



TIMOR-LESTE – CENSUS OF AGRICULTURE 2019 – METADATA REVIEW

1. Historical outline

The Timor-Leste Census of Agriculture (TLAC) 2019, was the first census of agriculture conducted as an independent country. The TLAC 2019 was a comprehensive statistical operation undertaken for the collection and compilation of information on crop cultivation, raising of livestock and poultry, and fisheries and aquaculture activities.

2. Legal basis and organization

Legal framework

The TLAC 2019 was conducted under the Government Resolution No. 23 of 17 May 2017.

Institutional framework and international collaboration

The General Directorate of Statistics (GDS) of the Ministry of Finance, and the Ministry of Agriculture, Forestry and Fisheries (MAFF), were the responsible government ministries authorized to undertake the TLAC 2019. While GDS had the mandate to conduct the census, MAFF was the primary user of the data produced from the census.

Census staff

The TLAC 2019 involved 1293 enumerators, 646 GPS (Global Positioning System) takers, and 646 supervisors.

3. Reference date and period

Reference day: day of enumeration for stock items such as land status, land tenure, number of livestock, machinery and equipment and demographic particulars of household members.

Reference period: the 12-month period prior to enumeration day, which fell during 12 August 2019 to 12 October 2019, was generally used as the reference period for items such as crops and land areas, crop and livestock sales, other farm-related income, use of machinery and equipment, hired farm labour, agricultural practices and services, and irrigation.

4. Enumeration period

The enumeration was conducted from 12 August to 12 October 2019 (see also Section 7 “Data collection methods”).

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

The **census scope** covered agricultural activities (crop production, livestock rearing, and poultry), fisheries and aquaculture activities.

The **statistical unit** for the 2019 TLAC was the agricultural holding defined as an economic unit under single management.¹

Community-level data

Census Form 3 “*Particulars of suco and facilities available*” collected data on the different physical attributes of the *suco* (village), such as topography, type of soil and natural disasters, as well as available local infrastructure, such as schools, hospitals, transportation, agricultural machineries, and economic activities.

6. Census coverage

Geographic coverage

The TLAC 2019 covered all households in the country including its rural and urban areas along with the non-household institutional farms operated by a corporation (company), religious or non-profit organization (e.g., church, trust), cooperative/community (group activity), or government.

Cut-off threshold and other exclusions

¹Two broad types of agricultural holdings were identified in Timor-Leste: household agricultural holdings and institutional agricultural holdings. Institutional holdings are agricultural entities managed and operated by a corporation (company), a religious institution/non-profit institution (e.g., church, trust), cooperative/community (group activity), or a government institution engaged in farming. As such, institutional holdings are considered to be in the non-household sector.

The TLAC2019 covered the holdings with at least one of the following characteristics: a minimum of 200 square metres (0.02 ha) of land used wholly or partly for agricultural production; a minimum of two large livestock; a minimum of three small livestock; and/or a minimum of 10 poultry.

7. Methodology

Methodological modality for conducting the census

The TLAC 2019 used the classical approach.

Relation to other censuses

The enumeration area (EA) in the TLAC 2019 was an area defined for the Population and Housing Census (PHC) 2015, delimited by natural or artificial boundaries (river, seaside, road, etc.). In the PHC 2015, an EA contained approximately 90 households on an average.²

Frame

The list of EAs (2283 EAs) and information used in the PHC 2015 was updated during the intervening period of PHC 2015 and TLAC 2019 and used as the frame for the TLAC household sector.

Complete and/or sample enumeration methods

The TLAC 2019 was an enumeration of all identified agricultural holdings.

Sample design

Considering the limited knowledge of farmers about the precise area of their holdings and parcels, the TLAC 2019 sampled a subset of the holdings to measure parcel and plot areas using GPS devices under a Circular Systematic Sampling (CSS) methodology. A sampling rate of 20 percent was applied in each EA systematically selecting one household involved in agriculture in every five.

Data collection method(s)

Data collection was accomplished primarily through CAPI (tablets), while GPS devices were used to measure a sample of parcel and plots areas. Paper questionnaires were prepared and used in exceptional circumstances, with the data later transferred in the CAPI application at the municipality level.

Questionnaire(s) and items covered

The TLAC 2019 utilized three questionnaires for the census in both the household and institutional sectors:

- (i) Form 1 – Listing Form: Collected information on the location and involvement of households and institutions in agriculture or aquaculture activities.³
- (ii) Form 2 – Detail Information on the agricultural holding: Collected information on the location, the respondent, and the agricultural holding.⁴
- (iii) Form3 – Suco (village) Questionnaire: Collected information at village level on soil types, main topographical features, incidence of calamity or disaster, presence of agro-processing equipment, machinery and facilities, mode of transport, availability of schools, communication facilities, health

²All the EA were classified according to an EA-ID of nine digits as: first 2-digit for municipality followed by next 2-digit for sub-municipality, next 2-digit for suco (village), 2-digit for EA and 1-digit for sector (rural/urban). All households in the EAs were listed in Form 1 to collect some relevant information for identification of farm households. Moreover, another list of corporations (company), religious/non-profit institutions, cooperatives/community and government institutions was prepared within the EAs and all those engaged in farming activity during the last 12 months prior to conduct of census was completely enumerated.

³This form was used to identify households/institutions qualifying for inclusion in the census by operating land used for agricultural purposes and meeting the minimum size thresholds (0.02 ha of agriculture land or raising at least two large livestock, three small livestock or ten poultry).

⁴Information included: the legal status of the agricultural holding; basic characteristics of the holding such as size, number of parcels, location, actual area, main land use, and land tenure of each parcel; use of irrigation/fertilizer/pesticides; temporary crops planted, permanent crops planted, agricultural practices, livestock and poultry raised, and fishing/aquaculture activities; implements/equipment and machinery used; hired labour; and the landholder's household information in the case of household holdings. Information on the agricultural household included total size, names, relation to household head, sex, age, marital status, highest level of education completed, status of employment and tasks undertaken in the agricultural holding in the previous 12 months.

facilities, water facilities, access to roads and presence of markets, presence of people's organizations.⁵

The TLAC2019 covered 22 out of the 23 essential items recommended in the WCA 2020.⁶

8. Use of technology

CAPI method was used for census data collection. GPS devices were used to measure a sample of parcel and plots areas.

9. Data processing

The data collected in CAPI was transferred directly from the field to GDS after completion of work in each EA through CSEntry mobile application into the CSWeb server. In the process, a report was generated to enable the Census Office to monitor the progress and coverage of data collection in respect to each EA/suco/sub-municipality/municipality. Data processing was conducted using CPro and STATA.

Data was cleaned, validated, and processed, and tables generated according to a pre-decoded tabulation plan. Edit specifications and the tabulation plan were developed based on the experience from the pilot census data collection and processing.

10. Quality assurance

For quality assurance, several steps were taken starting from the planning stage to the data dissemination. These steps included preparation of frame, pre-testing of questionnaires, pilot exercise, field scrutiny manual, training, field scrutiny programme, supervision of field work to minimize non-sampling errors, data processing, tabulation, comparison of internally data with external sources.

11. Data and metadata archiving

The metadata of TLAC 2019 dataset is stored in the Department of data management under the National Directorate of System and Report. Information related to variable descriptions is available in SPSS file format. All files, including data and metadata, are stored in offline storage.

12. Data reconciliation

The PHC 2015 has collected some data on agriculture for some broad indicators. The TLAC 2019 estimates were compared with the PHC 2015 for both external validation and reconciliation purposes.

13. Dissemination of census results and microdata

The TLAC 2019 national report with final census results was published in October 2020. These results provided a detailed portrait of Timor-Leste's agriculture sector, based on data collected from farm households, farm institutions and Suco (village) chiefs, using three questionnaires. Access of external users to the TLAC 2019 microdata was not provided.

14. Data sources

General Directorate of Statistics, Ministry of Finance and Ministry of Agriculture, Forestry and Fisheries. 2020. *Timor-Leste Agriculture Census 2019. National Report on Final Census Results.* The Democratic Republic of Timor-Leste. (also <https://www.statistics.gov.tl/wp-content/uploads/2020/11/FINAL-MAIN-REPORT-TLAC2019.pdf>)

⁵All households in the country were interviewed using Form 1 to determine their involvement in agricultural holdings. Where a household was found to be involved in agricultural activities and qualified for inclusion, according to the definition of an agricultural holding, the household was further interviewed using Form 2. Detailed data in respect of agricultural holdings were collected subsequently. Actual area of parcels and plots of holdings were measured for a sample of 20 percent of agricultural households, which were selected using circular systematic sampling methods. The data in Form-3 was collected directly from the Suco (village) head and was analysed and published separately.

⁶The following essential item was not covered: (I) 0302 Area of land actually irrigated: fully controlled and partially controlled irrigation.

General Directorate of Statistics, Ministry of Finance and Ministry of Agriculture, Forestry and Fisheries. 2019. *Timor-Leste Agriculture Census 2019. Methodological Note.* The Democratic Republic of Timor-Leste.

15. Contact

Statistics Timor-Leste
General Directorate of Statistics, Ministry of Finance (GDS)
Rua de Caicoli, Apartado 10/PO Box 10
Dili, Timor-Leste
Telephone: +670 3311348/ +670 333 9527
E-mail: inetl@mof.gov.tl
Website: <https://inetl-ip.gov.tl/>