

Philippines - Census of Population 2007

National Statistics Office

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Overview

Identification

ID NUMBER

PHL-NSO-POPCEN-2007-v01

Version

VERSION DESCRIPTION

Version 2.0 - Edited, anonymous dataset for public distribution. In this version, the dataset is obtained from the Public Use File of the POPCEN 2007. For this version, the data file of Ilocos Norte was used in this documentation as a sample dataset. The data files for the rest of the provinces in the country will be used in the future version of this documentation.

PRODUCTION DATE

2009-04-01

Overview

ABSTRACT

POPCEN 2007 was designed to take an inventory of the total population in the Philippines and to collect information about their characteristics. The census of population is the source of information on the size and distribution of the population as well as information about the demographic, social, and economic characteristics. These information are vital for making rational plans and programs towards national and local development.

The said census undertaking involved collecting, compiling, evaluating, analyzing, publishing, and disseminating data on the population count and characteristics of the population in each barangay, city/municipality, province, and region in the country. This census included the gathering of basic information on demographic and other socio-economic characteristics.

General Objectives

POPCEN 2007 aims to provide government planners, policy makers, and administrators with data on which to base their social and economic development plans and programs.

Specific Objectives

POPCEN 2007 aims to:

- obtain comprehensive data on the size of the population of the Philippines and its geographic distribution;
- gather data on the population composition in terms of age, sex, and marital status;
- gather data on highest grade/year completed, school attendance, and place of school;
- collect information on usual occupation and place of work;
- collect information on housing characteristics, particularly construction materials of the roof and outer walls, and tenure status of the lot;
- collect information about households in temporary relocation areas; and
- obtain information on the characteristics of the barangay for use as basis in urban-rural classification of these barangays.

August 1, 2007 has been designated as Census Day for POPCEN 2007, on which date the enumeration of the population in the Philippines was referred. For the purpose of this census, all information about the population were collected as of 12:01 a.m., Wednesday, August 1, 2007.

KIND OF DATA

Census/enumeration data [cen]

UNITS OF ANALYSIS

There are five units of analysis in POPCEN 2007. These are:

1. Household
2. Individual person
3. Housing unit
4. Institutional living quarter such as hospitals, military camps, prison camps, convents, and others
5. Barangay for urban-rural classification of the barangays

Scope

NOTES

The scope of POPCEN 2007 included the following:

HOUSEHOLD: average household size, households in occupied housing unit by type of construction materials of the roof and outer walls, as well as households by tenure status of the lot

HOUSEHOLD POPULATION population composition in terms of relationship to household head, sex, age, birth registration, marital status, school attendance, place of school, highest grade/year completed, overseas worker, usual occupation, and place of work

HOUSING: number of housing units by type of construction materials of the roof and outer walls

INSTITUTIONAL POPULATION: residence status, sex, age, birth registration, marital status, and highest grade/year completed

INSTITUTIONAL LIVING QUARTER: type of institutional living quarter such as hospitals, military camps, prison camps, convents, and others

BARANGAY: facilities, characteristics, establishments, and information on informal settlers

TOPICS

Topic	Vocabulary	URI
censuses [14.1]	CESSDA CESSDA	http://www.nesstar.org/rdf/common

Coverage

GEOGRAPHIC COVERAGE

POPCEN 2007 covered the entire country. The population count is available at the barangay, city/municipality, provincial, regional and national level. Demographic, social and economic characteristics are tabulated at the city/municipal, provincial, regional, and national level.

UNIVERSE

The POPCEN 2007 covered all persons, households, housing units, institutional living quarters, and institutional population based on de jure method of enumeration. All barangays and their characteristics are also included.

Producers and Sponsors

PRIMARY INVESTIGATOR(S)

Name	Affiliation
National Statistics Office	

FUNDING

Name	Abbreviation	Role
Government of the Philippines	GOP	

Metadata Production

METADATA PRODUCED BY

Name	Abbreviation	Affiliation	Role
Guillermo M. Lipio, Jr.	GML	Philippines National Statistics Office	Documenter
Minerva Eloisa P. Esquivias	MEPE	Philippines National Statistics Office	Reviewer

DATE OF METADATA PRODUCTION

2013-01-30

DDI DOCUMENT VERSION

Version 1.0 (January 2013)

This is the first version of documentation for the POPCEN 2007 using IHSN Toolkit. The data file of Ilocos Norte was used in this documentation as a sample dataset. The data files for the rest of the provinces in the country will be used in the future version of this documentation.

DDI DOCUMENT ID

DDI-PHL-NSO-POPCEN-2007-v01

Sampling

No content available

Questionnaires

Overview

BASIC CENSUS QUESTIONNAIRES

Listed below are the basic census forms that were used during the field enumeration.

CP Form 1 - Listing Booklet

A booklet that was used to list the buildings, housing units, households, and institutional living quarters (ILQ) within an enumeration area (EA). This form was also used to record other information such as address, total population and number of males and females.

CP Form 2 - Household Questionnaire

A four-page questionnaire that was used to record information about the households. This form was used to gather information on selected demographic and socio-economic characteristics of the population and some information on housing characteristics.

CP Form 4 - Institutional Population Questionnaire

A four-page questionnaire that was used to record the characteristics of institutional population residing in ILQ like hotels, hospitals, home for the aged, and others.

CP Form 5 - Barangay Schedule

A four-page questionnaire that was used to record the physical characteristics (e.g. street pattern) of the barangay and the presence of establishments and service facilities in the area. It was also used to record the number of households living in danger areas as well as those considered as informal settlers.

CP Form 7 - Household Self-Administered Questionnaire

This form was filled out by respondents who were not, for some reasons, personally interviewed by the EN. It contains specific and detailed instructions on how to fill out/accomplish each item.

ADMINISTRATIVE AND ACCOMPLISHMENT FORMS AND OTHER FORMS FOR ENUMERATION

Below are some administrative and accomplishment forms that were also used to facilitate data collection and supervision.

CP Form 6 - Notice of Listing/Enumeration

This form is a sticker. After listing and interviewing, this sticker was posted in a very conspicuous place, preferably in front of the house or at the gate of the building. This form was used for control and monitoring purposes as its presence indicates that a particular housing unit or ILQ has been listed.

CP Form 8 - Institutional Population Self-Administered Questionnaire Instructions

This form was used by managers or administrators of ILQ who were not, for some reasons, personally interviewed by the EN. It contains specific and detailed instructions for the managers/administrators to guide them in accomplishing each item.

CP Form 9 - Appointment Slip to Household/Institutional Population Respondent

This form was used to set an appointment with the household head or any responsible member of the household or manager of the institution, in case the enumerator (EN) failed to interview any responsible member of the household or manager of the institution during the EN's visit. The date and the time of the next visit shall be indicated in this form.

CP Form 9A - Appointment Slip to Barangay Official

This form was used to set an appointment with the barangay official knowledgeable about the characteristics of the barangay and who served as respondent for CP Form 5.

CP Form 10 - EN's Accomplishment/Progress Monitoring Report

This form was used to record the number of buildings, housing units, households, and ILQ, as well as household and institutional population. This form was used to monitor the progress of enumeration.

CP Form 11 - CAS'/TS' Weekly Progress Report

This is a progress report of enumeration in the various areas of supervision assigned to the Census Area Supervisor or

CAS/Team Supervisor or TS. This form was accomplished weekly. This was also used to record problems encountered and corresponding actions taken.

CP Form 12 - Re-interview/Spot-check Record

This form was used to check if the EN has followed the interview procedures accordingly. This form was also used to record observations regarding the supervisor's spot-checking activities.

CP Form 23 - NSO Personnel Supervision Form

This form was used by the Central Office and field office personnel to record the type of supervision done and observations made during the training and enumeration. This also served as reference for the preparation of their narrative reports.

Mapping Form

This form was used to plot buildings either occupied by households or vacant, ILQs and important physical landmarks in the area. It was also be used to enlarge the map of the block of an EA/barangay if the areas being enumerated are congested.

MANUAL PROCESSING FORMS

For manual processing, the following forms were used to facilitate the flow of manual processing of the questionnaires:

CP Form 19 - Provincial Processing Receipt and Control Form

This is a computer-generated form that was used to monitor the flow of questionnaires to be manually processed and to keep track of the progress of manual processing. The information that recorded in this form served as a hard copy backup of the Tracking, Receipt and Control System (TRACS).

CP Form 20 - Verification Slip for CP Forms 1, 2, 4, 5, or 7

This form was used by the verifiers and supervisors during manual processing at Provincial Office. This form was used by the supervisors to identify potential verifiers and coders from among the processors, as well as weak processors.

CP Form 21 - Record of Missing Questionnaires

This form was used when recording information about the geographic identification, building, housing unit, and household and institutional serial numbers of the missing questionnaires in a folio.

CP Form 22 - Manual Processor's Daily Accomplishment Report

This form was used in the manual processing stage to monitor the work of processors (either editor, coder, or verifier) on a daily basis. This was also necessary for money claims.

Data Collection

Data Collection Dates

Start	End	Cycle
2007-08-01	2007-08-31	N/A

Time Periods

Start	End	Cycle
2007-08-01	2007-08-01	N/A

Data Collection Mode

Face-to-face [f2f]

Data Collection Notes

I. CONDUCT OF PRETEST AND PILOT CENSUS

In line with the preparation for the conduct of the 2007 Census of Population (POPCEN 2007), series of pretests and pilot census were conducted in 2004. Pilot census was conducted a year before the actual census operation, which was done in May 2004. The original plan was to conduct the census in 2005. However, the conduct of the census was moved to 2007 due to its exclusion in the government appropriations in 2005 and 2006.

Pilot census was conducted to test every phase of the census operation - from preparation of questionnaires to forms and manuals, from hiring of enumerators to actual enumeration, from supervision to processing of the questionnaires and forms, and others. Furthermore, the pilot census was designed to test the procedures and systems to be used in the census, and to detect and correct any weakness in the programme before the actual operation is conducted. The experience in conducting the pilot census resulted in a few more revisions of the questions included in the census form. Thus, another round of pretests were done in 2006 prior to the actual census in 2007.

II. DATA COLLECTION INSTRUMENTS

All households, housing units, institutional population, and institutional living quarters were listed using CP Form 1 (Listing Booklet). Households and members of the household were enumerated using CP Form 2 (Household Questionnaire) or CP Form 7 (Household Self-Administered Questionnaire) for households who opted to self-administered the questionnaire. While the institutional living quarters and institutional population were enumerated using CP Form 4 (Institutional Population Questionnaire) or through the use of CP Form 8 (Institutional Population Self-Administered Questionnaire Instructions) if the institutional population opted to self-administered the CP Form 4.

On the other hand, information on barangay characteristics, services, and facilities were collected using CP Form 5 (Barangay Schedule).

III. PERSONNEL INVOLVED IN THE DATA COLLECTION

Personnel who served as enumerators (EN), team supervisors (TS), and census area supervisors (CAS) were hired. An EN was assigned an enumeration area (EA) or barangay depending on the workload, average daily output, and mandays computed for a given area of assignment. TS was assigned to supervise five ENs. In turn, CAS was responsible for seven TS.

IV. CONDUCT OF TRAINING

Training of personnel involved in POPCEN 2007 undertaking is an important requirement to effectively carry out the specific task assigned to each personnel. Hence, training at different levels were conducted as systematically as possible to ensure good results.

The four training programs conducted for POPCEN 2007 were the following:

1. Training on field operations in four levels involving the NSO Central and field office staff, CASs, TSs and ENs;
2. Training on Progress Monitoring System (PMS) and evaluation of PMS reports for Regional and Provincial Statisticians;
3. Training on manual processing, Tracking, Receipt and Control System (TRACS), and data entry application of CP Forms 5 and 7 for Provincial Statisticians and staff, hired processors, and receipt and control clerk (R&CC); and
4. Training on machine processing and map archiving for Regional Statisticians, selected Provincial Statisticians and staff of Regional Data Processing Center (RDPC 2007).

V. SUPERVISION DURING ENUMERATION

Field supervision is primarily aimed at ensuring the correct implementation of procedures and accurate data collection. Thus, field supervisors had systematically undertaken all measures of quality control activities. The following supervisory activities were carried during the supervision of the conduct of census:

- a. Scrutinized or edited the questionnaires (CP Forms 1, 2 or 7, 4, and 5) in the field to check for consistency, correctness, and completeness of responses.
- b. Checked randomly the consistency of the number of households and institutions, the counts for males and females in CP Forms 2 or 7 and CP Forms 4 against the numbers in CP Form 1 and CP Form 10.
- c. Examined the questionnaires for dubious and fictitious entries and for possibility of population padding.
- d. Re-interviewed at random households that were already enumerated to ensure the accuracy of enumeration.
- e. Reviewed maps as to orientation and boundaries and if households are properly plotted on the maps.
- f. Obtained the average actual output per day of the EN and compare this average with the expected output per day to assess the work progress of the EN.
- g. Checked for the possibility of padding or under enumeration.

VI. PROGRESS MONITORING SYSTEM

The progress monitoring system (PMS) was designed to provide the required information for monitoring the progress of enumeration and for evaluating the completeness/quality of census results. Preparation of reports and documents comprising the PMS operation started with the ENs through their accomplishment of CP Form 10, which was based on the information from CP Form 1 that were already consistently checked with CP Forms 2, 4, and 7. From EN to TS, then to CAS. From CAS, the data from PM reports were sent to the Central Office (CO) through Short Message Service (SMS) or text messaging. The CO compiled the PM text messages received for generation of PMS reports. These reports were used by Provincial Office (PO) and Regional Office (RO) to monitor the progress of enumeration and assess the quality of data collected. Parallel monitoring and assessment were also done by CO using these reports.

VII. INTERVIEW TIME

On average, the interview time for the interview of households took about 15 to 20 minutes.

VIII. DAILY AVERAGE OUTPUT

The average output per day was 20 households per day, on average. This average output differed from one barangay to another depending on the terrain, weather, available transportation facilities, and prevailing socio-economic and political conditions in the area.

IX. LANGUAGES USED IN THE INTERVIEW

Although the census questionnaires were in English, data collectors were provided with translation guide in different local dialects such as Tagalog, Ilocano, Kankanaey, Pangasinan, Ybanag, Kapampangan, Rombloanon, Cuyunon, Bicolano, Masbateno, Hiligaynon, Cebuano, Waray, Chavacano, Surigaonon, Kamayo, Maranao, Maguindanaon, and Tausug.

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Data Collectors

Name	Abbreviation	Affiliation
Enumerator	EN	Hired Personnel of Philippines National Statistics Office
Team Supervisor	TS	Hired Personnel of Philippines National Statistics Office

Supervision

I. PERSONNEL INVOLVED IN THE SUPERVISION

The NSO Central and Field Office personnel directly supervised the conduct of enumeration. In the region, the Regional Director and his/her staff were responsible for field visits in their respective provinces. At the provincial level, the Provincial Statistics Officer and his/her staff were responsible for supervision in cities/municipalities and barangays in their respective jurisdiction.

Aside from the NSO personnel, hired personnel were also tapped to augment supervisory functions. In a city/municipality, close field supervision was the responsibility of the Census Area Supervisor (CAS) assigned in the area. As mentioned earlier, on the average, the CAS was required to supervise seven Team Supervisor (TS). On the other hand, as a general rule, a TS was assigned to supervise five ENs. For a city/municipality with less than five enumerators (ENs), the CAS acted as the TS.

II. SUPERVISORY ACTIVITIES

NSO Central Office, Field Office, and hired supervisors were required to carry out re-interview of households and conduct spotchecking of the area and households with and without CP Form 6. Also, supervisors were required to observe the ENs in interviewing the households. The supervisor and the EN discussed the observation to improve data collection and to correct mistakes in asking questions, following skipping pattern, and others. For the re-interview, spotchecking, and observation activities, the supervisor used CP Form 12.

Further, the supervisors were also required to perform field editing of the accomplished questionnaires and discuss the issues with respect to inconsistencies, item non-response, and invalid entries in the accomplished questionnaires.

A weekly meeting with the supervisors and ENs was done to discuss problems encountered in the conduct of census and for the supervisors to review the accomplished questionnaires before submitting these questionnaires to the NSO Field Office.

Data Processing

Data Editing

Editing of data was undertaken at every phase of POPCEN 2007 to ensure quality of data. This was done during:

1. enumeration when ENs were required to check their accomplished questionnaires for completeness and consistency of data;
2. supervision when the supervisors conducted re-interview of households, spotchecking of the area, observation during interview of households, and field editing of accomplished questionnaires;
3. submission and review of questionnaires done by the supervisors;
4. manual editing conducted by the POPCEN 2007 Provincial Processing Staff (PPS 2007) at the Provincial Offices;
5. machine processing carried out by the POPCEN Regional Data Processing Centers (RDPC) at the Regional Offices and machine processing done by the Central Data Processing Center (CDPC) at the Central Office; and
6. further processing undertaken by the Census Planning and Operations Division and the Information Technology Systems and Research Division of the NSO-Central Office.

Other Processing

The POPCEN 2007 Provincial Project Staff (PPS 2007) was the unit involved in manual data processing which prepared the accomplished forms for machine data processing, as well as encoding of manually processed CP Form 5 (Barangay Schedule) and CP Form 7 (Self-Administered Household Questionnaire). The POPCEN 2007 Data Processing Centers (DPCs) in the Regional and Central Offices, on the other hand, were responsible for machine data processing.

Manual processing involved:

1. automated and manual receipt and control of census forms;
2. verification of geographic identification and completeness of forms;
3. review of entries for completeness, consistency and acceptability of responses;
4. coding of selected items;
5. sample verification;
6. document preparation; and
7. bundling/packaging of forms.

For coding the names of province, city/municipality and barangay, the coding from the Philippine Standard Geographic Code (PSGC) as of July 2007 was used. For highest educational attainment, particularly, the post secondary courses and academic degrees, the two-digit code based on 1997 Philippine Standard Classification of Education (PSCED) was used. On the other hand, the 1992 Philippine Standard Occupational Classification (PSOC) was used in coding the usual activity/main occupation.

On the other hand, machine processing involved:

1. automated receipt and control;
2. scanning of questionnaires and maps;
3. data entry/interpretation and key verification of write-in entries
4. computer editing of entries for consistency of data items within and between records
5. imputation of missing entries; and
6. consolidation of data according to predetermined table formats.

Machine processing at the regional centers, which was called POPCEN 2007 Regional Data Processing Center (RDPC 2007), involved scanning of questionnaires to produce digital copies (images), interpretation of mark fields, and completeness and consistency check of CP Forms 5 and 7 data files. Files for each EA/barangay, image files and batch files (files containing interpreted mark fields), that came from RDPC 2007 were inputs to further data capture processing of image questionnaires such as reject listing, verification, and data encoding done by the POPCEN 2007 Central Data Processing Center (CDPC 2007).

The Census Planning and Operations Division and the Information Technology System and Research Division of NSO had undertaken the consistency checking, imputation, tabulation of results, and creation of PUF.

For the data capture, OMR technology was adopted and done in two phases:

First Pass - Interpretation of all Optical Mark Recognition (OMR) data items with 100 percent verification for geographic and household ID. Verification means that the data items were encoded and the keyed-in data was compared to the corresponding interpreted figure. If a mismatch had occurred, the data encoder was prompted to re-type the correct entry. The output data files in this phase was used in evaluating the final population counts by sex by barangay.

Second Pass - All data items were interpreted with 100 percent verification for write-in entries. Since the geographic and household IDs had already been captured in the previous phase, there was no need to verify these data items.

Data Appraisal

Other forms of Data Appraisal

EVALUATION OF POPULATION COUNTS FROM THE 2007 CENSUS OF POPULATION

The evaluation of the counts of population and households from the 2007 Census of Population (POPCEN 2007) was carried out rigorously during the enumeration period using counts based from the Progress Monitoring System (PMS) reports sent to the Central Office (CO) through Short Message Service (SMS) or text messaging. The objective is to identify areas with coverage errors, that is, omission of households or persons and enumeration of households or persons more than once, and to correct these errors immediately. The Enumerator's Accomplishment/PM Reports (CP Form 10) were used as input to the PMS for POPCEN 2007. It generated reports for use by the NSO Provincial Offices, Regional Offices, and Central Office in monitoring the progress of enumeration and in identifying areas with possible coverage errors. The evaluation continued after the enumeration period using counts from Regional Data Processing Centers (RDPC).

EVALUATION OF COUNTS AT THE NSO FIELD OFFICES

The Regional Office (RO) was responsible for the evaluation of the POPCEN 2007 counts for the region while the Provincial Office (PO) was responsible for the province. The computerized reporting through the PMS facilitated the evaluation at the PO and the RO. The PMS generated various reports which include the EA Progress Enumeration Report (PMS Report 3). This report shows the counts of population of males and females and number of households by EA and the status of enumeration in each EA or barangay based on the information from CP Form 10. Another PMS report generated at the PO is the Barangay Coverage Report (PMS Report 4). This report was used to evaluate the acceptability of the reported counts for the following indicators, computed up to the barangay level:

- a. Household and population counts
- b. Demographic indicators
 - annual population growth rate
 - percent change in the number of households
 - average household size
- c. Difference between 2007 and 2000 institutional population
- d. Number and percent of EAs completed

The field offices investigated areas with demographically implausible growth rates, and questionable values in any of the cited indicators.

EVALUATION AT THE CENTRAL OFFICE

Parallel monitoring and evaluation were done at the Central Office particularly at the Household Statistics Department (HSD). The information used for the evaluation by HSD were:

- a. POPCEN 2007 counts up to the barangay level generated by RDPCs;
- b. average annual population growth rates for the provinces and cities/municipalities for the periods 1980-1990, 1990-1995, 1995-2000 and for all geographic levels, that is, including barangay level, for the period 2000-2007;
- c. sex ratio for the provinces and cities/municipalities for the year 2000, and for all geographic levels for the year 2007;
- d. average household size for all geographic levels, for the years 1990, 1995, 2000, and 2007;
- e. percent change of population between census years 1995 and 2000, and 2000 and 2007 for all geographic levels; and
- f. difference in the household population, number of households and institutional population between census years 1990 and 1995, 1995 and 2000, and 2000 and 2007, for all geographic levels.

Acceptable or demographically plausible values for these indicators, as well as the expected direction of their changes over time are specified in the Field Operations Manual (FOM) (page 86) of POPCEN. The demographic indicators for each geographic area were evaluated using the procedures also contained in the FOM. Explanations were sought if a particular indicator fell outside the acceptable range of values, or if the observed change in the indicator deviates from the expected demographic trend. The Regional Director submitted to the CO the explanations of the POs in his/her region for areas with census results that were considered questionable by the CO based on its independent evaluation.

A more thorough procedure of evaluation was employed for barangays suspected of having under-enumerated population or padded or fabricated population. Careful scrutiny of questionnaires for these barangays was carried out following the procedures discussed in pages 86-88 of the FOM. In extreme cases wherein the result of the scrutiny of questionnaires confirmed that under-enumeration or padding or fabrication of population was committed, field verification became necessary. Teams composed of Statisticians from the CO, the PSOs and Statisticians of concerned provinces conducted field verification in areas suspected of having been under-enumerated or over-enumerated.