



THE FEDERATED STATES OF MICRONESIA – AGRICULTURAL CENSUS 2016/2017 – METADATA REVIEW

1. Historical outline

The Federated States of Micronesia (FSM) had never conducted an agricultural census.¹ The Integrated Agriculture Census (IAC) 2016/2017 to which this metadata and data refer, was the first AC conducted after the FSM became a sovereign nation. Previous censuses were carried out in 1970 and 1980.

2. Legal basis and organization

Legal framework

The IAC was carried out under the Statistics and Census Act of 1988 (also referred to as Public Law 5-77). The authority for the IAC was rested with the Chief of Statistics who has the legal authority to collect such information under the statistics and census Act of 1988.

Institutional framework and international collaboration

The IAC was conducted by the Department of Resources and Development (jointly by the Resource Management and Development Division and the Statistics Division), in collaboration with Chuuk, Kosrae, Pohnpei and Yap State Agriculture, Forestry and Fisheries Agencies. The IAC was implemented through funding and technical assistance from the FSM National Government and its development partners – the Government of India, the Food and Agriculture Organization of the United Nations (FAO), and the Pacific Community (SPC).

Census staff

In total, 710 fieldworkers, including 570 enumerators and 140 supervisors were deployed in the field for the census.

3. Reference date and period

Reference day: the day of enumeration for items such as the household's identification information, demographic characteristics on household members; land area, tenure and use, livestock numbers, etc.

Reference periods:

- the week prior to the day of enumeration, for the information on the main activity of the household members aged 15 years and over.
- the last 12 months prior to census enumeration for items on crops, hired labour, use of pesticides, fishing, aquaculture, forestry, and hunting activities of the household, etc.

4. Enumeration period

The census enumeration started on 1 July 2016. The census was supposed to be carried out until 31 July 2016. However, delays and difficulties in organizing transport meant that some outer islands were not completed until about six months later.

¹ The FSM states were included in the 1969 census of agriculture carried out by the United State Department of Agriculture (USDA) when FSM was part of the Trust Territory of the Pacific Islands, a United Nations Trust Territory administered by the United States of America.

5. Scope of the census and definition of the statistical unit

The **scope of the census** covered the “agricultural” activities interpreted very broadly. The IAC included agriculture (crop and livestock production) activities, fisheries, aquaculture, forestry, hunting, and handcraft activities carried out by the households covered by the IAC.

The **statistical unit** in the IAC was the agricultural holding, defined as an economic unit of agricultural production under single management. The statistical units for census data collection were the households that had access to land or and/or are engaged in agricultural activities, i.e., the IAC covered only the holdings in the household sector (the holdings operated by household members).

Community-level data

The country did not conduct a community survey along with the census.

6. Census coverage

Geographic coverage

The census covered the entire country.

Cut-off threshold and other exclusions

Agricultural activities carried out by non-private households, i.e., businesses, schools, churches, NGOs, and other non-household holdings, were not covered by the IAC.² In 2010 about 0.5 percent of occupied households were non-private households, containing about 1.2 percent of the total population (1 220 people).

7. Methodology

Methodological modality for conducting the census

The classical approach was used in the IAC 2016/2017. No administrative registers were used as sources of census data.

Relation to other censuses

The Enumeration areas (EAs) for the IAC 2016/2017 were based on the EAs defined from the Population and Housing Census (PHC) 2010. The 2010 PHC household enumeration listing served as the frame, informed by the 2012 Household Income and Expenditure Survey and mapping updates.

Frames

The IAC 2016/2017 used the EAs and the lists of households provided by the PHC 2010. Enumerators were asked to update the lists as they went for census enumeration. There are very few commercial farms in FSM, and all were able to be identified through the household survey frame. Other institutional farms (e.g., church, community, or school farms) were not known, and enumerators were asked to identify them on a separate listing for future research.

Complete or/and sample enumeration methods

The IAC 2016/2017 was conducted by complete enumeration.

Sample design

No sampling was used.

Data collection methods

Data collection was carried out using the Pen and Paper Interviewing (PAPI) method.

Questionnaire(s) and items covered

Data were collected using one single questionnaire. The questionnaire included 18 out of the 23 essentials items³ recommended in the WCA 2020.

² Questionnaire, Map, & Household Listing Instruction Manual, p.2

³ The following essential items were not included in the census questionnaire: (i) Legal status of agricultural holder (type of holder), (ii) Area of land actually irrigated: fully controlled and partially controlled irrigation, (iii) Area of temporary crops harvested (for each temporary crop type), (iv) Area of productive and non-productive permanent crops in compact plantations (for each

8. Use of technology

No information on the use of new technology was provided in the census reports available.

9. Data processing

Data entry was delayed due to resourcing issues (both human and financial). An initial ten percent of the data was entered in 2017 in the different states, to test the data-entry application and to estimate the entry duration. The data was re-entered after the data-entry was refined and completed in 2018. The data entry system was developed in CSPro. After the data was entered, incomplete households were edited, and values imputed for missing key variables. As this was two years after the enumeration, it was too late to return to the field for any additional data collection. For areas not included in the census, the information from adjacent areas was copied and pasted into its proper place in the geographic hierarchy with the area geography changed to reflect what should have been there. Under coverage adjustment was used in the state of Chuuk.

10. Quality assurance

Tabulation, and reviews of the data outputs, were only carried out at a very late stage, so addressing the problems found was very difficult. The main issues included demographic, land area, crop, livestock, and fishing-related items. For instance, the number of households and total population according to the IAC 2016/2017 were low compared to previous data gathering (2010 PHC). The difference was about 15 percent, which partly could be due to emigration. The collection of land area data was especially difficult, as the households often did not know the operated land areas, land could be shared among a number of households and operated jointly, boundaries were unclear and, in some places, there were limited official records and land ownership may be disputed. There were also issues with the area measurement and the conversion of area into acres. Two variables were used in the tables: UNACRES (acres of owned, not shared land) and SACRES (acres of shared land). However, no one seems to know how these variables were created, or if they correctly converted the land area recorded in hectares into acres. Estimates of the total land area used for agriculture were derived from a table that categorized the total area of a household's land used for agriculture (sum of the SACRES and UNACRES variables), using the midpoints of the category ranges below. After the census, a follow up Chuuk household listing was carried out using tablets to understand what areas were missed. Data from Chuuk was weighted up by ten percent in the tables. No Post-Enumeration Survey (PES) was carried out to assess the IAC results. Therefore, the extent of the under-reporting, if there was under-reporting, could not be determined.

11. Data and metadata archiving

Metadata is expected at the Pacific Data Hub, maintained, and run by SPC Policy and Procedures available at <https://microdata.pacificdata.org/index.php/policy-and-procedures>

12. Data reconciliation

There was no data reconciliation.

13. Dissemination of census results and microdata

The IAC final results were disseminated through a printed report and the institutional website in 2019 and are available at: <https://www.fsmrd.fm/2016-fsm-integrated-agriculture-census-report/>

The census microdata is expected to be disseminated through SPC microdata library, available at: <https://microdata.pacificdata.org/index.php/catalog/510/study-description#metadata-identification>.

14. Data sources

Department of Resources and Development. 2016. 2016 Integrated Agriculture Census. Questionnaire, Map, & Household Listing Instruction Manual.

Statistics Division, Department of Resource and Development. 2019. Main report, Integrated agriculture census 2016. The Federated States of Micronesia. Palikir, Pohnpei (also available at: <https://www.fsmrd.fm/2016-fsm-integrated-agriculture-census-report/>).

permanent crop type), (v) Whether working on the holding is the main activity.

15. Contact

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