

# Sierra Leone - Sierra Leone Annual Agricultural Survey 2023

**Statistics Sierra Leone, Ministry of Agriculture and Food Security**

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## Identification

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### SURVEY ID NUMBER

SLE\_2023\_AAS\_v01\_M\_v02\_A\_ESS

### TITLE

Sierra Leone Annual Agricultural Survey 2023

### ABBREVIATION OR ACRONYM

SLAAS 2023

### COUNTRY

Name	Country code
Sierra Leone	SLE

### STUDY TYPE

Agriculture Integrated Survey[hh/nhh/agris]

### SERIES INFORMATION

The 2023 Sierra Leone Annual Agricultural Survey (AAS) is the first round of AAS conducted in Sierra Leone. It was implemented under the 50x2030 Initiative, a program jointly launched by the World Bank, Food and Agriculture Organization of the United Nations (FAO) and International Fund for Agricultural Development (IFAD). The lead national implementing agencies in Sierra Leone are Statistics Sierra Leone (Stats SL) and the Ministry of Agriculture and Food Security (MAFS).

AAS was designed to ensure the production of foundational agricultural data that are timely and of quality, fit the needs of the country and match the main national development targets. The approach adopted is that of a modular approach. This first round covers the CORE module and the ILP (Income, Labor and Productivity) module.

### ABSTRACT

The Sierra Leone Annual Agricultural Survey (SLAASS 2023) is a key component of Stats SL's efforts to provide up-to-date information on the agricultural sector. The 2023 SLAASS builds upon the successes of previous surveys and aligns with the best international practices.

The primary objective of the SLAASS was to collect comprehensive data on crop and livestock production, as well as other relevant agricultural indicators. This information is essential for policymakers, researchers, and other stakeholders to assess the performance of the agricultural sector, identify opportunities for improvement, and inform evidence-based interventions. Specifically, it involved:

- Collection of timely data on agricultural production and productivity at both national regional and district levels;
- Gathering core data to help develop and review agricultural policies and to guide the implementation of agricultural plans at national and regional levels between agricultural sub-sectors;
- Compilation of fundamental statistics that facilitate comparisons in the development of the agriculture sector across the country.

### KIND OF DATA

Sample survey data [ssd]

### UNIT OF ANALYSIS

Agricultural households

## Version

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### VERSION DESCRIPTION

v2.1: Edited, anonymized dataset distributed as public use file

Data have been edited and anonymized before the release. The type of release considered is Public Use File (PUF).

### VERSION DATE

2025-11-28

## VERSION NOTES

This new version of the datasets incorporates revisions to the ID variables. These updates improve the possibility of merging datasets, particularly those from the PP (Post Planting) season. Merging datasets from the PH (Post Harvesting) season, as well as merging PP and PH datasets, may still be restricted due to limitations inherent to the data collection application.

## Scope

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## NOTES

This survey collected data from agricultural households, covering the Post Planting (PP) season and the Post Harvesting (PH) season. The topics covered are: characteristics of agricultural households, agricultural production (crops, livestock, aquaculture, fisheries and forestry), access to inputs/resources, farm income, and labor force.

## TOPICS

Topic	Vocabulary	URI
Agricultural workers	ELSST Thesaurus	<a href="#">Link</a>
Agricultural production	ELSST Thesaurus	<a href="#">Link</a>
Crops	ELSST Thesaurus	<a href="#">Link</a>
Households	ELSST Thesaurus	<a href="#">Link</a>
Livestock	ELSST Thesaurus	<a href="#">Link</a>

## KEYWORDS

Keyword	Vocabulary	URI
Agricultural yields	ELSST Thesaurus	<a href="#">Link</a>
Area measurement	ELSST Thesaurus	<a href="#">Link</a>
Food and nutrition	ELSST Thesaurus	<a href="#">Link</a>
Forestry	ELSST Thesaurus	<a href="#">Link</a>
Labour force	ELSST Thesaurus	<a href="#">Link</a>
Land economics	ELSST Thesaurus	<a href="#">Link</a>
Seeds	ELSST Thesaurus	<a href="#">Link</a>

## Coverage

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## GEOGRAPHIC COVERAGE

National coverage, with the exception of the Western Urban district.

## UNIVERSE

Households involved in agricultural production and livestock rearing, in all the fifteen agricultural districts of the country, were considered for this study.

## Producers and sponsors

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## PRIMARY INVESTIGATORS

Name
Statistics Sierra Leone
Ministry of Agriculture and Food Security

## PRODUCERS

Name	Abbreviation	Affiliation	Role
Food and Agriculture Organization of the United Nations	FAO	United Nations	Technical assistance

## FUNDING AGENCY/SPONSOR

Name	Abbreviation	Role
Government of Sierra Leone		Government funder
World Bank	WB	Financial assistance through the HISWA Project

## Sampling

## SAMPLING PROCEDURE

The survey employed a stratified random sampling technique to ensure a representative sample of agricultural households across all five regions and fifteen districts of Sierra Leone with the exception of the Western Urban district. A two-stage sampling method was employed to select households. Both stages of sampling employed probabilistic methods.

The country was divided into districts and within each district, areas called Enumeration Areas (EAs) were identified. A sample of EAs was then selected, followed by a sample of agricultural households (Ag HHs) within each chosen EA. The total number of EAs selected for the survey was 520, with 5,200 households interviewed in total. For each EA, the field team had a list of 10 households.

The survey included households engaged in crop cultivation and/or livestock rearing, regardless of the scale of their operations. However, it did not cover non-household holdings, such as large-scale commercial farms, or sectors like aquaculture, forestry, and fisheries.

The survey generated national, regional, and sub-regional estimates.

## DEVIATIONS FROM THE SAMPLE DESIGN

Due to operational constraints, not all sampled households were successfully surveyed during data collection. Consequently, the Post Planting (PP) phase comprised 4,998 households. Additionally, survey attrition occurred during the PH phase. Weight variables for each phase have been adjusted to account for these variations.

## WEIGHTING

Sample weights were calculated for the data files. They were computed as the inverse of the probability of selection of agricultural household, which is the product of the probability of selection of the EA in which the household is located (at the first stage) and the probability of selection of the household (at the second stage).

The weight variable is called "HH\_Final\_weight".

## Data collection

## DATES OF DATA COLLECTION

Start	End	Cycle
2023-09-01	2023-09-30	Post Planting (PP)
2023-12-01	2023-12-30	Post Harvesting (PH)

## DATA COLLECTION MODE

Computer Assisted Personal Interview [capi]

## SUPERVISION

The teams of data collectors were divided into two groups: enumerators, primarily responsible for collecting data from eligible and consenting households, and supervisors, responsible for assigning and assisting enumerators in solving problems that they may encounter during the administration of the survey questionnaire and reviewing each questionnaire before it is submitted.

The number of persons per team varied from district to district. It ranged from 2 to 5, for a total of 104 enumerators and 26 teams deployed in the selected EAs to collect the data.

#### DATA COLLECTION NOTES

The data of the SLAAS 2023 was collected throughout the annual agricultural period. This period is divided into two seasons: the first season gave rise to the first phase of the data collection, corresponding to the Post Planting (PP) phase, and the second season gave rise to the second phase of the data collection, corresponding to the Post Harvesting (PH) phase.

A training of enumerators was held before each phase, during the training the questionnaires were presented and tested; and the main roles of each team member were discussed and elaborated.

#### DATA COLLECTORS

Name	Abbreviation	Affiliation
Statistics Sierra Leone	Stats SL	Government of Sierra Leone
Ministry of Agriculture and Food Security	MAFS	Government of Sierra Leone

## Questionnaires

#### QUESTIONNAIRES

For this survey, two questionnaires were used: the Post Planting (PP) questionnaire and the Post Harvesting (PH) questionnaire.

They were administered in each household, preferably to the head of household. They cover two modules, the CORE module and the ILP (Income, Labor and Productivity) module, split into several topics such as household demographics, land ownership, agricultural activities, livestock rearing, labor force composition, and participation in off-farm activities.

The questionnaires are provided as external resources.

## Data Processing

#### DATA EDITING

The PP and PH questionnaire were implemented using CAPI with CSPRO. During data collection, some validation controls were integrated into the app to minimize mistakes when typing households' answers. After data collection, a processing program designed with SPSS software allowed for cleaning both cases and variables. Duplicated cases were deleted and then the sampling weights were adjusted to take the two non-covered EAs into account. Missing, illegal, unlike and incoherent values were detected and then locally imputed objectively in respecting filters. Finally, the necessary tabulation variables were created and then tables were produced according to the tabulation plan designed earlier.

#### METHODOLOGY NOTES

The dataset was anonymized using Statistical disclosure methods on R software. To start the process, variables were classified into main categories as variables to delete, quasi identifiers, direct identifiers, linked variables. All direct identifiers and unnecessary variables were removed. Then, quasi-identifiers (and linked variables) were considered to formulate disclosure scenarios. Disclosure risk was mainly measured using k-anonymity and probabilistic risk.

Quasi identifiers have been anonymized using recoding, shuffling and local suppression which was applied to both the quasi identifiers and the linked variables. In addition, information loss was mainly measured based on number of missing values introduced during anonymization and dependency coefficient between categorical variables.

During the anonymization process, the EA codes have been shuffled. Their final usage is just to identify households in the same primary sampling unit. So, any use of these codes to infer geographic variables could be misleading.

## Data Appraisal

#### ESTIMATES OF SAMPLING ERROR

To appreciate the data quality, some tables were supported by sampling errors estimates. Especially, coefficients of variations and standard errors were estimated for a set of indicators for open data publishing purposes.

## Access policy

### CONFIDENTIALITY

Confidentiality of respondents is guaranteed by the Statistics Act of Sierra Leone, enacted in 2002.

### ACCESS CONDITIONS

The datasets have been anonymized and are available as Public Use Files (PUF). They contain individual-level data (non-aggregated) that has undergone treatment to ensure strict confidentiality, preventing direct or indirect identification of individuals or households. This confidentiality protection aligns with relevant legislation.

### CITATION REQUIREMENTS

Statistics Sierra Leone, Annual Agricultural Survey 2023 (SLAAS 2023), Version 2.3 of the public use dataset (November 2025)

Dataset downloaded from <https://microdata.statistics.sl/index.php/home>

### ACCESS AUTHORITY

Name	Affiliation	Email	URL
Statistics Sierra Leone	Government of Sierra Leone	microdata@statistics.sl	<a href="#">Link</a>

## Disclaimer and copyrights

### DISCLAIMER

The original collectors of the data, Stats SL, MAFS, and the relevant funding agencies bear no responsibility for use of the data or for interpretations or inferences based upon such uses.

### COPYRIGHT

All rights reserved (c) 2018, Statistics Sierra Leone

## Metadata production

### DDI DOCUMENT ID

DDI\_SLE\_2023\_AAS\_v01\_M\_v02\_A\_ESS\_FAO

### PRODUCERS

Name	Abbreviation	Affiliation	Role
Statistics Sierra Leone	Stats SL	Government of Sierra Leone	Documentation of the study
Ministry of Agriculture and Food Security	MAFS	Government of Sierra Leone	Documentation of the study
Food and Agriculture Organization of the United Nations	FAO	United Nations	Documentation of the study
Statistics Division	ESS	FAO	Metadata adapted for FAM

### DATE OF METADATA PRODUCTION

2025-04-15

### DDI DOCUMENT VERSION

Version 1.3 (November 2025). This is the second version of the AAS 2023 microdata documentation. This version is identical to version 1.1, except for the section on Datasets which was updated.

## Data Dictionary

Data file	Cases	Variables
<p><b>PP_Households</b> The file contains data related to the agricultural households and the head of agricultural households. The information refers to the Post Planting questionnaire. The ID variable is HH_ID.</p>	4998	30
<p><b>PP_Members</b> The file contains characteristics of all agricultural household members, including head of households. The information refers to the Post Planting questionnaire. The ID variables are HH_ID and hh0_id.</p>	26048	20
<p><b>PP_Parcels</b> The file contains data related to parcels used by the agricultural households. The information refers to the Post Planting questionnaire. The ID variables are HH_ID and s1_q1_par_id.</p>	7882	16
<p><b>PP_Plots</b> The file contains data related to plots in parcels. The information refers to the Post Planting questionnaire. The ID variables are HH_ID, s3_parcel_id and s3_plot_id.</p>	9818	23
<p><b>PP_Crops</b> The file contains data related to crops cultivated by plot. The information refers to the Post Planting questionnaire. The ID variables are HH_ID, s3_parcel_id, s3_plot_id and s3q4_crop_id.</p>	10420	18
<p><b>PH_1A1H2A_Cropproduction</b> The file contains derived data from sections 1A, 1H and 2A of the Post Harvesting (PH) questionnaire. The ID variables are HH_ID_PH, PARCEL_ID, PLOT_ID and crop_name.</p>	10863	36
<p><b>PH_1A1H2A_Harvest</b> The file contains derived data on quantities of crop harvested and yields. The processing of this dataset led to estimates at the national level only.</p>	10831	8
<p><b>PH_3A_FamilyLabor</b> The file contains data related to section 3A of the Post Harvesting (PH) questionnaire. The ID variables are HH_ID_PH and S3AQ1_1.</p>	13775	15
<p><b>PH_3B_HiredLabor</b> The file contains data related to section 3B of the Post Harvesting (PH) questionnaire. The ID variables are HH_ID_PH and S3B_ITEM.</p>	14373	15
<p><b>PH_3C_InputPurchase</b> The file contains derived data on input purchase from section 3C of the Post Harvesting (PH) questionnaire. The ID variables are HH_ID_PH and S3C_INPUT_NAME.</p>	484	9
<p><b>PH_3C_InputUse</b> The file contains derived data on input use from section 3C of the Post Harvesting (PH) questionnaire. The ID variables are HH_ID_PH and S3C_INPUT_NAME.</p>	639	9
<p><b>PH_4A_LivestockOwners</b> The file contains derived data on livestock stock from section 4A of the Post Harvesting (PH) questionnaire. The ID variables are HH_ID_PH and SPECIES.</p>	56988	32
<p><b>PH_4C_LivestockFlow</b> The file contains derived data from section 4C of the Post Harvesting (PH) questionnaire. The ID variables are HH_ID_PH and SPECIES.</p>	2492	22
<p><b>PH_4D_BreedingStrategies</b> The file contains derived data on breeding strategies from section 4D of the Post Harvesting (PH) questionnaire. The ID variables are HH_ID_PH and SPECIES.</p>	57576	19

<b>PH_4E_LivestockLabor</b> The file contains derived data from section 4E of the Post Harvesting (PH) questionnaire. The ID variables are HH_ID_PH and WORKER_TYPE.	23990	11
<b>PH_4F_LivestockHealth</b> The file contains derived data from section 4F of the Post Harvesting (PH) questionnaire. The ID variables are HH_ID_PH and SPECIES.	4268	13
<b>PH_4I_LivestockProducts</b> The file contains derived data from section 4I of the Post Harvesting (PH) questionnaire. The ID variables are HH_ID_PH and S4I_PRODUCT_TYPE.	28785	12
<b>PH_5A_Aquaculture</b> The file contains derived data on aquaculture production from section 5A of the Post Harvesting (PH) questionnaire. It allows estimations only at the national level. The ID variables are HH_ID_PH and SPECIES.	410	11
<b>PH_5B_AquacultureLabor</b> The file contains derived data on aquaculture labour force from section 5B of the Post Harvesting (PH) questionnaire. It allows estimations only at the national level. The ID variables are HH_ID_PH and S5B_WORKER_CAT.	410	10
<b>PH_6A_Fishing</b> The file contains derived data on fishing production from section 6A of the Post Harvesting (PH) questionnaire. It allows estimations only at the national level. The ID variables are HH_ID_PH and SPECIES.	866	15
<b>PH_6B_FishingLabor</b> The file contains derived data on fishery labor force from section 6B of the Post Harvesting (PH) questionnaire. It allows estimations only at the national level. The ID variables are HH_ID_PH and S6B_WORKER_CAT.	1445	15
<b>PH_7A_Forestry</b> The file contains derived data on forestry production from section 7A of the Post Harvesting (PH) questionnaire. It allows estimations only at the national level. The ID variables are HH_ID_PH and S7A_ROWNUM.	25568	13
<b>PH_7B_ForestryLabor</b> The file contains derived data on forestry labor force from section 7B of the Post Harvesting (PH) questionnaire. It allows estimations only at the national level. The ID variables are HH_ID_PH and S7C_WORKER_CAT.	7520	11
<b>PH_8_OtherCosts</b> The file contains derived data from section 8 of the Post Harvesting (PH) questionnaire. The ID variables are HH_ID_PH and S8_ITEM.	76656	9
<b>PH_9_Loans</b> The file contains derived data on loans from section 9 of the Post Harvesting (PH) questionnaire. The ID variable is HH_ID_PH.	4791	16
<b>PH_9_Transfers</b> The file contains derived data on transfers from section 9 of the Post Harvesting (PH) questionnaire. The ID variables are HH_ID_PH and PROVIDERS.	14373	9