

# Philippines - Census of Population 2015

**Philippine Statistics Authority**

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# Overview

## Identification

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ID NUMBER  
PHL-PSA-POPCEN-2015-v1

## Version

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VERSION DESCRIPTION  
V1.0: Division edits for preliminary estimates computation (raw, first output)

PRODUCTION DATE  
2017-06

## Overview

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### ABSTRACT

POPCEN 2015 was designed to take an inventory of the total population in the Philippines and collect information about its characteristics. The census of population is the source of information on the size, distribution, and composition of the population as well as information about its demographic, social, and economic characteristics. These information are vital in the formulation of 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 selected demographic and socio-economic characteristics of the population in each barangay, city/municipality, province, and region in the country.

General Objectives:

The main objective of the POPCEN 2015 was to provide government executives, policy makers, and planners with population data, especially updated population counts of all barangays in the country, on which to base their social and economic development plans, policies, and programs.

The specific objectives of the POPCEN 2015 were to gather data on:

- size and geographic distribution of the population;
- population composition in terms of age, sex, and marital status;
- religious affiliation;
- school attendance, literacy, highest grade/year completed, and technical/vocational course obtained;
- usual activity/occupation, and whether overseas worker for members 15 years old and over;
- registration of birth and death;
- household-level characteristics such as fuel used for lighting and source of water supply for drinking and cooking;
- housing characteristics such as the type of building, construction materials of the roof of the building, construction materials of the outer walls of the building/housing unit, and tenure status of the housing unit/lot; and
- barangay characteristics such as the presence of selected facilities and establishments; and presence of informal settlers, relocation areas, and in-movers in the barangay due to natural and man-made disasters.

August 1, 2015 was designated as Census Day for the POPCEN 2015, on which date the enumeration of the population in the Philippines was referred. For the purpose of this census, all information collected about the population were as of 12:01 a.m.,

Saturday, August 1, 2015.

Enumeration lasted for about 25 days, from 10 August to 6 September 2015. In some areas, enumeration was extended until 15 September 2015 for large provinces.

#### KIND OF DATA

Census/enumeration data [cen]

#### UNITS OF ANALYSIS

The following are the units of analysis in POPCEN 2015:

1. Individual person
2. Household
3. Housing unit
4. Institutional Population
5. Barangay

## Scope

#### NOTES

The POPCEN 2015 gathers information on the following:

**HOUSEHOLD:** number of households; number of households reporting deaths in the last two years by number of deaths, sex, age at death, and death registration; households in occupied housing units by type of construction materials of the roof and outer walls; number of households using a particular type of fuel for lighting; number of households by source of water supply for drinking and cooking; and number of households by tenure status of the housing unit/lot

**HOUSEHOLD POPULATION:** relationship to the household head, sex, age, birth registration, marital status, religious affiliation, school attendance, literacy, highest grade/year completed, technical/vocational course obtained, overseas worker, and usual activity/occupation

**HOUSING UNIT:** number of housing units by type of building, type of construction materials of the roof and outer walls, and tenure status of the housing unit/lot

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

**INSTITUTIONAL LIVING QUARTER:** type of ILQ such as dormitory/lodging house, hospital, military camp, prison/jail, orphanage, and seminary/convent

**BARANGAY:** selected characteristics and facilities present in the barangay or nearest to the barangay (i.e. within two kilometers or more than 2 kilometers from the barangay hall); number, kind and employment size of establishments in the barangay; and presence of informal settlers, relocation areas, and in-movers in the barangay due to natural and man-made disasters in the last five years.

#### TOPICS

Topic	Vocabulary	URI
Population and migration	Philippine Statistics Authority	

## Coverage

#### GEOGRAPHIC COVERAGE

The population count is available at the barangay, city/municipal, provincial, regional, and national levels. Demographic, social, and economic characteristics are tabulated at the city/municipal, provincial, regional, and national levels.

#### UNIVERSE

The POPCEN 2015 covered all persons who were alive as of 12:01 a.m. August 1, 2015, and who were members of the household and institution as follows:

##### Persons Enumerated as Members of the Household

1. Those who were present at the time of visit and whose usual place of residence was the housing unit where the household lived;
2. Family members who were overseas workers and who were away at the time of the census and were expected to be back within five years from the date of last departure.

These included household members who may or may not have had a specific work contract or had been presently at home on vacation but had an existing overseas employment to return to. Undocumented overseas workers were still considered as members of the household for as long as they had been away for not more than five years. Immigrants, however, were excluded from the census.

3. Those whose usual place of residence was the place where the household lived but were temporarily away at the time of the census for any of the following reasons:

- a. on vacation, business/pleasure trip, or training somewhere in the Philippines and was expected to be back within six months from the date of departure. An example was a person on training with the Armed Forces of the Philippines for not more than six months;
- b. on vacation, business/pleasure trip, on study/training abroad and was expected to be back within a year from the date of departure;
- c. working or attending school outside their usual place of residence but usually came home at least once a week;
- d. confined in hospitals for a period of not more than six months as of the time of enumeration, except when they were confined as patients in mental hospitals, leprosaria/leper colonies or drug rehabilitation centers, regardless of the duration of their confinement;
- e. detained in national/provincial/city/municipal jails or in military camps for a period of not more than six months as of the time of enumeration, except when their sentence or detention was expected to exceed six months;
- f. on board coastal, interisland, or fishing vessels within Philippine territories; and
- g. on board oceangoing vessels but expected to be back within five years from the date of departure.

4. Boarders/lodgers of the household or employees of household-operated businesses who did not return/go home to their respective households weekly;

5. Citizens of foreign countries who resided or were expected to reside in the Philippines for at least a year from their arrival, except members of diplomatic missions and non-Filipino members of international organizations;

6. Filipino balikbayans with usual place of residence in a foreign country but resided or were expected to reside in the Philippines for at least a year from their arrival; and

7. Persons temporarily staying with the household who had no usual place of residence or who were not certain to be enumerated elsewhere.

##### Persons Enumerated as Members of the Institutional Population

1. Permanent lodgers in boarding houses;
2. Dormitory residents who did not usually go home to their respective households at least once a week;

3. Hotel residents who stayed in the hotel for more than six months at the time of the census;
4. Boarders in residential houses, provided that their number was 10 or more. However, if the number of boarders in a house was less than 10, they were considered as members of regular households, not of institutions;
5. Patients in hospitals who were confined for more than six months;
6. Patients confined in mental hospitals, leprosaria or leper colonies, and drug rehabilitation centers, regardless of the length of their confinement;
7. Wards in orphanages, homes for the aged, and other welfare institutions;
8. Prisoners of corrective and penal institutions;
9. Seminarians, nuns in convents, monks, and postulants;
10. Soldiers residing in military camps; and
11. Workers in mining and similar camps.

All Filipinos in Philippine embassies, missions, and consulates abroad were also included in the enumeration.

## Producers and Sponsors

### PRIMARY INVESTIGATOR(S)

Name	Affiliation
Philippine Statistics Authority	National Economic and Development Authority

### FUNDING

Name	Abbreviation	Role
Government of the Philippines	GOP	Full Funding

## Metadata Production

### METADATA PRODUCED BY

Name	Abbreviation	Affiliation	Role
Population and Housing Census Division	PHCD	Philippine Statistics Authority	Documenter

### DATE OF METADATA PRODUCTION

2017-06-19

### DDI DOCUMENT VERSION

Version 1.0

This is the first version of documentation for the 2015 Census of Population (POPCEN 2015) using IHSN Toolkit.

### DDI DOCUMENT ID

DDI-PHL-PSA-POPCEN-2015-v1

## Sampling

### **Sampling Procedure**

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The POPCEN 2015 is a complete enumeration of all persons, households and institutional population in the country. No sampling was done.

# Questionnaires

## Overview

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### BASIC CENSUS QUESTIONNAIRES

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

#### CP Form 1 - Listing Booklet

This booklet was used to list the buildings, housing units, households, and ILQs within an EA. It was also used to record other information such as the address of the household head or ILQ, total population, and number of males and females corresponding to each household and ILQ listed.

#### CP Form 2 - Household Questionnaire

This four-page questionnaire was used to record information about the households. Specifically, 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

This four-page questionnaire was used to record information on selected demographic and socio-economic characteristics of the population residing in ILQs.

#### CP Form 5 - Barangay Schedule

This four-page questionnaire was used to record the physical characteristics (e.g. street pattern) and the presence of service facilities and establishments by kind and employment size in the barangay. It was also used to record the presence of informal settlers, relocation areas, and in-movers in the barangay due to natural and man-made disasters.

#### CP Form 7 - Household Self-Administered Questionnaire Instructions

This form contains specific and detailed instructions on how to fill out/accomplish each item in CP Form 2. It was used as guide/reference by respondents who were not, for some reasons, personally interviewed by the EN.

#### CP Form 8 - Institutional Population Self-Administered Questionnaire Instructions

This form contains specific and detailed instructions for the managers/administrators to guide them in accomplishing each item in CP Form 4. It was used as guide/reference by managers or administrators of an ILQ.

### OTHER FORMS FOR ENUMERATION, SUPERVISION AND MONITORING

Below are the major administrative and accomplishment forms that were also used to facilitate data collection and supervision, and monitoring of enumeration and personnel:

#### 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 used to enlarge a map or a block of an EA/barangay if the area being enumerated is too large or congested.

#### CP Form 1 - Listing Booklet

#### CP Form 6 - Notice of Listing/Enumeration

This form is a sticker. After listing and interviewing a household or ILQ, 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 had already been listed/interviewed.

#### CP Form 9 - Appointment Slip to the Household/Institution/Barangay Official

This form was used to set an appointment with the household head or any responsible member of the household or manager of an ILQ, in case the EN failed to interview any respondent in the household or ILQ during his/her visit. The date and time of the next visit were indicated in this form. This form was also used to set an appointment with a barangay official who is knowledgeable about the characteristics of the barangay and/or who served as respondent for CP Form 5.

#### CP Form 10 - Daily Accomplishment Report of Enumerator

This form was used to record the number of households, total population, and number of ILQs that were successfully interviewed by the EN. It was used to monitor the progress of enumeration.

**CP Form 11A - Accomplishment Report of Team Supervisor**

This form was used to summarize the weekly output of the ENs under the team of a TS. It was also used to record the weekly output of the TS. Recorded in this form were information such as the number of completed interviews, number of callbacks, vacant housing units (VHUs), interviews observed, and CP forms edited by the TS.

**CP Form 11B - Accomplishment Report of Census Area Supervisor**

This form was used to record the supervisory activities of the head CAS and hired CAS. Specifically, it was used to record the number of household interviews observed, number of housing units for which coordinates were collected, number of CP forms encoded using CAFES, number of CP forms edited, and the date when the accomplished questionnaires for completed EAs were submitted to the PO.

**CP Form 12 - Spotcheck, Reinterview, and Observation Record**

This form was used to check if the EN had followed the interview procedures as stated in the EN's Manual. It was also used to record observations regarding the supervisor's spot-checking activities.

**PSA Personnel Supervision Form**

This form was used by the CO and FO personnel to record the type of supervision done, and observations made during the training and enumeration. It also served as reference in the preparation of the supervisors narrative reports.

**MANUAL PROCESSING FORMS**

For manual processing, the following forms were used to facilitate the flow and monitoring of manual processing of 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 recorded in this form served as a hard copy back-up of the 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. It was also used by the supervisors to identify potential verifiers and coders from among the processors, as well as under performing processors.

**CP Form 21 - Record of Missing Questionnaires**

This form was used when recording information about the geographic identification (Geo-ID), building, housing unit, 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 to monitor the work of manual processors (editor, coder or verifier) on a daily basis. It was also used as supporting document for money claims.



# Data Collection

## Data Collection Dates

Start	End	Cycle
2015-08-10	2015-09-06	N/A

## Data Collection Mode

Face-to-face interview [f2f] and self-administered; Paper and Pencil

## Data Collection Notes

### I. CONDUCT OF PRETESTS AND PILOT CENSUS

In preparation for the actual conduct of the POPCEN 2015, four pretests and a pilot census were conducted in 2014.

#### PRETESTS:

Pretest 1 - conducted in Rosario, Cavite to test the time devoted to interviewing and in filling-out of the questionnaires, and the wordings and sequence of questions/flow of interview.

Pretest 2 - conducted in Rodriguez, Rizal, to determine the actual interview time in answering the questions revised in CP Forms 1 and 2. Moreover, the pretest also determined the actual time consumed in travelling from one household to the next household. The number of households interviewed was used in determining the average output for areas with the same characteristics.

Pretest 3 - conducted in NCR I, specifically in the area where there were condominiums. The average output for covering such multi-unit residential buildings was tested. Likewise, this pretest recommended strategies in enumerating households in high-rise condominiums.

Pretest 4 - conducted in Rosario, Cavite. This pretest tested the questions and strategy in covering relocation areas where households displaced by Typhoon Yolanda were transferred.

#### PILOT CENSUS:

##### Pilot areas:

Luzon: NCR District I and Cagayan

Visayas: Cebu, Eastern Samar, Leyte, Samar

Mindanao: Davao Oriental

The pilot census was conducted in August 2014, a year before the actual census operation to test every phase of the census operation - workload analysis and cost estimation; questionnaires, forms, and manuals; printing and delivery/distribution of the questionnaires and forms; training, hiring of enumerators, supervisors, and processors; actual enumeration and supervision; and data processing. The pilot census was basically designed to test the procedures and systems to be used in the census enumeration and supervision, and detect and correct any weakness or defficiency in the manual and machine processing systems and procedures before the actual operation is conducted. The experiences in the pilot census resulted to some revisions in the questionnaires, manuals, and in the data processing procedures. Further, in the case of Visayas which included in Typhoon Yolanda affected areas, the pilot censuses served as basis for re-computation of workload in anticipation of possible movements of persons/households due to evacuation.

### II. DATA COLLECTION INSTRUMENTS

All households, housing units, and ILQs were listed using CP Form 1 (Listing Booklet). Members of the household were enumerated using CP Form 2 (Household Questionnaire). For households which opted to accomplish the questionnaire themselves CP Form 2 together with CP Form 7 (Household Self-Administered Questionnaire Instructions) were provided. Persons living in ILQs or the institutional population were enumerated using CP Form 4 (Institutional Population Questionnaire). Similarly, especially for large institutional population, CP Form 4 with CP Form 8 (Institutional Population Self-Administered Questionnaire Instructions) were provided to managers or administrators of the ILQ for self-accomplishment.

Information about the characteristics of the barangay, facilities, and establishments therein, among others, were collected

using CP Form 5 (Barangay Schedule).

### III. PERSONNEL INVOLVED IN THE DATA COLLECTION

Enumerators (EN), team supervisors (TS), and Census Area Supervisors (CAS) were all hired by PSA. Regular staff of the PSA field offices were designated as Head CAS. Hired CAS assisted the Head CAS.

An EN was assigned to cover one or more enumeration areas (EA) or barangays depending on the workload, average daily output, and mandays computed. A TS was assigned to supervise about four ENs. In turn, a hired CAS was responsible for a group of five teams, with each team consisting of one TS and four ENs. Moreover, Head CASs supervised a group of hired CASs.

### IV. CONDUCT OF TRAINING

Training of personnel for the POPCEN 2015 is essential to enable these personnel to effectively carry out the specific tasks assigned to them. Training at different levels were conducted simultaneously and as systematically as possible to come up with a common knowledge on definitions, concepts, and operational procedures that will be used in the enumeration, supervision, and data processing.

The training programs conducted for the POPCEN 2015 were the following:

1. Training on enumeration and field operations in four levels: first level or task force for PSA Central Office (CO), Regional Director and selected Provincial Statistics Officers (PSO); second level for selected PSOs and Field Office (FO) staff; third level for hired CASs; fourth level for TSs, ENs, and other census personnel;
2. Training on Progress Monitoring System (PMS) and Evaluation of PMS Reports for regional and provincial statisticians were in two levels, the first and second level trainings;
3. Training on Manual Processing and Tracking, Receipt and Control System (TRACS) in three levels: first level for selected CO and FO personnel; second level for regional/provincial statisticians and staff; third level for hired processors, and Receipt and Control Clerks (RCC); and
4. Training on machine processing, scanning, electronic coding, and data encoding of CP Forms 2, 4, and 5, and archiving of CP Form 1 and maps in three levels; first level for selected FO staff; second level for regional statisticians, provincial statisticians; third level for machine processors.

### 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 quality control procedures were carried out during the supervision of the conduct of census:

- a. Scrutiny or editing of the questionnaires (CP Forms 1, 2, 4, and 5) in the field by the ENs to check for consistency, correctness, and completeness of responses.
- b. Scrutiny or editing of questionnaires by supervisors during field work using Computer-Aided Field Editing System (CAFES) which covered items P1 to P12 of all accomplished CP Form 2.
- c. Checking randomly by the supervisors the consistency of the number of households and ILQs, the counts for males and females in CP Forms 2 and 4 against the corresponding numbers/entries in CP Form 1 and CP Form 10 (Daily Accomplishment Report of Enumerator).
- d. Examination of the questionnaires for dubious and fictitious names/entries.
- e. Re-interview at random households that were already enumerated by the ENs to ensure the accuracy of information gathered.
- f. Review of maps as to orientation and boundaries and checking if the buildings, ILQs, and important physical landmarks were properly plotted on the maps.
- g. Obtaining and comparing the average actual output per day of the ENs with the expected output per day to monitor/assess the progress of the EN's work.
- h. Checking for indications of padding or under enumeration.

### VI. PROGRESS MONITORING SYSTEM

The PMS was designed to provide the required information for monitoring the progress of enumeration and evaluating the completeness/coverage of the census at the national, regional, provincial, city/municipality, barangay, and EA levels. The PMS assessed the overall situation of the enumeration in terms of percentage of coverage.

Preparation of reports and documents pertaining to the PMS started with the submission of CP Form 1 by the ENs to the TS

after the enumeration has been completed in an EA. The information in CP Form 1 that were consistently checked with CP Forms 2 and 4 were sent through Short Messaging Service (SMS) or text messaging by the TS. PMS reports were generated based on SMS data sent which included the number of EAs and barangays which have been completely enumerated; count of household and population covered; and number of areas with GPS coverage. These reports were generated and used by Provincial Statistical Office (PO), Regional Statistical Services Office (RSSO), and CO to monitor the progress of enumeration and assess the coverage of the census.

## VII. INTERVIEW TIME

On average, the duration of interview in a household lasted for about 15 to 20 minutes.

## VIII. DAILY AVERAGE OUTPUT

The average output per day or the average number of households enumerated per day varied depending on the characteristics of the EA/barangay in terms of terrain, accessibility, urbanity, dispersion of households, weather, availability of transportation facilities, and prevailing socio-economic and political conditions in the area.

## IX. LANGUAGES USED IN THE INTERVIEW

The census questionnaires were prepared in English and translated into different languages, such as Tagalog, Ilocano, Pangasinan, Ibanag, Kapampangan, Cuyunon, Rombloanon, Bikol/Bicol, Masbateño, Hiligaynon, Cebuano/Bisaya, Waray, Chavacano, Surigaonon, Kamayo, Maguindanaon, Maranao, and Tausug. Data collectors were instructed to use these translation guides, if needed in interviewing the household. The translation guides can be found at the back of the EN's Manual.

# Questionnaires

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## BASIC CENSUS QUESTIONNAIRES

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

### CP Form 1 - Listing Booklet

This booklet was used to list the buildings, housing units, households, and ILQs within an EA. It was also used to record other information such as the address of the household head or ILQ, total population, and number of males and females corresponding to each household and ILQ listed.

### CP Form 2 - Household Questionnaire

This four-page questionnaire was used to record information about the households. Specifically, 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

This four-page questionnaire was used to record information on selected demographic and socio-economic characteristics of the population residing in ILQs.

### CP Form 5 - Barangay Schedule

This four-page questionnaire was used to record the physical characteristics (e.g. street pattern) and the presence of service facilities and establishments by kind and employment size in the barangay. It was also used to record the presence of informal settlers, relocation areas, and in-movers in the barangay due to natural and man-made disasters.

### CP Form 7 - Household Self-Administered Questionnaire Instructions

This form contains specific and detailed instructions on how to fill out/accomplish each item in CP Form 2. It was used as guide/reference by respondents who were not, for some reasons, personally interviewed by the EN.

### CP Form 8 - Institutional Population Self-Administered Questionnaire Instructions

This form contains specific and detailed instructions for the managers/administrators to guide them in accomplishing each item in CP Form 4. It was used as guide/reference by managers or administrators of an ILQ.

## OTHER FORMS FOR ENUMERATION, SUPERVISION AND MONITORING

Below are the major administrative and accomplishment forms that were also used to facilitate data collection and

supervision, and monitoring of enumeration and personnel:

#### 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 used to enlarge a map or a block of an EA/barangay if the area being enumerated is too large or congested.  
CP Form 1 - Listing Booklet

#### CP Form 6 - Notice of Listing/Enumeration

This form is a sticker. After listing and interviewing a household or ILQ, 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 had already been listed/interviewed.

#### CP Form 9 - Appointment Slip to the Household/Institution/Barangay Official

This form was used to set an appointment with the household head or any responsible member of the household or manager of an ILQ, in case the EN failed to interview any respondent in the household or ILQ during his/her visit. The date and time of the next visit were indicated in this form. This form was also used to set an appointment with a barangay official who is knowledgeable about the characteristics of the barangay and/or who served as respondent for CP Form 5.

#### CP Form 10 - Daily Accomplishment Report of Enumerator

This form was used to record the number of households, total population, and number of ILQs that were successfully interviewed by the EN. It was used to monitor the progress of enumeration.

#### CP Form 11A - Accomplishment Report of Team Supervisor

This form was used to summarize the weekly output of the ENs under the team of a TS. It was also used to record the weekly output of the TS. Recorded in this form were information such as the number of completed interviews, number of callbacks, vacant housing units (VHUs), interviews observed, and CP forms edited by the TS.

#### CP Form 11B - Accomplishment Report of Census Area Supervisor

This form was used to record the supervisory activities of the head CAS and hired CAS. Specifically, it was used to record the number of household interviews observed, number of housing units for which coordinates were collected, number of CP forms encoded using CAFES, number of CP forms edited, and the date when the accomplished questionnaires for completed EAs were submitted to the PO.

#### CP Form 12 - Spotcheck, Reinterview, and Observation Record

This form was used to check if the EN had followed the interview procedures as stated in the EN's Manual. It was also used to record observations regarding the supervisor's spot-checking activities.

#### PSA Personnel Supervision Form

This form was used by the CO and FO personnel to record the type of supervision done, and observations made during the training and enumeration. It also served as reference in the preparation of the supervisors narrative reports.

### MANUAL PROCESSING FORMS

For manual processing, the following forms were used to facilitate the flow and monitoring of manual processing of 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 recorded in this form served as a hard copy back-up of the 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. It was also used by the supervisors to identify potential verifiers and coders from among the processors, as well as under performing processors.

#### CP Form 21 - Record of Missing Questionnaires

This form was used when recording information about the geographic identification (Geo-ID), building, housing unit, 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 to monitor the work of manual processors (editor, coder or verifier) on a daily basis. It was also used as

supporting document for money claims.

## Data Collectors

Name	Abbreviation	Affiliation
Enumerator	EN	Hired Personnel of the Philippine Statistics Authority
Team Supervisor	TS	Hired Personnel of the Philippine Statistics Authority

## Supervision

### I. PERSONNEL INVOLVED IN THE SUPERVISION

The PSA CO and FO personnel directly supervised the conduct of enumeration. In the region, the Regional Director (RD) and his/her staff conducted field visits in the provinces within his/her jurisdiction. At the provincial level, the Provincial Statistics Officer (PSO) and his/her staff supervised the census operation in the cities/municipalities and barangays within the province.

Aside from the PSA personnel, hired personnel were also tapped to carry out supervisory functions. In a city/municipality, close field supervision was the responsibility of the head CASs, hired CASs and hired TS within their respective areas of assignment. On average, a hired CAS was required to supervise five TSs, while a TS was assigned to supervise about four ENs.

### II. SUPERVISORY ACTIVITIES

PSA CO and FO, and hired supervisors were required to re-interview some households and conduct spotchecking activities in the area under their jurisdiction. They were also tasked to observe some ENs who were conducting interview. The supervisors were then asked to discuss with the EN their observations to improve data collection by correcting the ENs' mistakes in asking questions, observing skipping patterns, and others. For the re-interview, spotchecking, and observation activities, the supervisor used CP Form 12.

The supervisors were also required to perform field editing of the accomplished questionnaires either manually or using CAFES, and discuss with the ENs the issues with respect to inconsistencies, item nonresponse, and invalid entries.

Moreover, some supervisors were tasked to collect the coordinates of the building/housing units of the households whose interviews by the EN were observed by them, using a Global Positioning System (GPS) receiver.

A weekly meeting between the supervisors and ENs was done to discuss the problems encountered during the census enumeration. It was also the time when supervisors reviewed the accomplished questionnaires before these were submitted to the PO.

# Data Processing

## Data Editing

Data editing of entries in the accomplished questionnaires/data files was undertaken at every phase of POPCEN 2015 to ensure the quality of data. This was done during:

1. enumeration, when ENs were required to check their accomplished questionnaires for completeness and consistency of entries/data;
2. supervision, when the supervisors performed field editing of accomplished questionnaires of the ENs;
3. submission and review of questionnaires by the supervisors during the weekly meeting or during submission of questionnaires for the completed EA;
4. machine editing in the field using CAFES, after every observed interview of an EN, or at the end of the day and sometimes during the weekly meeting;
5. manual processing at the Data Processing Centers (DPC 2015) of POs;
6. machine processing at the RSSO and selected POs; and
7. further processing at the Population and Housing Census Division (PHCD) using census processing systems developed by the Systems Development Division (SDD) of PSA-CO.

## Other Processing

A Census Project Staff (CPS) was set up at the PO to handle the DPC 2015. Generally, the DPC 2015 was responsible for the manual and machine processing of all the accomplished questionnaires and maps that were submitted by the head CASs to the PO. Scanning/interpretation was handled at the DPC 2015 with a Scan Station (SS 2015). For POs that have no SS 2015, scanning/interpretation was done in the SS 2015 located in the RSSO or in nearby POs with SS 2015. The CO, on the other hand, was responsible for further machine data processing.

Manual processing involved:

1. automated and manual receipt and control of census forms and maps;
2. general screening by verification of the Geo-ID and completeness of forms and maps;
3. data encoding of CP Form 1 page totals and other relevant information for the Quick Count by the Assistant Statistician and Assistant Supervisor;
4. editing and checking for readability of entries, and completeness, consistency, and acceptability of responses;
5. document preparation, which includes sorting and bundling/folioing of forms; and
6. transmittal of CP forms to the DPC.

In coding the names of the province, city/municipality, and barangay, the Philippine Standard Geographic Code (PSGC) as of 31 December 2015 was used as reference. For highest educational attainment, particularly, the post secondary courses and academic degrees, the three-digit code used was based on the 2008 Philippine Standard Classification of Education (PSCED). The 2012 Philippine Standard Occupational Classification (PSOC), meanwhile, was used in coding the usual activity/occupation.

Selected RSSOs and POs designated as SS 2015 and/or Data Entry Station (DES 2015) carried out the machine processing of manually processed questionnaires. At the SS 2015 and DES 2015, the following activities were carried out:

At the SS 2015:

1. automated receipt and control;
2. scanning of questionnaires and maps to produce digital copies (images);
3. interpretation of marked fields;
4. completeness and consistency checking of all CP forms versus images; and
5. forwarding of images to the DES.

At the DES 2015:

1. encoding using key-from-image system (all write-in fields and marked fields that were not successfully interpreted or not filled-up);
2. coding of selected items by specialized coders using electronic code book (religious affiliation, post secondary or college course under highest grade/year completed, technical/vocational course obtained, and usual activity/occupation);
3. code verification;

4. data consistency checking;
5. evaluation of marginals and consistency tables; and
6. transmittal of datafiles (batchfiles and images) through the RSSO to the POPCEN 2015 DPC at the CO for further processing.

The PHCD had undertaken further processing, which included the data consistency checking, tabulation of results, and creation of licensed microdata file (LMD).

The following procedures were carried out as parts of the further data processing at the CO:

1. certification pass;
2. merging and reformatting of data files;
3. automatic editing of unresolved logical data inconsistencies;
4. imputation of missing data;
5. conversion of master file for tabulation;
6. tabulation of results;
7. evaluation of results; and
8. preparation of LMD

## Data Appraisal



## Other forms of Data Appraisal

### EVALUATION OF POPULATION COUNTS FROM THE 2015 CENSUS OF POPULATION

The evaluation of population counts and households from the POPCEN 2015 was carried out during the enumeration period using counts generated from the PMS.

The reports generated using the PMS were the following:

1. PM Report 1 - Progress of Enumeration by Enumeration Area

This report provided information on the percentage of EAs where the enumeration was completed relative to the total number of EAs. It also showed the status of enumeration in each EA, that is, whether the enumeration is already completed or is still ongoing.

2. PM Report 2 - Progress of Enumeration by Enumeration Area with Total Number of Households and Total Population

This report showed which EAs were already completely enumerated as of the date the report was generated. It also showed the percentage of EAs in a barangay, city/municipality or province that had already completed the census taking. For the completely enumerated EAs, the number of households and population count could be compared with the corresponding 2010 CPH counts and the counts estimated for each barangay in the province for August 2015, which the CO provided to the FO for their workload analysis. Any significant deviation in the counts based on the POPCEN 2015 from the 2015 CPH counts or estimates for August 2015 were investigated.

3. PM Report 3 - Number of Enumeration Areas with Reported GPS Coordinates

This report showed the percentage of EAs with reported GPS coordinates and number of housing units with GPS coordinates. It also provided information on the number of EAs visited by the CAS when he/she observed the household interviews conducted by the EN.

### EVALUATION OF COUNTS AT THE PSA FIELD OFFICES

The RSSO was responsible for the evaluation of POPCEN 2015 counts for the region, and the PO for the province. The reports generated from the Quick Count System (QCS) were used as bases in evaluating the population counts. The evaluation of population counts at the FO started once all CP Form 1 had already been encoded through the QCS. The QC Report generated by the PO was used in evaluating/monitoring the completeness and coverage of census in each barangay and city/municipality in the province. The report also showed the comparative counts of households and population based on the 2010 CPH and POPCEN 2015. QC Report contained the following information:

- Number of households: 2010 and 2015
- Total population: 2010 and 2015
- Household population: 2010 and 2015
- Institutional population: 2010 and 2015
- Annual population growth rate: 2010-2015
- Change in the number of households: 2010-2015
- Average household size: 2010 and 2015
- Change in the count of institutional population: 2010-2015
- Sex ratio: 2010 and 2015

The FOs investigated areas with demographically implausible growth rates, and questionable values in any of the aforementioned indicators.

### EVALUATION OF POPULATION COUNTS AND NUMBER OF HOUSEHOLDS AT THE CENTRAL OFFICE

Parallel monitoring and evaluation were done at the CO, particularly at the PHCD. The information used in the evaluation of population counts and number of households were the following:

- POPCEN 2015 population counts down to the barangay level;
- average annual population growth rates for the provinces and cities/municipalities for the periods 1995-2000, 1995-2007, 2000-2007, 2007-2010, 2000-2010, and 2010-2015 at all geographic levels, that is, down to barangay level;
- sex ratio in the provinces and cities/municipalities for the year 2010, and for all geographic levels for the year 2015;
- average household size for all geographic levels, for the year 2010;
- percent change of population between census years 1995 and 2000, 2000 and 2007, 2007 and 2010, and 2000 and 2010 for all geographic levels; and
- difference in the household population, number of households, and institutional population between census years 1990 and 1995, 1995 and 2000, 2000 and 2007, 2007 and 2010, and 2000 and 2010 for all geographic levels.

Acceptable or demographically plausible values for the aforementioned indicators, as well as the expected direction of their changes over time were specified on page 86 of the POPCEN 2015 Field Operations Manual (FOM). The demographic indicators for each geographic area were evaluated using the procedures also contained in the said FOM. Explanations from PSA field offices were sought if a particular indicator fell outside the acceptable range of values, or if the observed change in the indicator deviated from the expected demographic trend.

A more thorough procedure of evaluation was employed for barangays suspected of having under-enumerated population and padding or fabrication of figures. Careful scrutiny of questionnaires for these barangays was carried out following the procedures discussed in pages 131 and 132 of the FOM. In extreme cases, when the result of the scrutiny of questionnaires confirmed that under-enumeration, padding or fabrication of population was committed, field verification was made. Teams composed of statisticians from the CO and the PSO and statisticians of concerned provinces conducted field verification in areas suspected of having been under-enumerated or over-enumerated population.

### EVALUATION OF DEMOGRAPHIC AND SOCIOECONOMIC CHARACTERISTICS

The evaluation of demographic and socioeconomic characteristics was carried out based on the following:

1. Evaluation at the FO

Evaluation of marginal and consistency tables

Evaluation of 29 tables were prepared and generated for evaluation. Below is the list of tables for consistency evaluation

Consistency tables on population:

- Table 1 Total number of housing units and households by province
- Table 1A Household population by characteristics in special HSNs and province
- Table 2 Household population by single-year age classification, sex, and province
- Table 3 Household population by relationship to household head, sex, and province
- Table 4 Household population by relationship to household head, single-year age classification, and province
- Table 5 Household population by birth registration, copy of birth certificate, and province
- Table 6 Household population by single-year age classification, marital status, and province
- Table 7 Household population by religious affiliation and province
- Table 8 Household population by age group, school attendance, and province
- Table 9 Household population by age group, literacy, and province
- Table 10 Household population by single-year age classification, highest grade/year completed, and province
- Table 11 Household population by age group, if graduate of technical/vocational course, and province
- Table 12 Household population by age group, technical/vocational course obtained, and province
- Table 13 Household population by literacy, highest grade/year completed, and province
- Table 14 Household population by age group, overseas worker or not, and province
- Table 15 Household population by overseas worker or not, highest grade/year completed, and province
- Table 16 Household population by age group, usual activity/occupation, and province
- Table 17 Household population by usual activity/occupation, highest grade/year completed, and province
- Table 18 Household population by age, selected usual activity/occupation, and province
- Table 19 Household population by selected usual activity/occupation, highest grade/year completed, and province

Consistency tables on housing (six tables):

- Table 20 Number of housing units and households by type of building, construction materials of the roof of the building, and province
- Table 21 Number of housing units and households by type of building, construction materials of the outer walls of the building/housing unit, and province
- Table 22 Number of housing units and households by type of building, Fuel for Lighting, and province
- Table 23 Number of housing units and households by type of building, main source of water supply for drinking, and province
- Table 24 Number of housing units and households by type of building, main source of water supply for cooking, and province
- Table 25 Number of housing units and households by type of building, tenure status of the housing unit/lot, and province

Consistency tables on registration of deaths in the last two years among household members (seven tables):

- Table 26 Number of households reporting if there are deaths in the last two years by number of deceased members and province
- Table 27A Number of deceased members by sex and province
- Table 27B Number of deceased members by sex, age at death indicator, and province
- Table 28A Number of deceased members by age at death indicator, age at death in days, and province
- Table 28B Number of deceased members by age at death indicator, age at death in months, and province
- Table 28C Number of deceased members by age at death indicator, age at death in years, and province
- Table 29 Number of deceased members by death registration, copy of death certificate, and province

2. Further processing at CO

a. Evaluation of marginal and consistency tables

The same tables that was sent in the field offices were used in the evaluation of marginals and consistency.

b. Evaluation of tables after further processing

c. Evaluation of age-sex distribution based on adjusted datafile

### EVALUATION OF BARANGAY CHARACTERISTICS

Information gathered from CP Form 5 was sent to FO in excel format for field verification, evaluation and confirmation. The file contained comparison of information on barangay facilities and characteristics, kinds of establishment in the barangay, informal settlers, presence of relocation area, and in-movers based on 2000 CPH, POPCEN 2007, CPH 2010 and POPCEN 2015. The confirmed file undergone further processing at CO.