

## NIUE – CENSUS OF AGRICULTURE 2021 – METADATA REVIEW

### 1. Historical outline

The first Census of Agriculture (CA) in Niue was conducted in 1989 and the second in 2009. The third one, to which the metadata review and data presented here refer, was carried out in 2021.

### 2. Legal basis and organization

#### *Legal framework*

The CA 2021 was conducted under the Statistics Act of 2009.

#### *Institutional framework and international collaboration*

The Department of Agriculture, Forestry and Fisheries (DAFF) organized the AC with the active guidance and technical support of National Statistics Office (NSO), and contributions from other government agencies such as Department of Justice, Lands and Survey (DJLS) staff. A steering committee, with members from DAFF, NSO and DJLS, was established and approved by the cabinet in March 2019, and provided technical and advisory support to DAFF for conducting the CA 2021. The steering committee also functioned as the working group in assisting with the logistics such as providing technical support to the coordinating committee. The latter included two representatives from DAFF and NSO, and one from DJLS and coordinated activities with FAO, which provided technical assistance through a Technical Cooperation Programme project, during the three years since the approval of the census project in 2019.

#### *Census staff*

The fieldwork involved 15 enumerators, two field supervisors, two office staff, and one cartographer. IT and data processing specialist, and subject matter specialist were consultants from FAO.

### 3. Reference date and period

**Reference day:** the day of the interview, for household composition, livestock, domestic animals, machinery stock.

#### **Reference periods:**

- from 1 August 2020 to 31 July 2021, for land variables, crops, households agricultural support, machinery rented, food insecurity experience, fisheries;
- the last six months preceding the day of the interview, for hunting; and
- the last month preceding the day of the interview, for labour force.

### 4. Enumeration period

The CA was conducted from 1 August to 13 November 2021. The training of enumerators and pilot census originally planned for March 2020 was postponed, due to COVID-19 travel restrictions for FAO experts. DAFF and NSO resumed plans in 2021 and the fieldwork using CAPI began on 1 August 2021 but was halted midway through due to COVID. It finally resumed the first week of November 2021 and ended on 13 November, including for institutional holdings.

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

The **census scope** covered agricultural (crop and animal production) and capture fisheries activities.

The **statistical unit** was the agricultural holding, defined as an economic unit of agricultural production under single management comprising all livestock kept and all land used wholly or partly for agricultural production purposes, without regard to title, legal form or size. The holding's land may consist of one or more parcels, located in one or more separate areas. Two types of agricultural holdings were considered: (i) households; and (ii) institutional holdings.

### ***Community-level data***

There were no community-level data collected along with the census.

## **6. Census coverage**

### ***Geographic coverage***

The CA 2021 covered the entire country.

### ***Cut-off threshold and other exclusions***

No thresholds were applied for the CA.

## **7. Methodology**

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

The CA 2021 was conducted using the classical approach.

### ***Relation to other censuses***

No relationship with other censuses.

### ***Frames***

For the purpose of the census, each village in Niue was divided into enumeration areas (EAs). Household lists were provided by the Department of Justice, Lands, and Survey for each EA and these were updated during enumeration, so that all households in the country were covered at the time of the census. EA maps were also provided. The household updating process involved identifying changes in the households living in an existing house, vacant/demolished houses, and new houses constructed since 2017. The final updating of the household lists was carried out by the NSO staff and the enumerators in July 2021.

### ***Complete or/and sample enumeration methods***

The CA was conducted using complete enumeration.

### ***Sample design***

No sampling was used.

### ***Data collection methods***

In the CA 2021, data was collected through the CAPI method using tablets with Survey Solutions software for both the household and institutional questionnaires. In a few cases, paper questionnaire was also used to collect the data.

### ***Questionnaire(s) and items covered***

Two questionnaires were used in the CA 2021: (i) household questionnaire; and (ii) institution questionnaire. The questionnaires covered 20 out of 23 essential items recommended in the WCA 2020<sup>1</sup>.

## **8. Use of technology**

CAPI was used for field data collection. Census results were disseminated online on the Niue Statistics website.

## **9. Data processing**

CAPI method ensured direct data capture. A comprehensive array of data validation checks was incorporated into the CAPI data collection system to help enumerators identify possible errors/outliers in the data reported. This was done as the responses were recorded so that enumerators could correct the data on the spot. After an interview case was completed by an interviewer in the field, it was

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<sup>1</sup> The following essential items were not covered: (i) 0103 Legal status of agricultural holder (type of holder); (ii) 0503 Number of female breeding animals; and (iii) 1201 Presence of aquaculture on the holding.

synchronised using mobile internet to the data server (referred to as Headquarters). Once the case was received on the server, two CAPI supervisors logged into the interface and reviewed each case received from the field. Cases were reviewed for outliers, enumerator comments, and completeness. In reviewing each case, the CAPI supervisor approved or rejected the case. If the case was approved, it was stored in the final database. If a case was rejected, it was returned to the enumerator along with supervisor's comments for correction. After this, the checking process was repeated until the case was approved. Upon the completion of fieldwork, additional data cleaning checks were performed, including coding of open end (other specify) questions, and numeric outlier checks. Corrections to the data were made as a result of these checks and a final clean dataset was produced in SPSS and Excel format. Data was tabulated using SPSS and quality control was conducted on them, checking the balance of values, noting any missing values, etc., before being finalising.

## 10. Quality assurance

A pilot census was carried out in selected villages to test the clarity of the questions, the methods of data collection, the effectiveness of the training program for field staff, the completeness of the instruction manuals, the duration of the interview per household and the depth of understanding of the questionnaire by the enumerators. A small set of tables were produced using data from the pilot census to evaluate the census instruments, quality of data and tabulation software. The results of the pilot census were utilized to make further improvements in the census instruments including the data processing system. There was complete response from all households due to re-visits by enumerators and senior DAFF officials to households that refused to answer. A Post-enumeration Survey (PES) was conducted from 1 to 13 November 2021 in a sample of one household from each of the 14 villages, to evaluate coverage and response quality of selected questions.

## 11. Data and metadata archiving

Data and metadata are available on the census website at <https://niuestatistics.nu/census/agriculture/>. An anonymized (de-identified) version of the database in SPSS was produced where all respondent details such as names, household number and GPS co-ordinates have been removed. These identifying variables were stored in a separate database which can be re-identified by running an SPSS syntax. The CA 2021 microdata, final tables and final reports will be secured in the main server located at the Pacific Community (SPC) with limited access to staff of the DAFF.

## 12. Data reconciliation

There was no reconciliation process of the CA 2021 data.

## 13. Dissemination of census results and microdata

Final results were disseminated in August 2022. The final report is available in hard copy form as well as on the Niue Statistics website. Data is available at the village level. Further census analysis might include in-depth studies on themes such as gender, the environment and agricultural enhancing agricultural productivity.

## 14. Data sources

**Department of Agriculture, Forestry and Fisheries (DAFF).** 2022. Report of the Niue Census of Agriculture 2021. Alofi, Niue.

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