

Planning for the 2010 Population and Housing Census In Indonesia

Rusman Heriawan
Director General
BPS-Statistics Indonesia

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Introduction

Indonesia is the world's largest archipelago consisting of five major islands and roughly 13,700 islands scattered over 5,120 kilometers. Fifty six per cent of islands are unnamed and only seven percent of them are inhabited. Transportation and communication links are very limited between islands.

Indonesia administratively divided into 33 provinces and 440 districts/municipalities. There are more than 300 ethnic groups and more than 250 languages are spoken in Indonesia. The largest ethnic group is the Javanese, 41.6 percent of the total population. The Sundanese make up 15.4 percent, followed by Maduranese 3.4 percent.

The population is scattered unevenly across the archipelago. Java which is only about 6.6 per cent of the land size is populated by almost 60 per cent of Indonesia's population. This is an indication that the development plan is still focused on Java region. Based on the 2000 Population Census, population of Indonesia was 205.1 million persons. Between the intercensal periods of 1990-2000, the average growth was 1.35 percent per annum. The rate had declined compared to 1980-1990 average annual growth of 1.63 percent, and the rate of 2.34 percent during the 1970-1980 periods.

History of the Census

BPS-Statistics Indonesia has had a long experience in undertaking national Population and Housing Censuses, besides the responsibility of collecting, interpreting and disseminating other fields of statistics. The Population and Housing Censuses of Indonesia were conducted for the years 1961, 1971, 1980, 1990 and 2000. The 2000 Population and Housing Census was the fifth decennial census undertaken since the independence of Indonesia in 1945.

The importance of Census data was also recognized by the Dutch colonial government in Indonesia which conducted several censuses, although only those of 1920 and 1930 were considered proper censuses in terms of the objective and the method used. The forthcoming Population and Housing Census of Indonesia will be conducted in 2010.

The most recent Population and Housing Census which was undertaken in June 2000 has been used extensively in the preparation and monitoring of the Five-Year Indonesia Medium Plans (2000 – 2004). The *de jure* and *de facto* approach was adopted in the 2000 Census whereby all persons on Census Day (30th June 2000) were enumerated according to their place of usual residence. Enumeration was undertaken during the period of 1st to 30th June 2000. All persons including foreigners who had stayed or intended to stay in Indonesia for six months or more in the year 2000 were included in the Census.

The Forth Coming 2010 Population and Housing Census

One of the important factors that determine the success of the national development program is baseline data on socio-economic situation of the population. So far Population censuses are traditionally used for public and private sector policy-making, planning, administrative and research purposes while Housing censuses are used to

develop benchmark housing statistics and to formulate housing policy and programs, and in the private sector to assist in site selection for industrial, retail and service facilities, as well as for the commercial development of residential housing.

As mention above, BPS-Statistics Indonesia is responsible for conducting decennial population and housing census. In addition, BPS is also responsible for conducting agricultural census, economic census, intercensal survey, large scale household surveys and establishment surveys. BPS also compiles administrative data sources from government ministries and departments and also from private sectors.

The 2010 Population and Housing Census planned to be started in 2008 since it was realized that a population census is one of the most complicated statistical operations, consisting of various steps to be carefully planned in advance so that proper control of the continuous sequence of activities can be implemented. A master plan will be prepared for the whole operation of the census covering the period 2008 through 2012. *A population census is the total process of collecting, compiling, evaluating, analyzing and publishing or otherwise disseminating demographic, economic and social data pertaining, at a specified time, to all persons in a country or in a well-delimited part of a country. While a housing census is the total process of collecting, compiling, evaluating, analyzing and publishing or otherwise disseminating statistical data pertaining, at a specified time, to all living quarters and occupants thereof in a country or in a well-delimited part of a country.* "(Principles and recommendations for Population and Housing Censuses, Revision 2, 2006, United Nations.)"

The 2010 Population and Housing Census operations including the above mentioned activities may be categorized into six stages as follows:

- Preparatory work
- Household listing and sample selection
- Census enumeration
- Data processing and tabulation
- Evaluation and analysis of the results
- Dissemination.

Legal Basis

Legal provision of the census is one of the important aspects for empowering the census operation. The legislation to conduct Population and Housing Census is based on Law 16/1997 regarding Statistics, Government regulation 51/1999 regarding the implementation of Statistics undertaking, and other Ministerial Decrees which are supporting the census activity. In accordance with provision of the Statistics Act, a notified order will be issued for the 2010 Population and Housing Census. By this notice, the BPS-Statistics Indonesia would be empowered to conduct the 2010 Population and housing Census.

Objectives

- To provide information on population and housing for the smallest administrative area (village)
- To provide detailed information regarding demographic parameters
- To construct a master sampling frame to be used for the next sample surveys
- Meet the needs of policymakers, businesses, non-profit organizations, and the public for current measures of the Indonesia population and housing conditions.

Coverage

The 2010 Population and Housing Census will cover all house, building and all population residing in the entire geographic area of Indonesia regardless of whether they had permanent resident or not. The foreign diplomatic members and their family will exclude in the enumeration.

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Such activities will take in the 2010 Population and Housing Census :

2008

- Pilot study on constructing and mapping of census blocks.
- Mapping of rural administrative regions and Jakarta metropolitan.
- Constructing and mapping of census blocks in rural areas and Jakarta metropolitan area.
- Pilot study/try-out of the 2010 PHC's Village Potentials Data Collection.
- Try-out of the 2010 PHC's instruments, methodology, enumeration techniques, field operation, field organization, etc.

2009

- Mapping of urban administrative regions.
- Constructing and mapping of census blocks in urban areas.
- Collecting and processing data of the 2010 PHC's Village Potentials.
- General rehearsal of the 2010 PHC.

2010

- Presenting data of the 2010 PHC's Village Potentials.
- Urban/rural Classification
- Undertaking the 2010 Population and Housing Census
- Post Enumeration Survey
- Processing data of the 2010 Population and Housing Census

2011

- Presenting the 2010 PHC's results
- Disseminating the 2010 PHC's results
- Calculating demographic parameters

2012

- Calculating Population Projection based on 2010 PHC
- Analysis of the 2010 PHC's results

Census Fieldworkers

As census is a decennial activity requiring huge resources, most of the census activities have to be carried out on an ad-hoc basis. For this, it is very important to have a strong organization for the smooth running of the census operation. The 2010 census organization will be visualized and set up, so as to conduct the census within a specified time frame covering all 33 Provinces, 440 districts and municipalities, and more than 850,000 enumeration areas (census blocks). In total around 400,000 enumerators and supervisors are required for a period of one month.

The Population and Housing Census fieldworkers came from various backgrounds. It might come from the BPS staffs, students, school teachers, other government staffs or from persons residing in village. These persons will be officially appointed by the Director General of BPS. It is considered that each field worker will be assigned to carry out the enumeration in their own village. Furthermore, fieldworker will be trained prior to the census implementation. Therefore, only persons with high possibility to conduct the task at the schedule time are selected.

Publicity Campaign

As in the 2000 census, the publicity program of the upcoming census will start with an aim to plan "an effective publicity campaign for the census against the prevailing social and economic background". Publicity programs will be targeted to increase the willingness of the respondents to cooperate the enumeration. The programs will be focused towards informing the public about the uses of and importance of census data. Further, the campaign will be aimed to encourage the respondents to correctly answer the questions asked in the census.

Main objective of the publicity program will be "to create awareness for all respondents on the population census 2010". While most of the techniques and procedures used for the 2000 census will be considered for the 2010 census too, a number of changes will be made in the light of lessons learned and the media available in the country.

The Census publicity will be done during the pre-enumeration stage, enumeration stage and post-enumeration stage. This will help in enlisting the cooperation of the public and also ensuring confidentiality of information collected. BPS-Statistics Indonesia also worked on the related publicity campaign for the society at large. It included the following activities:

- Information leaflets/posters will be distributed to every village within the country some days before the enumeration.
- The hot line will be established.
- Information about the census will be presented on national and local TV, radio and in newspapers.
- Lectures in various institutions (the Association of Municipalities, municipalities, universities, schools, etc.) will be organised.
- Information will be disseminated in the mass media (on the national TV, radio and in newspapers).
- Drama, interactive discussion in TV and Radio
- Publish Stamp with Census logo, in cooperation with Post Office.
- The 2010 Population and Housing Census Web Site will be established.

Questionnaires

In the modern context there is always an increasing demand for data and information, and this is not an exception for the census as well. A census being a huge national undertaking incurring substantial amount of money, while the resources are always constrained and limited. The choice of topic to be covered in a census mainly depends upon the user needs. However, as society becomes complex the demand of population data for development plans is not only increasing but the level of such information is switching to smaller administrative levels, while census being a complex and large operation has its own limitations in meeting all the demands of data users. Another main consideration for determining census topic is to maintain comparability and continuity of the census information.

Population and Housing Census questionnaires hopefully can accommodate the data required for the compilations of MDG Indicators, which is essential for national policy making and monitoring. In developing questionnaires, BPS also consider with the UN guideline in conducting Population and Housing Censuses.

Core topic derive from the “Principles and recommendations for Population and Housing Censuses” UNSD.

Population census variables	Housing census variables
<ul style="list-style-type: none"> • Place of usual residence • Sex • Place of birth • Duration of residence • Place of previous residence • Rel. to head or other ref. member of HH • Marital status • Age • Household and family composition • Children ever born • Children living • Births in the last 12 months • Infant mortality • Educational attainment • School attendance • Literacy • Activity status • Occupation • Industry • Status in employment • Citizenship • Year of period of arrival • Disability 	<ul style="list-style-type: none"> • Living quarters – type of • Type of Collective living quarters • Type of Housing units • Type of Conventional dwellings • Occupancy status • Ownership • Use of housing unit • Room • Number of occupants • Water supply • Toilet and sewerage facilities • Cooking facilities and fuel used for cooking • Solid waste disposal • Occupancy by one or more households • Location • Type of Buildings • Material of construction • Material of outer walls • Tenure • Ownership • Information and communication technology devices (ICT)

Census-planned Budget

The required funding for the census will be allocated from the national/state budget. It covers budget for organisation of the census, including preparation of cartographic material, publicity, salaries of fieldworkers (supervisors and enumerators).

In total, about US \$ 204 million were used in the period 2008–2012, which is about \$ 0.87 per capita. The major costs included those for the fieldwork (enumeration staff).

Year	Activities	Budget (US\$)
2008	Preparation - Sampling frame development - Mapping - Try out - Questionnaires and manual development - Administrative	1,300,000
2009	Village potential survey Mapping (Continued) Try out Training of trainers Administrative	33,000,000
2010	Publicity Dress rehearsal Data processing equipment Software development Questionnaires and manuals printing Field workers training Field Operation Post enumeration survey Editing/coding Data capturing Administrative	137,000,000
2011	Data Processing Tabulation Data analysis Administrative	27,400,000
2012	Data Dissemination Publication Administrative	5,300,000
	Total	US \$ 204.000.000

Training

Various levels of training will be organized for different levels of staffs in the census at different points of time. These include the training of the master trainers, district census officers, area supervisors, field supervisors and enumerators. To start with, a group of

master trainers will be trained in the central office. These training will be mainly focused for maintaining uniformity on the census procedures, terms and definitions used in the census questionnaires and developed understanding among all the trainees.

Data Processing

Intelligence character recognition (ICR) technology will be employed for data capture. Data capture, or the process of converting the entries in the Census 2010 forms into machine-readable format, starts with the scanning of every page of the accomplished census forms, which have been earlier batched at the Provincial Offices, to create an image for every page. The resulting images are passed on to a recognition program which handles the automatic conversion of optical marks (OMR), machine-printed and hand-written information (ICR) into ASCII text.

Problems

One of the obstacles to census taking in Indonesia is due to the size and dispersion of the population that have to be enumerated, living in thousands of islands. The enumeration can not be done through a mailing system, since the level of education of the population (especially in rural areas) is still relatively low. The enumeration will be carried out by approximately 400,000 part time field workers (enumerators and field supervisors). Due to the huge number of part time workers required, the recruitment of low quality enumerators in remote places outside Java could not avoided. This situation could possibly affect the quality of data.

Conclusions

1. Indonesia is committed to conduct the 2010 Population and Housing Census, since the result will be extensively demanded by central and local government, universities, private research institute, and public in general.
2. Questionnaire design and data collection strategy will be developed to match various domestic needs and internationally comparison purposes.
3. New technology for data capture, employing Intelligent Character Recognition (ICR System) will decrease the number of staff members for data entry and timeliness of data entry.
4. Publicity is very important part in creating awareness for all respondents on the 2010 Population and Housing Census.
5. Indonesia PHC is huge national undertaking, covering 33 provinces and 440 districts/municipalities scattered all over Indonesia, employing about 400,000 enumerators and supervisors, and estimated financial budget US \$ 204 million.
6. It is important to consider how to match the census results with the needs of data users under conditions of resources and budget constraint.