demographic Yearbook* questionnaires. Three questionnaires are disseminated every year to all national statistical offices: for population estimates, vital statistics and international migration. After a country had its population census, another set of three questionnaires is added to the regular ones: on population characteristics, economic characteristics and household characteristics.

16. *Demographic Yearbook* questionnaires request a voluminous and comprehensive set of data, with a total of approximately one hundred tables, (see list of tables presented in Annex II.). In addition to statistics, the questionnaires also request a set of meta-data intended to complement the figures themselves. For population estimates, the questionnaire requests information on: - the basis for the estimates, the method applied, the evaluation of accuracy of the estimates, and coverage and assumptions underlying the estimates. The questionnaire on vital statistics requests information on the quality of vital statistics, such as reference time for the vital event (i.e., whether by date of occurrence or date of registration), completeness of civil registration and methods used to evaluate the completeness of registration. Similarly, the questionnaire on population censuses inquires about a number of issues related to census methods, such as the completeness in terms of coverage, implementation of post-enumeration survey and its main findings regarding under- or over-enumeration.

B. Dissemination and collection of questionnaires

17. *Demographic Yearbook* questionnaires are disseminated to all national statistics offices, at the moment¹² 233 addresses in all, usually in fourth quarter requesting data for the current year or, if these are not available, for the latest available year. The deadline for returning the completed questionnaires is set for end of March of the following year, and is usually extended to end of May. In February, communication is sent out reminding national statistical offices of the deadline.

¹² Mid-year 2003.

18. In the 2002 mailing of the questionnaires, two formats were used: print and electronic, on diskettes. In addition, they are also disseminated in electronic format via e-mail. There are indications, from responses received to date with the 2002 *Demographic Yearbook* questionnaires that were sent out, of a strong preference for the electronic versions and e-mail. Of the 82 countries that have supplied data, 30 sent back the electronic questionnaires via e-mail; two on CD-Rom; and 40 countries replied through the joint electronic questionnaire that was developed in cooperation with the Statistical Office of European Commission (Eurostat). Only ten countries completed the paper questionnaires.

C. Capturing and processing data

19. In an average, non-census year, the total number of records to be processed does not exceed 100,000. However, especially at the beginning of census decade, this number is two to three times larger.

20. The data are processed through the *Input System*, one of the components of the *Demographic Yearbook*. The *Input System* is a set of computer applications designed to capture data received in reply to the questionnaires. It mirrors the questionnaires and has additional features for the purpose of coding and checking consistency of the data. The *Input System* has several basic functions: checks the data against data from previous years, including special codes on reliability and record type (which varies depending of the source of data), checks the consistency of data within the questionnaire itself (for example, if the figure for total population varies from one table to the other and there is no explanation attached), performs numerical checking (i.e. whether totals tally), and prepares the data for further processing and storage.

21. There are several different scenarios of the initial data processing, depending on the format in which data were received. For paper questionnaires, entries are coded and sent for data entry, resulting in an ASCII file; for data received in electronic format, the *Input System* captures them directly; and data from official publications are keyed in the forms of the *Input System*. Given the increasing use of publications to fill the gaps in the data, procedures to use scanning and *Optical Character Recognition* technology, are now underway to facilitate the extraction of data and reduce the processing time.

D. Storage and retrieval

22. The next component in the process is the *Master Database*. It is also a set of computer programmes and applications custom designed for the needs of the *Demographic Yearbook*. Data from the *Input System* are uploaded in the *Master Database* and checked against existing records in the database. The checking is intended to avoid duplication of information and ensure consistency of the meta-data. At the moment, the *Master Database* holds approximately 20 million records, that is, almost all of the *Demographic Yearbook* data collection since 1948.

23. There are many features in the *Master Database*; some are produced for development purposes and for the work by the *Demographic Yearbook* team, such as editing procedures that allow for editing of the individual records, adding new data and adding footnotes. Others have been developed for users within the United Nations, such as searching for or viewing the availability of data by country or topic, and downloading data in different formats. Another set of features is developed for generating the quarterly *Population and Vital Statistics Report* that presents the most recent basic census figures, population estimates, live births and live birth rates, deaths and death rates and infant deaths and corresponding rates. In sum, the *Master Database* is a major vehicle for storage, searching, retrieval and, lately, dissemination of *Demographic Yearbook* data.

E. Tabulation and dissemination

24. Tabulation of data for the purposes of dissemination is developed using *Table Production Language (TPL)*, proprietary software specifically designed for statistical tabulation and publication. The TPL routines that are designed to produce the tables for the regular issue of the *Demographic Yearbook* in hardcopy, as well as for special issues, on CD-Rom. The computation of rates and ratios is also incorporated into these routines.

25. The *Demographic Yearbook* is a comprehensive set of demographic statistics, accompanied by technical notes and footnotes, in hardcopy, and is a bilingual publication (English and French). It is one of the best sellers of the United Nations, used worldwide as a major reference, with respect to both data and methodology. It would be extremely demanding on human and material resources, to be publishing regularly all the data collected in one year, and would produce volumes that would be difficult to use. Therefore, a system has been established to publish the regular issue of the United Nations *Demographic Yearbook* every year covering basic population statistics. In its twenty-five tables, the *Demographic Yearbook* displays statistics on population, such as estimates, population by age and sex, population of cities, and vital statistics (live births, deaths, foetal deaths, infant deaths, marriage and divorces) for countries of the world.

26. Data collected by *Demographic Yearbook* questionnaires are substantially more comprehensive and detailed than those presented in the regular issues of the *Demographic Yearbook*. To provide more of the data to the users, the Statistics Division instituted a series of *Demographic Yearbook* Special Topics. The thinking behind this approach is to periodically concentrate on specific topics in much more details. The special topics are generally as follows:

- Fertility
- Mortality
- International migration
- Population census – social and geographic characteristics
- Population census – economic characteristics
- Population census – household characteristics
- Marriages and divorces
- Other selected issues (for example, historical overview of major population statistics)

27. Until the 1997 issue, the special topics were issued in hardcopy, printed as part of the regular *Demographic Yearbook*. That year, the special topic - historical supplement, 1948-1997¹³ was issued as a CD-ROM, followed by a CD-ROM focusing on fertility.¹⁴

28. Another regular hardcopy product is the quarterly *Population and Vital Statistics Report*.¹⁵ This publication displays data for all countries/areas on population from the latest available census by sex, mid-year estimates, birth and birth rates, deaths and deaths rates and infant deaths and infant deaths rates. A wide audience uses it for general information.

29. Aside from hardcopy publications, the *Demographic Yearbook* disseminates data on the Internet, such as the population by sex for cities with over 100,000 inhabitants¹⁶ and makes available data to the internal user through access to the *Master Database*¹⁷.

F. Meta-data

30. As mentioned earlier,¹⁸ in all the phases of preparation of the *Demographic Yearbook* and the accompanying electronic and hardcopy products, a special focus is on capturing meta-data. The purpose of these is to better explain the figures themselves and to shed additional light on the meaning of data. Notes are attached either to individual records (that is specific figures pertaining to a country) or to a country.

31. At the coding stage, specific codes are used to indicate the reliability of the record, that is, whether the figure refers to, for example, a final or provisional figure. Similarly, there is also a system of codes that indicate the type of record, that is, the source of data, for example whether it is a census, de facto, with complete enumeration, or census, de jure, complete enumeration.

32. In addition to the coding of individual records, another technique used for building up the meta-data inventory in the initial phases is to append a textual footnote to the record. The footnote becomes a part of that record for storage, retrieval and tabulation purposes. There are many footnotes, and as a rule they are displayed at the end of the table in the hardcopy format, and as footnote indication in electronic formats. For example, data on the world's capital cities and cities with 100,000 population and over are accompanied by 164 footnotes that provide crucial information about the coverage (i.e., whether data refer to the administrative city, urban agglomeration or some other form of civil division).

33. General meta-data are those that are not linked to an individual record, but are linked to the whole country or area. An example of these is the definition of urban and rural areas of a

¹³ *Demographic Yearbook – Historical Supplement 1948-1997*, United Nations publication no. E/F.99.XIII.12, United, New York, 2000.

¹⁴ *Demographic Yearbook – Natality Statistics*, United Nations publication no. E/F.02.XIII.6, United Nations, New York, 2002.

¹⁵ See paragraph 25.

¹⁶ See <http://unstats.un.org/unsd/citydata/>.

¹⁷ See paragraph 25.

¹⁸ See paragraph 9.

country. This definition is crucial to assess the scope of data and to better understand the limitations of international comparisons. As a rule, the general meta-data are displayed at the beginning of the publication and are cross-referenced throughout the book. General meta-data are not limited to definitions. They relate also to the specifics of data collection and processing methodology relevant to better understanding of data. For this purpose, the *Demographic Yearbook* provides extensive technical notes at the beginning of the book/CD-Rom for each topic

34. To successfully navigate through the wealth of data on many topics over the 50+ years the *Demographic Yearbook* maintains a detailed index that enables users to locate the topic they are interested in, to identify the year of issue of the *Demographic Yearbook* that covers that specific topic for the specific time coverage.

III. NEEDS FOR IMPROVEMENT

35. In the past fifty-three years, since the introduction of the *Demographic Yearbook*, the review of some of its components have taken place several times. Similarly, there were significant changes and improvements, especially in the phase of data processing (from manual calculators, via mainframe, to the contemporary database of today). Rarely, if ever, have all the components, such as the questionnaires, processing, response rates and dissemination been subjected simultaneously to detailed and coordinated review, adjustment and enhancement. Such a process, (excluding the data processing component), is now underway and is envisaged to last a period of years. The needs for improvement of these components, with the exception of the data processing part,¹⁹ are outlined below.

A. *Demographic Yearbook* Questionnaires

36. The six questionnaires used for collection of data for the *Demographic Yearbook* have not been the subject of revision in recent decades, with the exception of the *Questionnaire on international migration and travel statistics*, which is now disseminated in selected countries as a pilot study.²⁰ There were some efforts in enlarging the scope of the *Demographic Yearbook* data collection, by incorporating questions on elderly population.²¹ The results were published in a special issue of the *Demographic Yearbook*.²² Also, in an attempt to compile the information on living and housing condition of population in the world, the questionnaire for the *Compendium of Human Settlements Statistics* was introduced in early 1980s.²³ The source of the major portion of statistics requested by this questionnaire is the national population and housing census.

¹⁹ The data processing is a subject of a separate set of activities, at the level of the UN Statistics Division, and will not be elaborated here in details.

²⁰ For detailed overview of questionnaires topics, see paragraph 17.

²¹ See *Population census questionnaire on household characteristics*.

²² United Nations publication.

²³ Three issues have been published.

37. All the questionnaires were carefully developed and tested before being used for the *Demographic Yearbook* data collection at the time of their introduction. In the meantime, a whole new set of international recommendations in the field of population and housing censuses and vital statistics has been issued, setting the standards, definitions and methods that are recommended by the United Nations.²⁴ The data collection instruments used by the United Nations have therefore to be harmonized with updated set of statistical standards. In addition, the questionnaires are reviewed from the point of view of their content, that is, whether the topics in the questionnaire are still relevant, and whether some missing topics that are deemed important should be added. Finally, a specific point refers to the need for reviewing the existing questions on meta-data. These areas are elaborated below.

1. Harmonization

38. Harmonization refers to ensuring that the standards developed in international principles and recommendations for population and housing censuses and for vital statistics are adhered to in all other methodological and data collection instruments produced in the United Nations Statistics Division. Harmonization, for the *Demographic Yearbook* questionnaires, can be looked at from several aspects: (a) definitions and concepts; (b) classifications; (c) tabulations.

39. *Definitions.* In a few cases the definitions used by the *Demographic Yearbook* questionnaires differ from those recommended. The Questionnaire on Vital Statistics, for example, defines marriage as “All legal unions of persons of opposite sex, established by civil, religious or other means recognized by law”, which is different from the one in the recommendations on vital statistics.²⁵ “Marriage is an act, ceremony or process by which the legal relationship of husband and wife is constituted. The legality of the union may be established by civil, religious or other means as recognized by the laws of each country”. The difference in substance is not significant, but the definition from the vital statistics recommendations is much more precise and emphasizes the notion of a marriage as a social construct.

40. A basic premise of the *Demographic Yearbook* questionnaires is that they are expected to comply fully with international recommendations and standards in substance, form and techniques. This premise is challenged in some cases, as a consequence of the fact that international standards, based primarily on professional and scientific knowledge and experience, are also a product of political consensus, especially when it comes to social phenomena that are viewed from fairly opposite standpoints. In the collection of statistics on abortions, table 23 of the *Demographic Yearbook* questionnaire on vital statistics requests data on “legally induced abortions”. However, the major international recommendations do not mention abortions at all, except as a footnote,²⁶ calling for replacing the term “abortion” by the use of weight-specific measures. To conform with the recommendations the term abortion

²⁴ *Principles and Recommendations for Population and Housing Censuses, Revision 1*, United Nations publication sales no. E.98.XVII.8 and *Principles and Recommendations for a Vital Statistics System, Revision 2*, United Nations publication sales no. E/01.XVII.10.

²⁵ *Principles and Recommendations for a Vital Statistics System, Revision 2*, United Nations publication, Sales no. E/01.XVII.10.

²⁶ United Nations publication, Sales no. E/01.XVII.10, page 11.

would need to be replaced with weight-specific measures *Demographic Yearbook* questionnaire.

41. *Classifications.* As is the case with definitions, classifications used by the *Demographic Yearbook* questionnaires need to be harmonized with the relevant international recommendations. However, in some cases, the categories for the same variable are not identical in the two major recommendations, for censuses and for vital statistics, thus, there is a need to harmonize these two sets of standards, as well.

42. *Tabulations.* Another area where the *Demographic Yearbook* questionnaires need to be harmonized with international standards is the design and layout of tabulations used for data collection. Both major recommendations include a set of recommended tabulations in annexes, to guide national statistical authorities in developing their dissemination programmes for population and housing censuses and vital statistics. Each revision of the recommendations included the revision of the accompanying tabulations. Comparing the most recent version of the recommendations with *Demographic Yearbook* questionnaires points to several divergent cases.

43. In addition, the number of tables recommended in census and vital statistics recommendations exceeds their number in the *Demographic Yearbook* questionnaires. However, not all of these tabulations have the same relevance at the national level as at the international level. It is therefore necessary to establish a balance between the needs at the international level and the burden placed on countries in replying to requests for data.

2. Removing and adding topics

44. The coverage of topics by the *Demographic Yearbook* questionnaires is comprehensive and voluminous²⁷ and includes an area of variables that, subjected to the detailed review and assessment, are candidates for exclusion from the questionnaires. The decision on whether a topic needs to be removed is based on at least two criteria: (a) users' need for data on the topic at the international and national levels; and (b) the ability and willingness of reporting units – national statistical offices to provide statistics. The former can, in part, be assessed by the number of requests for data on a specific topic, and the latter can be quantified based on response rates over a period of years. It is also important to take into account the need to maintain time series, to the extent that they exist, and to be prepared to maintain a topic for the sake of continuity, even if it generates little or no requests from users.

45. The decision to add a specific topic to the *Demographic Yearbook* data collection, is based largely on the needs of the users, national practices in collecting statistics on that variable and, therefore, the availability of these data in a number of countries, the burden such an addition places on countries and on the data collection and processing mechanisms, and the level of compatibility and complementarities with other *Demographic Yearbook* topics. The two major international recommendations, on censuses and vital statistics, represent a major guidance

²⁷ See paragraphs 17.

together with regional census recommendations.²⁸ However, topics of interest at regional level might not have the same weight at the world's level (for example, while census data on fuel used for cooking is of utmost importance in most of Africa, it is not of particular interest in Europe).

3. Collecting meta-data

46. The meta-data requests represent a significant and important content of the *Demographic Yearbook* since they are used in a number of ways to emphasize the characteristics of statistics (through technical notes, footnotes, presentation in italics, special codes²⁹ and so forth). They allow the users to have both the numerical information and the explanation of the accuracy, coverage, relevance and other key characteristics of the data. The questions about the quality of data and methods applied in data collection and computation, included in the questionnaires on population estimates and on vital statistics, and censuses require further review to ensure that the information collected are relevant and useful. They need also to be updated to take account of recent methodological developments.

B. Response rates

47. Response rates refer to the participation of national statistical authorities in the *Demographic Yearbook* data collection and are expressed in terms of the number of countries that provided data as requested. The number of countries replying to questionnaires, though, is not dependant only on national capacities and willingness to participate; it is primarily the result of actions in the United Nations Statistics Division in developing and maintaining the network of national statistical offices, enhancing data collection instruments and increasing national statistical capacities while at the same time ensuring the understanding of the importance of the *Demographic Yearbook*.

48. The participation of countries in the *Demographic Yearbook* data collection has not been even for all the topics for which statistics are requested. In some cases, the response rates are quite high, while in others they simply do not reach desired levels.

49. While it is not possible to discern an exact pattern for all the topics collected by the *Demographic Yearbook*, in general it can be stated that the response rates are in need of improvement. In recent years, around 100 national statistical offices, out of 230 to whom we dispatch the questionnaires, complete and return them.³⁰ In addition, data are extracted from national publications and from official websites, when available, for those countries that do not reply to the questionnaires. For example, over 20 national statistical offices in Africa have never provided statistics on the total number of infant deaths. On the other end, there are

²⁸ These are issued by regional United Nations Economic Commissions, for example, the United Nations Economic Commission for Europe, in coordination with the Statistical Office of European Commission (Eurostat) issues a set of census recommendations before each census round, based on general census recommendations issued by UN Statistics Division.

²⁹ See paragraphs 33-37.

³⁰ See paragraph 20, for some examples.

national statistical offices that have consistently provided information on regular, annual basis, over the years.³¹

50. Another general point refers to the decrease of the response rate as the cross-classification increases, i.e. as more detailed statistics are requested (for example, infant deaths by sex and urban/rural residence), fewer responses are received. Similarly, more general topics receive a more complete coverage. For example, the response rate is much higher for total deaths than for infant deaths.

51. The format of the data collection instrument and ease and convenience for filling it undoubtedly has an impact on the response rates. The *Demographic Yearbook* questionnaires are disseminated in two formats: as paper form and in electronic format. A prerequisite to receive a filled questionnaire back from national statistical office is first, that the package reaches the target office. In the latest dispatch of the questionnaires, mailed in December 2002, the package did not reach about 50 offices. These offices, when contacted with a reminder letter in February 2003 reported not receiving the set of questionnaires originally shipped to them and requested a new set to be sent to them in electronic format via e-mail. This request was complied with and all the sets were sent via e-mail. In the course of the months of May, June and July, out of 50 offices, 21 completed and returned their questionnaires.

52. The burden that replying to questionnaires sent by international organizations places on national statistical authorities is well recognized and, under the guidance of the United Nations Statistical Commission, a number of actions are being put in place in order to avoid duplication of data collection. The *Demographic Yearbook* developed a joint questionnaire with the Statistical Office of the European Commission (Eurostat) and the Council of Europe. This electronic questionnaire consist of two parts, one of common interest to all participants and the other of interest to the *Demographic Yearbook* only, covering parts of the Questionnaire on population estimates and the Questionnaire on vital statistics. This joint questionnaire clearly reduces the burden of reply to countries and increases the response rate, since it is coordinated at the regional level, thus allowing for closer and more frequent contacts with offices in the region.

53. Another activity aimed at increasing the coverage of the *Demographic Yearbook* is related to the introduction of scanning and the use of the *Optical Character Recognition (OCR)* technology. An increasing number of countries are providing data by copying relevant pages of their official publications, rather than filling in the questionnaires. Until recently, the data from these publications were keyed in, which involved committing considerable resources and time, and was prone to errors. This was impractical especially for large sets of data, like census statistics on population by age, sex and urban/rural residence. Using *OCR* technology, that is, scanning the data and placing them in the *Input System*³² directly, the efficiency improved, as well as reduction of data-entry errors.

54. The basic premise for providing data for the *Demographic Yearbook* is to have them available at the national level. To assess the capacity of countries, the Statistics Division is

³¹ These include statistical offices of Japan, Singapore, Hungary, and Romania.

³² See para 22.

monitoring two major sources of data for the *Demographic Yearbook*, the population and housing censuses and civil registration – vital statistics systems. The information on censuses in the current census round (1995-2004) is used to dispatch census questionnaires on time and is made available on the Internet.³³ Out of 230 countries and areas for which the *UN Demographic Yearbook* collects information, 188 had held their censuses (82 per cent), 27 are planning to have the census before 2004 (12 per cent) and 15 do not plan to have this exercise at all (6 per cent). These fifteen are either countries and areas with unresolved status (such as Western Sahara), emerging from or still involved in civil conflicts (such as Ethiopia, Liberia, Somalia), countries that for specific political reasons are reluctant to undertake the enumeration (Bhutan, Bosnia-Herzegovina, Gibraltar, Lebanon), countries for which there is no specific information regarding the census (Chad, Cuba, Guinea-Bissau, Peru, Democratic People's Republic of Korea), or areas with very small populations (Svalbard and Jan Meyen Islands, Pitcairn). Likewise, through the *Demographic Yearbook* data collection information on the development and coverage of the civil registration system used as source for vital statistics is collected, and at the present moment, it is estimated that slightly more than 50 per cent of the countries do not have complete registration of vital events. All this has an impact on the response rate for the *Demographic Yearbook*.

C. Dissemination

55. Another key component in the *Demographic Yearbook* system, the dissemination of collected statistics, is a multi dimensional issue, involving the time lag between collection and dissemination, means and formats used for making data available to users, periodicity of regular and special issues and success in meeting users' needs.

56. Disseminating all the data collected by the *Demographic Yearbook* questionnaires and captured from publications and other national official sources has always represented a significant challenge, given the volume and the scope of statistics. The initial system³⁴ of producing a regular issue with 25 tables annually, with special topic tables on rotating basis is still in place. There is a two-year lag between the data reference year and the publication year (in 2003 the *Demographic Yearbook* with statistics for 2001 will be published).

57. In a recent effort to customize the *Demographic Yearbook* to better suit regional needs, several special issues were prepared, narrowing the scope of the *Demographic Yearbook* on specific regions: Caribbean Community (CARICOM) countries³⁵ and United Nations Economic and Social Commission for Asia and Pacific (ESCAP)³⁶. Both were welcomed as an appropriate dissemination vehicle, enabling more efficient comparison at the regional level.

58. *Demographic Yearbook* special topics were printed in hardcopy as an integral part of the regular issue until 1999. Since then they are issued on CD-Rom and two were produced so far:

³³ <http://unstats.un.org/unsd/demographic/census/cendate/index.htm>.

³⁴ See paragraphs 5, 33-37.

³⁵ *Demographic Yearbook – Special Report on the Member Countries of the Caribbean Community (CARICOM)*, ST/ESA/STAT/118, United Nations, New York, 2002.

³⁶ *Demographic Yearbook – Special Report on the Member Countries of the Economic and Social Commission for Asia and the Pacific*, ST/ESA/STAT/121, United Nations, New York, 2002.

the Historical Supplement and Natality Statistics. The next special topic will focus on general and economic characteristics of the population, as collected by the national population censuses.

59. In general, it can be emphasized that, with few exceptions³⁷, all the data collected by the *Demographic Yearbook* have been disseminated at least once. The time lag, however, between the collection and the dissemination in some cases has been quite significant, i.e., data are collected but not disseminated for long stretch of time.

60. The *Demographic Yearbook* uses the dissemination via the Internet in a limited way, for presenting data on cities with 100,000 or more inhabitants and for posting the *Population and Vital Statistics Report*. One of the reasons for not using the Internet in a more significant way is that the *Demographic Yearbook* data processing was, until recently, on mainframe. All the storage, retrieval and tabulation were based on manipulation of a number of different data sets in ASCII format. For each of the yearly production of the *Demographic Yearbook* a separate data set would be put together, including newly received as well as previously received data. The relevant meta-data were not linked to individual records; all the footnoting was done after the tabulation, and other relevant notes were appended as text in the final phases of the process. In migrating these voluminous collection of records from mainframe to the PC-based technology, there were two major concerns: (1) avoiding duplicate records that accumulated in yearly sets of data, and (2) linking the meta-data to each individual record. Given the size of the collection (approximately 20 million records) the time needed for their “cleaning” is considerable. Posting incomplete data or data that differ from those published in earlier *Demographic Yearbooks* on the Internet would not be acceptable. At the moment, around 30-35 per cent of the records covering basic demographic topics is validated and made available to the users at the United Nations Secretariat via the Intranet, in a form of a relational database. The database has interfaces that allow querying, retrieval and download of records in different formats, according to the users’ needs. The copy of the screen below offers an example of such an interface, though it is slightly adjusted to better suite this presentation format:

Select a region/continent	Select a Country	Retrieve data
Europe ▼	Austria ▼	View
Select a Table	Select range of reference year(s)	
B01 Population by sex ▼	From: 2000 ▼	To: 2002 ▼
		Save changes
		Save

Austria - 15 records found. From 2000 to 2002

Area	Both sexes	Male	Female	Reference date	Source	Footnote No.
Total	8108679	3940285	4168394	1 July 200	Estimate	673
Urban						
Rural						

³⁷ The table on live birth by month was never disseminated, for example.

Total	8065465	3907244	4158221	15 May 2001	Census	673
Urban	5379498	2572088	2807410	15 May 2001	Census	673
Rural	2685967	1335156	1350811	15 May 2001	Census	673
Total	8103028	3953689	4176639	1 July 2001	Estimate	673
Urban						
Rural						

Footnote 673: *De jure* population.

61. The *Demographic Yearbook* data are also disseminated on an *ad hoc* basis, on specific requests from users. The number of such requests varies in different periods of the year, and sometimes as many as 40 are received weekly. The requests range from the very general figures, like population estimates over the years, or population by sex, to very detailed ones, like deaths by months of occurrence or population by age and sex, age specific live-births rates, population by marital status, sex and age, cities by sex and so forth. Each query is answered, irrespective of the availability of data.

IV. WAYS OF IMPROVEMENT

62. In reviewing the *Demographic Yearbook* and its system of collecting, processing and disseminating statistics, in the previous section, some areas were identified that are in need of improvement. There are different approaches that could be adopted in overcoming these deficiencies, enhancing the flow of data and making the *Demographic Yearbook* up to a task for the next period. What follows is meant to open a discussion regarding the possible ways of improving different components of the *Demographic Yearbook*, rather than offering ready-to-use solutions.

63. *Harmonization of the questionnaires with international principles and recommendations.*³⁸ There is a clear necessity to harmonize definitions, classifications and tabulations of the *Demographic Yearbook* questionnaires with those recommended in international recommendations for population and housing censuses and for vital statistics system. In doing so, it has to be borne in mind that sometimes these two recommendations are in need of harmonization, too, and that they can be imprecise in some cases.³⁹ Another important point refers to the fact that the *Demographic Yearbook* questionnaires should not incorporate all the tabulations from the principles and recommendations, given that the purposes of the two are different. For example, the questionnaires are designed to collect statistics at the national and urban/rural level for countries of the world, while the tabulations in the recommendations are designed to guide national statistical authorities in developing their processing and dissemination programme.

64. In essence, the harmonization requires careful evaluation of the levels of harmonization: (i) there is need to use the same definitions in the questionnaires as in the recommendations, and

³⁸ See paragraphs 41-46.

³⁹ See paragraph 44, for example.

indeed, this should be addressed immediately; and (ii) the *Demographic Yearbook* questionnaires should use the recommended classifications, with an additional requirement, that coding schemes currently in use be updated, aggregated or disaggregated as applicable, to preserve time series.

65. Incorporating recommended tabulations in the *Demographic Yearbook* questionnaires requires an additional assessment related to preserving the continuity and comparability over time. It is also worth noting that tabulations in international recommendations are revised and that from one revision to the other certain tabulations are subject to change or exclusion. Consequently, in harmonizing *Demographic Yearbook* questionnaire tabulations with those recommended in international recommendations, it is necessary to take into account the users' needs, maintaining the coverage over time and the similarity or the lack of it between the two sets of tabulations. In cases where the elements in both tabulations are the same, but the layout is somewhat different, there should be a precise assessment of the balance between the benefits of harmonized instruments and the preservation of time series and the ultimate purpose of statistics – providing an accurate and trustworthy numerical picture of social and economic phenomena.

66. *Removing topics.* In the same line of argument, removal of topics must be based on careful assessment of users' needs, maintaining time series and attention to response rates. An extremely low response rate, a legitimate argument for considering removal of a specific topic, should be combined with the information regarding the interest of the users, the international recommendations and the significance of the topic itself: for deaths by occupation, age and sex, for example, a very low response rate is recorded almost consistently; yet, the information carried in this tabulation might be considered of particular value in complementing data on occupational deaths.

67. *Adding topics.* In the light of national practices, reflected in international recommendations, and the interest of users, there is need to consider incorporating topics that are not currently included in the *Demographic Yearbook* questionnaires. In doing so, the fact that the *Demographic Yearbook* data collection is already voluminous should be taken into account and a balance between existing, excluded and newly included topics should be taken into consideration.

68. *Meta-data.* As a first priority, all the questions regarding meta-data need to be reviewed and updated, based on national methodological practices. Second, as statistical methods are not usually prone to frequent changes, requesting the same information on methods on a yearly basis needs to be adjusted. Instead, a separate methodological database needs to be developed, that would include all the information currently on record in the *Demographic Yearbook*, covering methods used for censuses, estimates and civil registration and vital statistics, thus providing methodological country profiles. This *Meta-data Profiles* would be made available on the Internet, and instead of including these questions on a yearly basis, countries would be invited to check the database and provide corrections, missing information or changes in their systems. In turn, the *Demographic Yearbook* would draw from the database the information and display it in the same fashion as currently, through technical notes, footnotes, special notifications and print.

69. *Response rates.* Increasing the response rate is of paramount importance for the *Demographic Yearbook* at this moment. The complexity of the issue is not helped by the fact that achieving this goal is not solely dependent on the Statistics Division, or on the national statistical authorities or regional organizations. It involves a coordinated set of actions and long-term commitment from all stakeholders, including producers and users of statistics at national and international level.

70. One of the first steps is to obtain as precise as possible information regarding the preferred format of the questionnaire. The experience so far clearly points to the electronic questionnaire as the preferred format, however, that finding is based on less than one half of respondents. Additional analysis is needed to identify how many different formats the *Demographic Yearbook* needs to develop in order to facilitate the reply by national statistical authorities. In addition to the electronic format sent by e-mail, would there be a need to develop individual *country domains* on the Division's server, which will consist of facilities to fill in the questionnaires on-line? How many national statistical offices would find this as the most convenient approach? How many offices would still prefer paper questionnaires, given the lack of efficient access to the Internet? And would email transmission of questionnaire suit others best?

71. Irrespective of the format of the questionnaire, it is the willingness and the capacities of the respondent to provide data or to at least inform about the unavailability of statistics for particular topics. Contemporary means of communication are facilitating building of a *Demographic Yearbook Network*, with the goal of identifying at least one official in each national statistical office that would be a focal point for *Demographic Yearbook* data collection and all issues related to the exchange of necessary information. Building such a network requires establishing and maintaining clear channels with over 230 offices using all means of communication available (phone, faxes, e-mail, web-sites). It also requires a set of regional workshops, designed to (a) train national statisticians in providing data for the *Demographic Yearbook*; (b) assess the major difficulties in meeting *Demographic Yearbook* requests; (c) establish regional networks for collection, processing and exchange of population statistics; (d) exchange national experiences in this field. Ideally, these workshops should involve every single statistical office.

72. Aside from the willingness to provide data, the statistical capacity at the national level is often the major challenge for successfully meeting data requirements. The United Nations Statistics Division is already investing considerable resources in building national statistical capacities in all fields of statistics. In this context, a thorough review of national capacities in collecting and disseminating demographic and social statistics needs to be undertaken, followed by appropriate training programmes and support. This activity should be taken in conjunction with the regional workshops, thus avoiding the duplication of efforts.

73. As for increasing the response rate by capturing data from national publications, the Statistics Division needs to increase its resources for the application of the *OCR* technology,⁴⁰ as the experience with its use so far has been positive.

⁴⁰ See para 56.

74. *Dissemination*. Improving the dissemination of data in terms of scope and timeliness is also dependent on several factors; most of them linked to the internal arrangements of the Statistics Division as regards users' needs. Fostering dissemination and eliminating the time lag between collection and dissemination of data requires more efficient functioning of the *Input System* and its incorporation with the *Master Database*. It is also dependent on format of the returned questionnaires that is predominant: if there is a need to key the data in (in case of paper questionnaires), that certainly delays processing and dissemination.

75. Another basic premise in enhancing dissemination of collected statistics is related to the validation of earlier data coming from the mainframe computer⁴¹ and posting tables on the Internet as they become available. As the *Demographic Yearbook* is a sales publication, with a price attached to it, there is a need to establish rules for the use of the data posted on the Internet. Similarly, there is a need for guidance on allowing general access to the *Demographic Yearbook Master Database* via the Internet.

V. CONCLUSION

76. In conclusion, the *Demographic Yearbook* is a major reference publication in the field of demographic and social statistics with a significant impact in many areas – providing national statistics used in monitoring population and social phenomena, assessing national statistical capacities, evaluating methodological approaches and national practices, providing a model for collection and dissemination of data, to name a few. Therefore, it needs to be maintained as such and enhanced in order to meet the growing needs for population and social statistics. The three basic components of the system are reviewed with a major goal of identifying areas in need of improvement: questionnaires, response rates and dissemination of data.

77. A list of questions for consideration by the Expert Group Meeting is presented at the end of each of the three more detailed papers focusing on three components of the *Demographic Yearbook*: collection, coverage and completeness and dissemination⁴². Here, just a few general ones are listed:

- How best to engage national statistical offices regarding the provision of accurate data for the *Demographic Yearbook* in a timely manner?
- Different format of the questionnaire: does it make a difference?
- The basic dilemma: reducing the number of topics?
- What is the best dissemination tool?

The Expert Group Meeting is a major step in preparing the *United Nations Demographic Yearbook* for the next vigorous 50+ years and, aside from debating these and other questions, is expected to provide a sound guidance to that end.

⁴¹ See paragraph 63.

⁴² Paper numbers: ESA/STAT/AC.91/2, ESA/STAT/AC.91/3 and ESA/STAT/AC.91/4, respectively.

ANNEX I - List of the original forty-eight *Demographic Yearbook* topics recommended by the United Nations Statistical Commission and the United Nations Population Commission, 1948.

I. Area and Population

1. Area
2. Total population
3. Population density
4. Annual percentage rate of population change
5. Population of major cities
6. Population by age and sex – absolute numbers and proportions
7. Population by age, sex and marital conditions - absolute numbers and proportions
8. Population by urban and rural divisions
9. Population by race and nationality (or citizenship)
10. Population by age, sex and literacy
11. Households – number and distribution by size
12. Women by number of children ever born and by number of children living

II. Economically active population

13. Active population (labour force) by age and sex
14. Active population by industry
15. Active population by industrial status (class of worker)

III. International migration

16. Emigrants by country of destination
17. Immigrants by country of origin and nationality
18. Emigrants and immigrants by age, sex and occupation

IV. Natality

19. Total number of births
20. Crude birth rates
21. Births by month of occurrence
22. Births by age of mother and father
23. Fertility rates by age of mother
24. Births by parity
25. Births by legitimacy
26. Births by duration of marriage
27. Stillbirths
28. Gross and net reproduction rates
29. Ratio of children under five years of age to women aged fifteen to forty-nine years

V. Mortality

30. Total deaths
31. Crude death rates
32. Deaths by month of occurrence
33. Deaths by age and sex
34. Death rates by age and sex
35. Infant mortality rates
36. Deaths by cause
37. Maternal (puerperal) mortality rates
38. Life tables deaths rates (q_x)
39. Life table survivors (l_x)
40. Mean expectation of life ($\overset{\circ}{e}_x$)

VI. Morbidity

41. General morbidity

VII. Marriage and Divorce

42. Total marriages
43. Crude marriage rates
44. Marriages by age of partners
45. Marriage rates by age and sex
46. Total divorces
47. Crude divorce rates
48. Divorces by duration of marriage and number of children.

ANNEX II - List of Tables included in the *Demographic Yearbook* Questionnaires

(1) Population estimates

1. De facto population estimates by urban/rural residence as of mid-year for the past 40 years;
2. Estimated population by age, sex and urban/rural residence: latest available year, preferably mid-year estimates; the age classification is in single years;
3. De facto population estimates of the capital and cities of 100,000 or more inhabitants; latest available year;
4. Estimated population by age, sex, marital status and urban/rural residence; the age classification is in 5-year age groups.

(2) Vital statistics

1. Vital statistics summary by urban rural residence for the last five years.
 - (a) Mid-year population;
 - (b) Live births;
 - (c) Deaths;
 - (d) Infant deaths;
 - (e) Late foetal deaths;
 - (f) Marriages;
 - (g) Divorces and annulments;
 - (h) Divorces;
 - (i) Annulments;
 - (j) Legally induced abortions.
- . The next part of the questionnaire focuses on Live births for the past five years by:
 - (a) Month of birth;
 - (b) Legitimacy and sex;
 - (c) Live-birth order;
 - (d) Legitimate live-births by duration of marriage,
 - (e) Age of mother, sex of child, legitimate live-births by urban/rural residence;
 - (f) Age of father and legitimacy;
 - (g) Age of mother and live birth order (latest available year only);
 - (h) Birth-weight;

- (i) Gestational age
 - (j) Type of birth.
3. This table requests data on fertility, namely: Total Fertility rate and gross and the reproduction rate.
 4. An additional table of the questionnaire focuses on Life Tables. An Abridged life table is followed by a complete life table with values for:
 - (a) Number surviving to exact age (l_x);
 - (b) Probability of dying (q_x);
 - (c) Life expectancy (e_x).
 5. The next part of the questionnaire focuses on Deaths by:
 - (a) Month of death (excluding foetal deaths);
 - (b) Age, sex and urban and rural residence (excluding foetal deaths);
 - (c) Age, sex and marital status
 - (d) Age, sex and occupation.
 6. This is followed by statistics on Infant deaths (deaths under 1 year of age) requested by:
 - (a) Month of death;
 - (b) Age and sex.
 7. Statistics on Late foetal deaths (death of a foetus of at least 28 completed weeks of gestation) are requested by:
 - (a) Age of mother and legitimacy;
 - (b) Age of mother and total birth order;
 - (c) Period of gestation (in weeks).
 8. Data on Legally induced abortions by age and number of previous live births of mother are also requested.
 9. Statistics on marriages are collected by:
 - (a) Month of marriage;
 - (b) Previous marital status of bride and groom;
 - (c) Age of bride and groom;
 - (d) Age of bride and groom at first marriage;
 - (e) Age and previous marital status of bride and groom.
 10. Data on divorces are requested by:
 - (a) Duration of marriage;
 - (b) Number of dependent children;
 - (c) Age of husband and wife;

(d) Duration of marriage and age of husband and wife.

(3) International migration and travel

1. Major categories of international departures and arrivals
2. Long-term emigrants and immigrants by country of intended long-term residence or by country of last-long term residence
3. Long-term emigrants and immigrants by age and sex

(4) Population censuses

1. Total area: land; and inland water;
2. Population by sex and urban/rural residence;
3. Population of major civil divisions by urban/rural residence;
4. Population in localities by size-class of locality and sex;
5. Population of national capital and other principal cities with population of 100,000 or more by sex and land area;
6. Households, population in households and number of family nuclei by size of household and number of persons living in households.

*This is followed by a series of tables on **population according to:***

7. Single years of age, five-year age groups, sex and urban/rural residence;
8. Marital status, age, sex and urban/rural residence;
9. Native and foreign-born by age and sex;
10. Foreign-born by country of birth, age and sex;
11. Foreign-born in the country for less than five years by country of birth, age and sex;
12. Literacy for 10 years of age and over by age and sex;
12. Educational attainment for 15 years of age and over by age and sex;
13. School attendance for 5 to 24 years of age, by single years of age and sex;
14. Number of children born alive for females 15 years of age and over, by age and urban/rural residence;
15. Number of children living for females 15 years of age and over, by single years of age and urban/rural residence;
16. Country of citizenship and sex;
17. National and/or ethnic group and sex;
18. Religion and sex;

19. Language and sex.

(5) Population Census Questionnaire on Economic Characteristics

1. Population by type of activity, age and sex
2. Population not economically active by functional categories, age and sex
3. Economically active population by industry, age and sex
4. Economically active population by occupation, age and sex
- 4A. Economically active foreign-born population by occupation, age and sex
5. Economically active population by status, age and sex
6. Economically active population by status, industry and sex
7. Economically active population by status, occupation and sex
8. Female population by type of activity, age and marital status

Countries are requested to provide data by rural/urban area of residence for all tables except tables 4 and 4A.

(6) Population census questionnaire on household characteristics

1. Population by age, sex and type of household
2. Households by age and sex of household head or other reference member of household and household size
3. Households by age, sex and marital status of head of household or other reference member of household
4. Households by number of persons in household and relationship to head or other reference member of household by age and sex of head of household or other reference member
5. Population by number of persons in household and relationship to head of other reference member of household by age and sex of head of household or other reference member
6. Households by type of household, number of household members and presence of spouse by age and sex of head or other reference member of household
7. Households and population in households by sex, size of household and presence of persons 60 years of age and over
8. Household population by relationship to householder, (head or reference person), age and sex
9. Households and population in households by number of persons 60 years of age and over by age, sex of householder and type of household