

2010 Round of Censuses: Learning from the 2000 Round

Country position: Mauritius

February 2006

This country position paper has been prepared on the basis of past experience in census taking, as well as, on the UN publication 'Principles and Recommendations for Population and Housing Censuses, Revision 1'. The list of topics for which data will be collected for the 2010 Census of Mauritius will however be finalized following consultations with users in order to ascertain their data needs. The consultations will be held a few years prior to census.

1. A core set of topics and outputs

A. List of core topics for population census

Below is a list of core topics for population census. This list has been prepared on the basis of population census topics printed on pages 59-60 of the UN manual.

A total of 25 core topics have been short – listed and are given below:

(a) Geographical and Internal migration (3 topics)

- Place of usual residence
- Place where present at time of census
- Place of residence at a specified date in the past

The variables 'place of residence at a specified date in the past' together with 'place of usual residence' can be used to estimate internal migration. The variables 'place of birth', 'duration of residence' and 'place of previous residence' can be used to provide additional information on migration but they are not considered core topics.

Also, we believe that the use of place of birth to estimate lifetime migration might be misleading since most births occur in hospitals. Moreover, in the past women used to give birth at their mother's place and then move to their usual residence just after the birth of their child.

(b) Household and family characteristics (1 topic)

- Relationship to head or other reference member of household

(c) Demographic and social characteristics (6 topics)

- Sex
- Age
- Marital Status
- Citizenship
- Religion
- Language

The variable 'national and/or ethnic group' is not considered a core topic in the Mauritian context since information on ethnic group is no longer collected in our censuses. After the election of 1982, the government decided that people should not be asked their community in census. The government felt that this question was very divisive.

(d) Fertility and mortality (2 topics)

- Children ever born
- Age, date or duration of first marriage

The vital registration system of Mauritius is practically complete and from which pertinent statistics on fertility and mortality are derived. As such, only two topics have been retained as core topics. The two topics would enable us to derive fertility indicators for the lowest geographic unit and hence allow for regional comparison as well as comparison by socio-economic groups.

(e) Educational Characteristics (4 topics)

- Literacy
- School attendance
- Educational attainment
- Field of education and educational qualification

(f) Economic characteristics (6 topics)

- Activity status
- Number of hours worked during a reference week
- Occupation

- Industry
- Status of employment
- Place of work

The census 2000 is the first census for which data on income was collected in Mauritius. A comparison of this data with data on income from the Household Budget Survey showed that there was an under-reporting of income in the census.

Given that income is quite a sensitive variable and that the quality of data are usually poor, the topic is not considered a core topic.

Data on 'institutional sector of employment' was not collected in the 2000 census of Mauritius. However data was collected on 'the length of service with present or more recent employer' but is not considered a core variable.

(g) International migration (2 topics)

- Country of birth
- Citizenship (covered in section 3)

In our census, data was not collected on the variable 'country of birth'. However, it is believed that it is an important variable as it would give the country of origin of people coming to live in Mauritius from abroad. It can be used to estimate the stock of immigrants as well as to obtain the distribution of immigrants by country of origin.

It should be recalled that foreigners having stayed a long time in the country might have acquired the Mauritian nationality so that the variable citizenship alone would not be sufficient to estimate the stock of international immigrants.

The variable 'year of arrival' is a variable that permits a more in-depth analysis of migration but is not considered a core variable.

(h) Disability characteristics (2 topics)

- Disability
- Causes of disability

In our 2000 census, data on 'causes of disability' was not collected. However, we believe that data on the variable would help in the formulation of policies geared towards lowering the incidence of disability.

B. List of core topics for housing census

This list of core topics has been prepared on the basis of housing population census topics printed on pages 97-98 of the UN manual 'Principles and Recommendations for Population and Housing Census, revision 1'.

A total of 17 core topics have been short – listed and are given below

(a) Unit of enumeration: Building (3 topics)

- Building – type of
- Construction material of outer walls and roof
- Year or period of construction

The materials for roof does not appear in the UN list but we believe that it could be collected as would give a more complete picture of the characteristics of the housing unit.

(b) Unit of enumeration: Living quarters (12 topics)

- Location of living quarters
- Living quarters – type of
- Occupancy status
- Rooms – number of
- Water supply system
- Toilet and sewerage facilities
- Bathing facilities
- Cooking facilities
- Lighting – type of and/or electricity
- Solid waste disposal – type of
- Occupancy by one or more households
- Occupants – number of

In our housing census, we did not ask for information about 'type of living quarters', 'type of ownership' and 'floor space'.

However we believe that 'type of living quarter' is an important variable that needs to be included in a housing census questionnaire. This would provide for the opportunity for

detailed analysis by type of living quarters, which in turn would provide vital information for the formulation of housing policies.

(c) Unit of enumeration: Households/occupants (2 topics)

- Tenure
- Rental cost

In our housing census, we did not ask for the age, activity status and occupation of the head of household. It is believed that the characteristics of the head might not necessarily be correlated to the housing condition of the household. Rather, the characteristics (usually economic) of all members of the household together might be more correlated to their housing conditions.

C. Core set of outputs from Housing and Population Census

The following core set of tabulations have been based on the core list of variables given in sections A and B above. Also the tables chosen from the list provided in the Principles and Recommendations for Population and Housing Census Revision 1, are the simple ones giving basic information on the variables. The complicated multi-variable tabulations have been excluded.

Geographical and internal migration characteristics

1. Total population and population of major and minor civil divisions, by urban/rural distribution and sex
2. Population in localities, by size class of locality and sex
3. Population of principal localities and of their urban agglomerations, by sex
4. Population ... years of age and over, by place of usual residence, place of residence at a specified date in the past, age and sex.

Household characteristics

1. Population in households, by relationship to head or other reference member of household, marital status and sex, and size of institutional population
2. Households, population in households and number of family nuclei, by size of household
3. Households and population in households, by size and type of household

Demographic and social characteristics

1. Population by single years of age and sex
2. Population by marital status, age and sex
3. Population by religion age and sex
4. Population by language (mother tongue, usual language or ability to speak one or more languages), age and sex

Fertility and mortality

1. Female population 15 years of age and over, by age and number of children ever born alive by sex
2. Female population 15 years of age and over in their first marriage/union or married once, by five year duration of marriage/union group and number of children ever born alive by sex

Educational characteristics

1. Population ... years of age and over not attending school, by educational attainment, age and sex
2. Population 5 to 29 years of age attending school, by educational attainment, age and sex
3. Population 5 to 29 years of age, by school attendance, single year of age and sex
4. Population 10 years of age and over, by literacy, age group and sex
5. Population that has successfully completed a course of study at the third level of education, by educational qualification, age and sex

Economic characteristics

1. Population ... years of age and over, by usual (or current) activity status, marital status, age and sex
2. Usually (or currently) active population, by main occupation, age and sex
3. Usually (or currently) active population, by main industry, age and sex
4. Usually (or currently) active population, by main status in employment, place of work, main occupation and sex
5. Currently active population by sex, main status in employment and number of hours worked in all occupations during the last week
6. Population not usually active, by functional categories, age and sex
7. Population not currently active (in other words not in labour force) by primary reason of inactivity, age and sex

Immigration stock

1. Foreign born population, by country of birth, age and sex
2. Population, by country of birth and citizenship, age and sex

Disability characteristics

1. Total population, by type of disability, geographical division, urban/rural residence, whether living in household or institution, age and sex
2. Population with disability, by cause and type of disability, urban/rural area, age and sex
3. Population of usual age for entering the first level of school to 29 years of age, by school attendance, type of disability, urban/rural area, age and sex
4. Population 5 years of age and over, by educational attainment, type of disability, urban/rural area, age and sex
5. Population 15 years of age and over, by activity status, type of disability, urban/rural area, age and sex

Housing characteristics

1. Households by broad types of living quarters and number of homeless households
2. Households in occupied housing units, by type of housing units
3. Conventional and basic dwellings, by year (or period) of construction of building (in which dwelling is located), cross-classified by type of building and construction material of outer walls
4. Housing units by number of rooms, cross-classified by type of housing unit and number of occupants per housing unit
5. Households in housing units, by type of housing unit occupied, cross-classified by number of households and number of rooms per housing unit
6. Housing units by type of housing unit occupied, cross-classified by water supply system
7. Housing units by type of housing unit occupied, cross-classified by type of toilet facilities
8. Housing units by type of housing unit occupied, cross-classified by type of solid waste disposal
9. Occupied housing units, by type, cross-classified by type of lighting
10. Households in housing units by type of housing unit, cross-classified by tenure of household and, for tenant households, ownership of housing unit occupied
11. Renting households in housing units, by rent paid, cross-classified by type of owner of the housing unit, whether space occupied is furnished or unfurnished, and tenure of the household head

2. New Topics

New topics that could be considered for inclusion in census questionnaires for our census are agriculture and development indicators.

Mauritius has just conducted an agricultural census but the frame used was incomplete and out of date. It is expected that the information to be obtained from the census would be used as a frame for forthcoming agricultural censuses.

The government is very concerned with the monitoring of development and poverty in the country. Working along these lines, the office has produced a development indicator based on data on amenities and facilities available in housing units as collected in the housing census. However, the inclusion of developmental topics in the census questionnaire would give opportunities for the creation of additional development indicators that would help in the monitoring of development and poverty.

Health statistics is available in sufficient details that enable the production of pertinent health indicators. Thus, there is no necessity to include health questions in census.

Disability is already included in our census.

Information on ownership of assets, environment and use of ICT are already collected in household surveys. The inclusion of these topics are therefore not warranted in our census.

3. Geographical and migration related topics

Legal residence

It is believed that questions on legality of stay should not be included in a census. Given that it is a very sensitive issue and that people might be required to produce legal document, this might create negative response from respondents and might also unduly overburden the fieldwork

Instead, the field usual residence could be used to determine whether to count them or not as residents.

Definition of place of usual residence

The boundaries of geographic subdivisions should be well defined in order to minimize the risk of assigning people to wrong geographic subdivisions. Also, attempts should be made in order to have geographic subdivisions to very fine levels. This would allow for

the production of indicators for very small regions which would be useful for comparison purposes.

In order to capture students or workers living temporarily away from their households, it is important to give clear instructions in the census questionnaire to include them in the count of population usually residing in the household.

If a condition of time limit of presence in or absence from the country is imposed, there is a risk that these special groups might be excluded from the count.

4. Alternative approaches to conventional censuses

In Mauritius, the householder method of enumeration is used for data collection in our census. The population census questionnaire together with a census guide, which is an instruction manual on how to complete the questionnaire, is distributed to household heads by census enumerators during the week preceding the census night. The head of household is expected to fill in the questionnaire. The census enumerator visits the households just after census night in order to collect the completed questionnaire. He verifies the questionnaire on site and completes any missing information. In case, the householder has not completed the questionnaire, the enumerator completes it himself. However, the majority of households complete the questionnaire themselves.

This approach of data collection yields good results given that literacy rate is quite high among the population. The success of this method however depends to a large extent on the level of publicity made on the importance of census taking, in order to secure the collaboration of the public.

The basic requirement for a register- based population census is the availability of a good population register with sufficiently detailed information. In the case of Mauritius, no such register is currently available though a project for the creation of a central population database is in the pipeline.

The canvassing of specific topics on a sample basis within a census operation is one of the new techniques available for census taking. Given that Mauritius conducts a variety of household surveys in order to satisfy its needs for data, the need to include sampling within our census is not felt. Especially that the office conducts a continuous household survey called the 'Continuous Multipurpose Household Survey', in which the topic to be included is dictated by the needs of the time except for labour force which is a core topic in the survey.

5. Promotion of censuses

The census is a large data collection exercise meant to gather information to be used for planning and policy making and which costs a significant amount of money. To make

optimum use of resources, it is important to investigate the requirements of potential users in order to collect the most relevant information. This could be done by requesting for inputs from relevant departments. Once inputs have been received from them, meetings can be arranged with them in order to discuss the issues and arrive at a consensus on the topics to be included in the census questionnaire.

In the preparation of the census project, adequate funds need to be made available for the analysis and dissemination of census results. In fact, this portion of the census project is the most important and attempts should be made in order to make maximum use of census results by users.

In the first instance, this could be done by preparing pertinent outputs and disseminating them in the most cost-effective manner. This can be achieved by creating a team of staff dedicated to census data analysis. The team should prepare preliminary reports on important issues for quick dissemination, followed by the release of more extensive reports.

As pointed out previously, the use of census results will depend to a large extent on the strategy adopted for the dissemination of census results. As soon as census results become available, a workshop should be organized in order to disseminate the census results. All potential users should be invited. This would be an opportunity to market the wide variety of information available from the census. It would also help to create an interest among users on the use of census data.

Maximum use should also be made of the opportunity provided by information technology. All the information should be placed on a website for use by potential users. The census results in hard copies should also be disseminated to users.

6. Sensitive questions

In our census at present there is no question relating to race/ethnic group. The question on ethnic group was present in the 1972 census population questionnaire. In the following census, that is, census 1983, the question was eliminated because the government felt that it was a divisive question.

7. Outsourcing of census operations

For the 2000 census almost all census operations were conducted by the office staff except for the printing of census forms which was done by the Government Printing Office and the data capture which was done by the Central Information Systems Division of the Ministry of Finance. Given that both departments form part of the government service, no contracts as such bound the CSO with these departments for the performance of these tasks.

No outsourcing of census operations to the private sector is envisaged in the future given that the CSO has the necessary know-how and qualified manpower for the execution of a census project.

It is believed that prior to any outsourcing of census operation to the private sector, the issue of confidentiality need to be re-assessed in order to maintain trust of users on official statistics.

8. The use of Information technology

Optimum use should be made of information technology in the census taking process.

Given that our census questionnaire is quite complex, automatic capturing and coding of data cannot be envisaged. However, the power of information technology should be maximized in census analysis and dissemination of census data.

Data analysts need to be given sufficient training on the use of relevant softwares such as IMPS, STATA, SPSS, MAP-INFO or TNTlite.

Much emphasis must be given on the use of GIS for the mapping of demographic/social and economic data. This would be an important step towards making information more easily understandable by users, which in turn would boost the use of census data. For this purpose, there is a need to provide the necessary logistics and training to the staff concerned.

Census data should be disseminated through the office website. For a wider dissemination of our census products, the CSO website need to be linked to other relevant websites.

9. Funding for the population and housing census

The population and housing census of Mauritius is wholly funded by the central government.

10. The mode of capturing the data

Collection of data for a census can be done either through personal interviews, self – enumeration or a combination of both. The advantage with personal interviews is that a questionnaire of greater complexity may be administered compared with self-enumeration. Also, the response rate with personal interview is much higher and inconsistencies detected during verification can be corrected after the necessary field checks.

With self-enumeration, the census operations would be less costly due to the fact that less resources would be required for carrying out the exercise. However, the questionnaire has to be kept quite simple in order to minimise burden on the respondent.

For self-enumeration to be feasible, the population has to be sufficiently literate. The success of the census will depend to a large extent on the willingness of the household to return back the completed questionnaires. The response rate would however be less than with personal interviews. It would also be more difficult to clear inconsistencies cropping up in completed questionnaires.

11. Post Enumeration surveys

In Mauritius, the evaluation of census was done using indirect methods, that is, using statistical techniques. The evaluation of the past several censuses has shown that the census data are of good quality. Post enumeration surveys are not conducted in Mauritius.

12. De Facto/De jure censuses

In Mauritius, the population census questionnaire is completed with respect to (i) all persons who spent the census night on the premises whether they are members of the household, visitors, guests, boarders or servants, (ii) all persons who arrive on the premises and join the household on the day following the census night without having been enumerated elsewhere (iii) all temporary absent members of the household eg. on business trip, hospital or studying abroad.

The count of de jure population is then derived using the census question asking whether the person's usual residence is "Here", "Elsewhere in Mauritius" or "Abroad". All individuals returning "Here" are counted as usual residents. As such, all temporary visitors such as tourists are excluded from the count. The term de facto or de-jure is not mentioned in our census questionnaires.

Though we have compiled a de-jure population, reference is not made to the legal status of residence of the respondent.

13. The status of the National Statistical System in Mauritius

The Central Statistics Office (CSO) is the official organisation responsible for the collection, compilation, analysis and dissemination of all official statistics relating to all aspects of the economic and social activities in the Republic of Mauritius. According to the Statistics Act of 2000, the Central Statistics Office shall be the central depository for all statistics produced in Mauritius.

The Central Statistics Office is made up of a staff of around 200, with the Director of Statistics as the head, supported by Deputy Directors, Principal Statisticians, Senior Statisticians, Statisticians, Senior Statistical Officers and Statistical Officers. Support services are provided by a team of administrative staff.

Presently a few ministries and government departments collect and compile statistics independent of the CSO though some degree of collaboration with the CSO exist. These departments are:

1. The Ministry of Health and Quality of life
2. The department of Fisheries
3. The Bank of Mauritius
4. The Agricultural Research and Extension Unit

Apart from Government departments, the private sector also produces statistics usually for their own consumption or for the servicing of other organisations. Some of these organizations are as follows: The University of Mauritius, The Centre for Applied Social Research, Mauritius Chamber of Commerce and Industry, Mauritius Employers Federation etc.

The CSO collects its data through censuses, surveys and through administrative records. The data collected are compiled, analysed and disseminated through a variety of ways. Our tool for the quick dissemination of data is a series of Economic and Social Indicators which are posted on our website. The indicators are released according to an advance publication calendar which appear on our website. More comprehensive reports are also posted on our web once the data become available. All our publications in hard copies are regularly mailed to our current users.

The Statistics Act of 2000 also provides for the disclosure of unidentified individual statistical records, under strict conditions, solely for bona fide research or statistical purposes.

The Act also provides for the establishment of a Statistics Advisory Council (SAC). The main function of the council is to advise the Minister on statistical matters including the setting up of priorities and programme of work to be adopted by the Central Statistics Office.

The members of the SAC are drawn from various backgrounds including the public sector, the private sector, the employers, the trade unions and the NGO's. The Statistics Advisory Council held its first meeting in May 2001. Given the diversity of issues to be tackled, the committee gave approval for the constitution of committees to work on the specific issues. One of the committees which emerged is the 'Committee on Public Understanding of Statistics'. During its mandate, the committee came out with an action plan in order to make statistics more accessible to the lay public. The office is currently implementing the actions proposed such as the improvement of the office website, the improvement of our publications etc. Along the same lines, the office is the process of

preparing a series of TV programmes in order to explain statistics terms and concepts to the lay public using the local language, but the project has not yet materialised.