

## 1. HISTORICAL OUTLINE

The first decennial agricultural census in the Philippines was conducted in 1960, followed by censuses carried out in 1971, 1981, 1991 and 2002.<sup>1</sup> The 2012 Census of Agriculture and Fishery (CAF) is the sixth in a series of decennial agricultural censuses and the fifth in the series of decennial censuses of fisheries to be conducted in the country.

## 2. LEGAL BASIS AND ORGANIZATION

### **Legal framework**

The legal basis for the CAF 2012 was provided by:

- Commonwealth Act (CA) No. 591, which authorized the then-National Statistics Office (NSO) “to prepare for and undertake all censuses of population, agriculture, industry and commerce”.
- Executive Order (EO) No. 352 (Designation of Statistical Activities that will Generate Critical Data for Decision-Making of the Government and Private Sector), which provided for the conduct of a census of agriculture every ten years;

### **Institutional framework and international collaboration**

The former National Statistics Office (NSO) was mandated to conduct agricultural censuses. The planning and preparation of the CAF 2012 started in 2009, through the creation of the Census Steering Committee (CSC) and Working Groups to provide overall directions for the CAF’s various activities. The NSO Administrator chaired the CSC. The 2012 CAF was funded by the Government of the Philippines.

### **Census staff**

A total of 43 778 enumerators and 21 477 team supervisors were hired for the census fieldwork.

## 3. REFERENCE DATE AND PERIOD

### **Reference days:**

- 31 March 2013, for inventory items such as number of livestock, and for data collected for establishment-based agriculture operations;
- the day of the interview, for the number of livestock (including poultry) in household-based agriculture operations.

**Reference period:** the calendar year (January to December 2012), for the land area of the holding, the number of parcels, land tenure and land use, crops, irrigation, aquaculture and fishery.

## 4. ENUMERATION PERIOD

The enumeration of household-based holdings was conducted from 25 February to 30 April 2013.

The CAF 2012 Establishment Questionnaires were distributed in April 2013 and retrieved by June 2013, together with other questionnaires of the 2012 Census of Philippine Business and Industry (CPBI).

## 5. SCOPE OF THE CENSUS AND DEFINITION OF THE STATISTICAL UNIT

The **census scope** covered agricultural (crop and animal production) activities, as well as aquaculture and fishing activities. The CAF 2012 for establishments constituted a rider to the CPBI 2012. A community survey was also conducted in all *barangays*.<sup>2</sup>

The **statistical units** of the CAF were agricultural holdings or farms, aquaculture farms (household-based and establishment-based), and units engaged in fishing activities (household-based and establishment-based).

The agricultural holding (farm) was defined as “any piece or pieces of land used wholly or partly for any agricultural activity, such as growing of crops, tending of livestock (including poultry) and other agricultural activities, and operated as one technical unit, by one person alone or with others, regardless of title, legal form, size or location”.

## 6. GEOGRAPHIC COVERAGE

The CAF 2012 covered the entire country, except for the municipalities of Baganga, Boston and Cateel in Davao Oriental, which were not covered because of the vast damage caused by Typhoon Pablo. Nevertheless, certain households located in these municipalities were enumerated in other municipalities, where they were temporarily relocated.

## 7. CUT-OFF THRESHOLD AND OTHER EXCLUSIONS

No thresholds were applied in the 2012 CAF. Holdings in government institutions were excluded from the census.

## 8. METHODOLOGY

### **Methodological modality for conducting the census**

A modular approach was envisaged for the CAF 2012. A core module was carried out on a complete enumeration basis to provide key structural data and the frame for the supplementary modules. Along with the core census module, a community-based module was also administered in all *barangays*.

The CAF 2012 was supposed to conduct sample-based supplementary modules, which would collect more in-depth structural data on irrigation, cropping pattern, aquaculture and fisheries. However, because the former four statistical agencies transitioned into the Philippine Statistics Authority (PSA), these were not carried out.

<sup>1</sup> Censuses of agriculture were also conducted in 1903, 1918, 1939 and 1948 in conjunction with population censuses, although on a limited scale.

<sup>2</sup> The smallest administrative division in the Philippines, the *barangay* is the native Filipino term for a village, district or ward.

**Frame**

The census listing covered all households, to identify those with holdings operated by agricultural operators or by aquaculture and fishing operators. All establishments with agriculture, aquaculture and fisheries as their main kind of business or industry were also covered in the CAF 2012. These were the same establishments covered in the CPBI 2012.

**Complete and/or sample enumeration methods**

The CAF 2012 was conducted by complete enumeration.

**Sample design (if sampling was used)**

Not applicable.

**Data collection methods**

Two methods were used for data collection: (i) face-to-face interviews using paper questionnaires (the PAPI method), for data collection from all households for the core and community modules; and (ii) a self-administered paper questionnaire was used for establishments.

**Questionnaire(s)**

Five household-based questionnaires (forms),<sup>3</sup> four establishment-based questionnaires<sup>4</sup> and one a community module questionnaire (form 6)<sup>5</sup> were designed and used for the CAF 2012.

The CAF questionnaires covered 15 of the core items recommended in the WCA 2010.<sup>6</sup>

**9. USE OF TECHNOLOGY**

Census results were disseminated and are accessible online. Microdata are available upon request.

**10. DATA PROCESSING AND ARCHIVING**

The Scan Stations and Data Entry Stations served as the processing centres for CAF 2012 machine processing. The activities performed in Scan Stations included receipt of questionnaires after manual processing, scanning of forms and maps, and interpretation of Optical Mark Recognition (OMR) data items. Anonymization was applied to the database.

**11. CENSUS DATA QUALITY**

Four pre-tests were carried out to examine the feasibility and cost-effectiveness of new and alternative field operations, enumeration procedures and questionnaire content.

A pilot census was conducted, providing the opportunity to test all aspects of the census operation in advance of the main census activities. This ensured the smooth operation and success of the census.

**12. DATA DISSEMINATION**

Census results were disseminated through printed publications and online. Special releases and reports, including statistical tables, were disseminated through the PSA's website.<sup>7</sup> Access to microdata is available upon request.

**13. DATA SOURCES**

**FAO.** 2016. Regional Roundtable on the World Programme for the Census of Agriculture 2020 (WCA 2020). 19–23 September 2016, Bangkok, Thailand. In: *World Programme for the Census of Agriculture* [online]. Rome, Italy. [Cited 4 September 2019]. <http://www.fao.org/world-census-agriculture/events/wca2020bangkok/en/>

**Philippine Statistics Authority.** 2017. *Census of Agriculture and Fisheries, Agriculture 2012*. Manila, Republic of the Philippines. (also available at [https://psa.gov.ph/sites/default/files/CAF2012Agri\\_Philippines.pdf](https://psa.gov.ph/sites/default/files/CAF2012Agri_Philippines.pdf)).

**Philippine Statistics Authority.** 2019 *Open Stat* [online]. Manila, Republic of the Philippines. [Cited 5 September 2019]. <http://openstat.psa.gov.ph/>

**14. CONTACT**

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<sup>3</sup> The following forms were designed and used for the CAF 2012: Form 1 – for listing the households; Form 2 – Household Roster (the CAF 2012 Form 2 questionnaire was designed to record the sociodemographic characteristics of all members of agriculture, aquaculture and fishing operators' households identified during the listing); Form 3 – Module for Agriculture; Form 4 – Module for Aquaculture; and Form 5 – Module for Fishing.

<sup>4</sup> Form 24 – Agriculture Establishment (Growing of Crops); Form 25 – Agriculture Establishment (Livestock and Poultry Raising); Form 26 – Aquaculture Establishment; and Form 27 – Fishing Establishment.

<sup>5</sup> For community-level data collection.

<sup>6</sup> The core item that was not covered is: "Other economic production activities of the holding's enterprise".

<sup>7</sup> See PSA's website at <https://psa.gov.ph/content/census-agriculture-and-fisheries-caf>

# THE PHILIPPINES – 2012 CENSUS OF AGRICULTURE AND FISHERY – MAIN RESULTS

| NUMBER OF HOLDINGS AND AREA, BY LEGAL STATUS |                  |                  |
|--|------------------|------------------|
|  | Holdings         | Area (ha)        |
| <b>Total</b>                                 | <b>5 563 138</b> | <b>7 271 446</b> |
| Civil persons                                | 5 557 998        | 6 861 993        |
| An individual                                | 5 512 501        | 6 786 935        |
| Co-holder                                    | 45 497           | 75 059           |
| Juridical persons                            | 5 140            | 409 453          |

| LAND TENURE                                      |                  |                  |
|--|------------------|------------------|
|  | Holdings         | Area (ha)        |
| <b>Total</b>                                     | <b>5 563 138</b> | <b>7 271 446</b> |
| Holdings operated under one tenure form          | 5 034 385        | 6 336 952        |
| Fully owned/owner-like farms                     | 3 452 564        | 4 366 075        |
| Tenanted farms                                   | 814 309          | 1 071 114        |
| Leased/rented farms                              | 165 087          | 308 601          |
| Rent-free farms                                  | 425 264          | 173 811          |
| Other single forms of tenure of farm             | 177 161          | 417 351          |
| Holdings operated under two or more tenure forms | 528 753          | 934 494          |

| LAND FRAGMENTATION  |                  |                  |
|---------------------|------------------|------------------|
|                     | Holdings         | Area (ha)        |
| <b>Total</b>        | <b>5 563 138</b> | <b>7 271 446</b> |
| 1 parcel            | 3 903 857        | 3 750 991        |
| 2–3 parcels         | 1 520 737        | 2 803 316        |
| 4–5 parcels         | 113 628          | 465 873          |
| 6–9 parcels         | 22 716           | 166 095          |
| 10 parcels and over | 2 200            | 85 169           |

| DISTRIBUTION OF HOLDINGS BY LAND SIZE CLASSES |                  |                  |
|---|------------------|------------------|
|   | Holdings         | Area (ha)        |
| <b>Total</b>                                  | <b>5 563 138</b> | <b>7 271 446</b> |
| Less than 0,500 ha                            | 2 162 500        | 277 880          |
| 0,500–0,999 ha                                | 1 000 183        | 594 806          |
| 1,000–2,999 ha                                | 1 779 364        | 2 586 935        |
| 3,000–7,000 ha                                | 520 796          | 2 123 794        |
| 7,001–9,999 ha                                | 44 400           | 365 653          |
| 10,000–24,999 ha                              | 50 199           | 662 624          |
| 25,000–49,999 ha                              | 3 943            | 127 348          |
| 50,000 ha and over                            | 1 753            | 532 406          |

| LAND USE                                 |                   |                  |
|--|-------------------|------------------|
|  | Number of parcels | Area (ha)        |
| <b>Total</b>                             | <b>7 897 371</b>  | <b>7 271 446</b> |
| Agricultural land                        | 5 658 232         | 6 913 189        |
| Arable land                              | 3 851 656         | 3 505 307        |
| Land under temporary crops               | 3 832 329         | 3 474 036        |
| Land under temporary meadows             | 8 754             | 14 548           |
| Land temporarily fallow                  | 10 573            | 16 722           |
| Land under permanent crops               | 1 801 683         | 3 357 486        |
| Permanent meadows and pastures           | 4 893             | 50 396           |
| Forest and other wooded land             | 6 874             | 44 514           |
| Land under livestock and poultry raising | 69 526            | 59 101           |
| Land under aquaculture                   | 1 354             | 1 780            |
| Other land                               | 7 184             | 5 141            |
| Homelot                                  | 2 154 201         | 247 721          |

| MEMBERS OF HOLDER'S HOUSEHOLD, BY SEX             |                   |
|---|-------------------|
|   | Number            |
| <b>Total</b>                                      | <b>25 034 610</b> |
| Engaged in agricultural activities on the holding | 8 512 092         |
| Aged 15 years and over                            | 8 355 904         |
| Aged 10 to 15 years                               | 156 188           |

| LIVESTOCK                            |             |           |
|--------------------------------------|-------------|-----------|
|                                      | Holdings    | Head      |
| <b>Total holdings with livestock</b> | <b>n.a.</b> |           |
| Cattle                               | 882 108     | 1 995 841 |
| Buffaloes                            | 1 160 889   | 1 790 681 |
| Sheep                                | 14 918      | 64 361    |
| Goats                                | 693 854     | 2 291 894 |
| Pigs/swine                           | 1 549 126   | 7 709 133 |
| Horses                               | 170 714     | 229 465   |
| Poultry (1 000 head)                 | n.a.        | n.a.      |
| Chickens                             | 4 590 716   | 146 585   |
| Ducks                                | 638 902     | 8 938     |
| Other poultry                        | 68 225      | 2 756     |
| Other animals                        | 7 485       |           |
| Insects                              |             |           |
| Bees (hives)                         | 2 721       | n.a.      |
| Silkworms                            | 2 446       | n.a.      |
| Other worms or insects               | 3 883       | n.a.      |

| IRRIGATION BY LAND USE TYPES              |                   |                     |
|---|-------------------|---------------------|
|   | Number of parcels | Area irrigated (ha) |
| <b>Total</b>                              | <b>n.a.</b>       | <b>n.a.</b>         |
| Land under temporary crops                | 1 791 171         | 1 555 668           |
| Land under permanent crops                | 80 940            | 186 133             |
| Land under temporary meadows and pastures | 989               | 1 875               |
| Land under permanent meadows and pastures | 504               | 5 371               |

| PERMANENT CROPS <sup>1</sup>    |                   |             |
|---------------------------------|-------------------|-------------|
|                                 | Number of parcels | Area (ha)   |
| <b>Total</b>                    | <b>n.a.</b>       | <b>n.a.</b> |
| Tropical and subtropical fruits | n.a.              | n.a.        |
| Bananas                         | 249 444           | 214 413     |
| Mangoes                         | 36 394            | 41 849      |
| Papayas                         | 3 780             | 2 110       |
| Nuts                            | n.a.              | n.a.        |
| Cashew nuts                     | 3 377             | 3 892       |
| Oilseed crops                   | n.a.              | n.a.        |
| Oil palms                       | 2 909             | 34 087      |
| Palm trees                      | 747               | 5 648       |
| Coconuts                        | 941 232           | 1 480 928   |
| Beverage crops and spice crops  | n.a.              | n.a.        |
| Cocoa                           | 24 067            | 17 278      |
| Coffee                          | n.a.              | 27 675      |
| Other permanent crops           | n.a.              | n.a.        |
| Rubber                          | 93 639            | 145 923     |
| Abaca                           | 49 924            | 52 173      |
| Bamboo                          | 2 786             | 2 545       |

<sup>1</sup> Data refer to permanent crops in compact plantations.