Statistical Capacity Building (StatCaB) Programme

AGRICULTURAL INTEGRATED SURVEYS (AGRIS):

Strategy to Improve Agricultural Statistics

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DEMAND FOR AGRIS

01 The challenge of producing the right data to meet priority needs

02 The SDGs have presented new demands for more data

OBJECTIVES

- Building cost-efficient integrated statistical information systems

- Meet the needs of national statistical institutes
  - ✓ *Minimum Set of Core Data* (Global Strategy)
  - ✓ Inform policy design and implementation, and support research
  - ✓ Contribute to SDGs monitoring (4 indicators: direct; 15: partial)
  - ✓ Representative estimates at sub-national level (region, province)

- AGRIS lays the foundations for the creation of an efficient agricultural statistical system.

SPECIFICATION

Statistical unit	All agricultural holdings • Household • Non-household sector
Data Collection	• Synchronized with the Agricultural Census and operates over a 10-year cycle to provide a regular flow of quality data • Face-to-face interviews, recommend to use CAPI
Sample design	Versatile sampling strategy, capable of meeting the needs of the various national situations • Multiple waves for data collection possible (labour, economy) • Panel/Rotating sample for the core module • The same sample or a Sub-sample of the core module for the rotating modules

AGRIS: Recommended Modules flow

	Years	1	2	3	4	5	6	7	8	9	10
Core Module	Agricultural holding (AH) Roster	•	•	•	•	•	•	•	•	•	•
	Crop + livestock production	•	•	•	•	•	•	•	•	•	•
	Other key variables	•	•	•	•	•	•	•	•	•	•
Rot. Module 1	Economy	•		•		•		•		•	
Rot. Module 2	Labour		•				•				
Rot. Module 3	Production Methods and the Environment				•				•		
Rot. Module 4	Machinery, Equipment and Assets	•				•					

- **Core Module:** yearly data collection on current agricultural production (crop and livestock) integrated with key economic, technical and socio- demographic statistics.

- **Rotating Modules :** thematic data to be collected with lower frequency (2- 5 years): economy, labour, production methods & environment, machinery-equipment-assets.

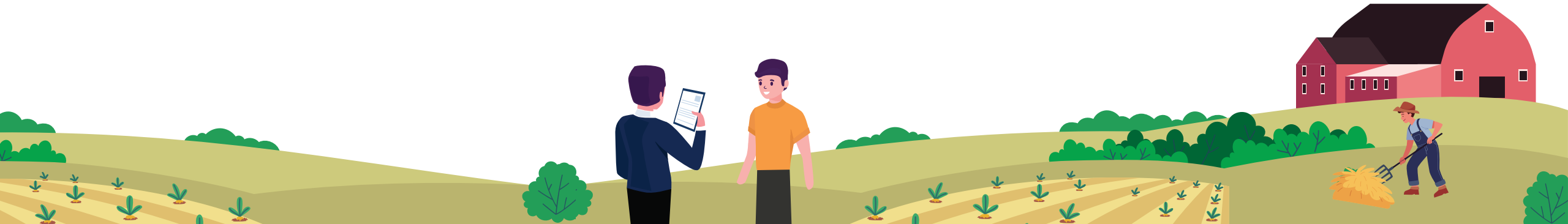
AGRIS MODULE
CORE MODULE

The **core module** is essentially a production questionnaire – repeated **every year** – which allows monitoring key indicators in a timely manner, thus establishing trends

Covers also essential structural data on the holding and the household (for HH sector) and essential data on inputs (including labour), and production methods

Implementation

- Annual survey
- Normally fielded once a year, after main harvest:
  - captures productions for the last agricultural year.
  - specific reference date/period for selected data items (ex: livestock)
- … or can be fielded in several waves (multiple ag campaigns)



COVERAGE
CORE MODULE

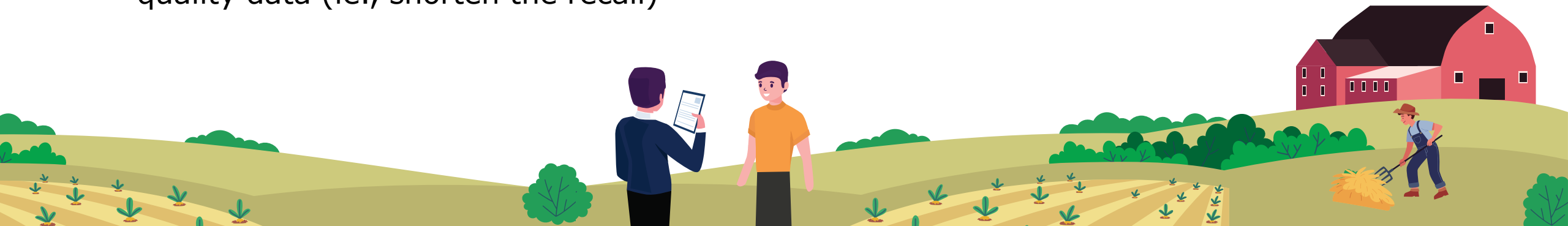
1) Identification of the holding and agricultural activity
2) Characteristics of the holders and managers
3) Crop production during the reference period
4) Livestock production during the reference period
5) Economy during the reference period
6) Sociodemographic characteristics of the households of the holders and co-holders
7) Labour used by the holding
8) Household dwelling and assets

AGRIS MODULE
ECONOMY MODULE

The **Economy module** focuses on farm's budget (incomes and expenses).
Provide data to measure production costs and profitability for different production systems and farm types
Provide data to calculate different productivity measures (+ core + labour modules)

Implementation

- (Sub-)sample of the core module, results at national/province level
- Fielded **every other year**, as budgets may change quickly
- Holding from the non-household sector: 1 wave of data collection
- Holding from the household (HH) sector:
  - Option A: 1 visit = 1 wave of data collection
  - Option B: multiple waves of data collection (3 or 4) - recommended to ensure better quality data (ie., shorten the recall)



COVERAGE
ECONOMY MODULE

1) Main characteristics of the agricultural holding
2) Income for the agricultural holding during the reference period
3) Expenses of the agricultural holding during the reference period
4) Investments, financial and insurance costs
5) Marketing and storage

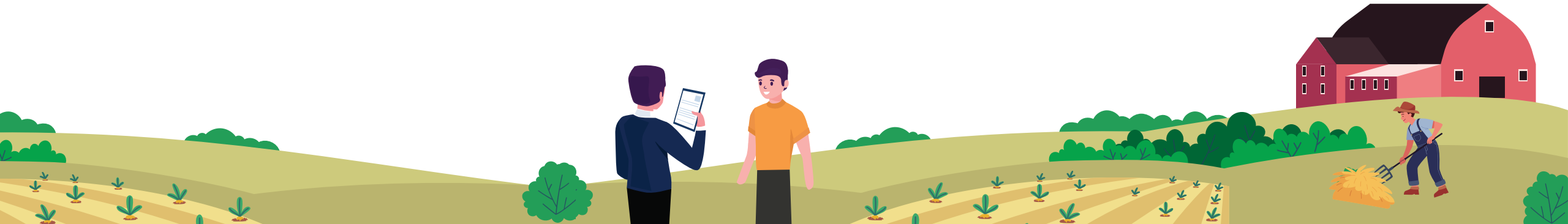
AGRIS MODULE
LABOUR MODULE

The **Labour module** collects detailed data on labour input in agriculture; the organization of labour in the holdings, in particular identification of age- and sex- specific roles; payments and modalities

Provide data to calculate labour productivity (+ core + economy modules)

Implementation

- (Sub-)sample of the core module, results at national/province level
- Fielded **at least twice in the 10-year cycle**
- 1 or multiple wave/s of data collection Multiple-visit approach is recommended to ensure better quality data (ie., shorten recall periods)



COVERAGE
LABOUR MODULE

1) Overview of the holding activities and labour
2) Household members: Time worked, main activities, payments and benefits for the work on the holding
3) External workers: demographic characteristics, time worked, main activities, payments and benefits for the work on the holding
4) Information about contractors

AGRIS MODULE

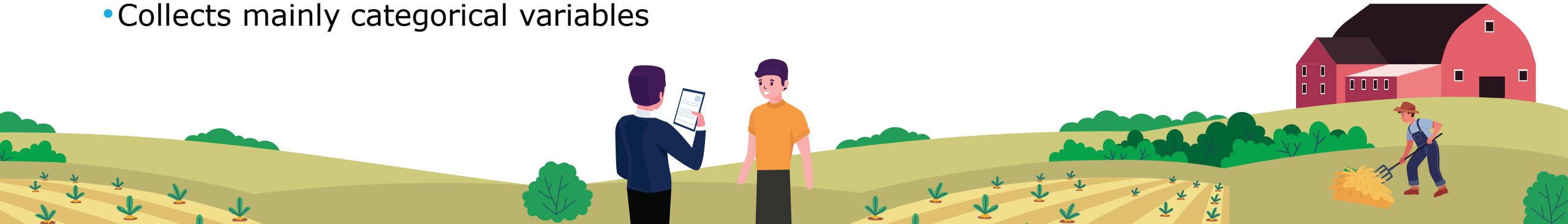
PRODUCTION, METHODS, & ENVIRONMENT MODULE

The **Production Methods & Environment** questionnaire collects data on the production processes adopted by the holdings, and their environmental impact. This allows to identify the ag. practices applied and their potential sustainability.

Enable an analysis of the costs of production for different types of agricultural production methods (when linked with the economy module)

Implementation:

- (Sub-)sample of the core module, results at national/province level
- Fielded **at least twice over the ten-year period**
- One wave of data collection
- Collects mainly categorical variables



COVERAGE

PRODUCTION, METHODS, & ENVIRONMENT MODULE

1) Identification of the holding and prospects for development
2) Use of natural resources
3) Crop production methods during the reference period
4) Livestock production methods during the reference period
5) Certified organic farming and conversion to organic certification during the reference period
6) Agroforestry during the reference period
7) Access to and use of information services, infrastructure and communal resources
8) Greenhouse gas and environmental issues
9) Adaptation to climate change and mitigation strategies
10) Waste management

AGRIS MODULE

MACHINERY, EQUIPMENT, & ASSETS MODULE

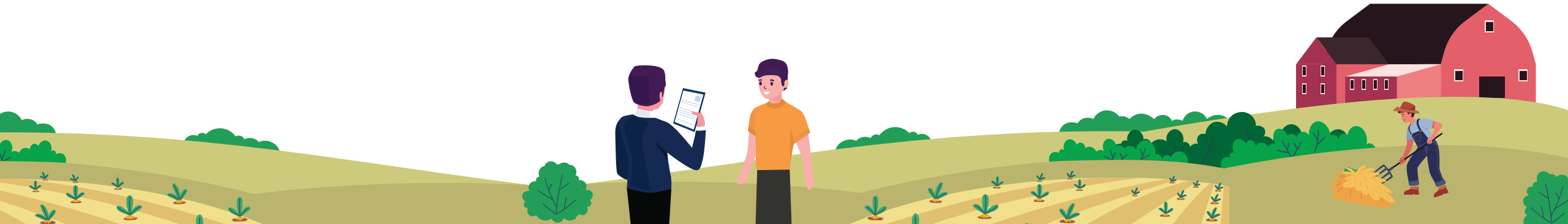
The **Machinery, Equipment & Assets** module gathers information on the physical equipment used in the holdings - types, numbers, age and ownership of machinery and equipment used on the farm.

Provides information on key assets, incl. non-residential buildings

Collects data on livestock and land ownership disaggregated by sex and age for HH sector

Implementation

- (Sub-)sample of the core module, results at national/province level
- Fielded **twice over the ten-year period**
- 1 wave of data collection

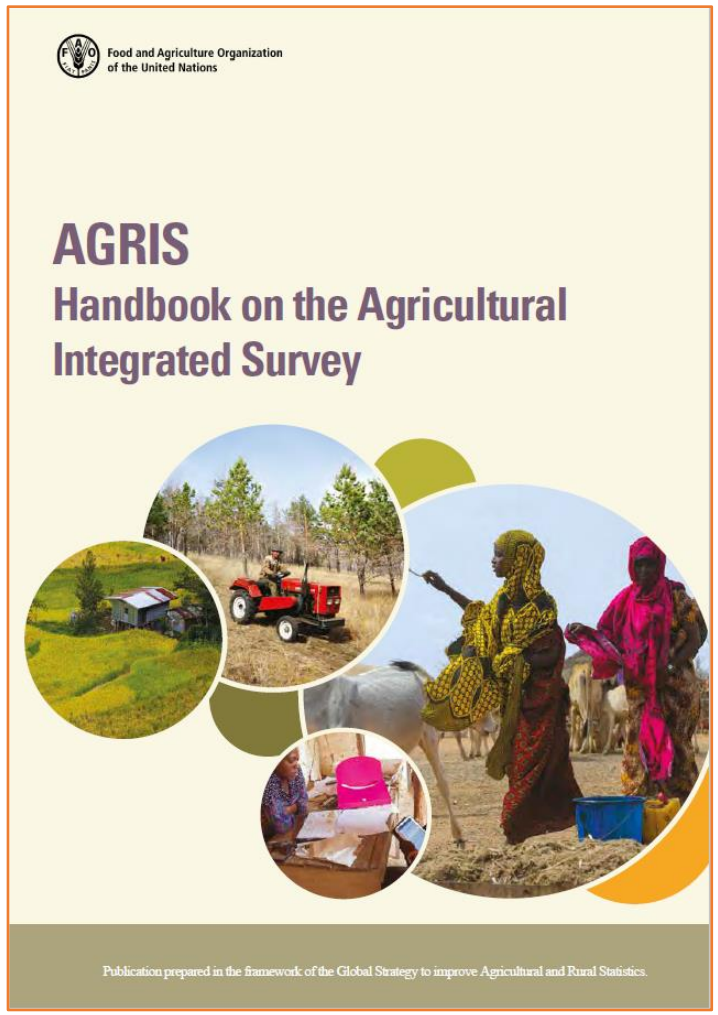


COVERAGE

MACHINERY, EQUIPMENT, & ASSETS MODULE

1) Machinery and equipment used by the holding during
2) Non-residential buildings or structures used by the holding
3) Selected assets owned by the household

AGRIS HANDBOOK



Contents:

- Rationale
- Scope
- Data items
- Definitions
- Survey cycle
- Questionnaires and methodology
- Sampling strategy
- Data access

https://www.fao.org/in-action/agrisurvey/resources/resource-detail/en/c/1198081/

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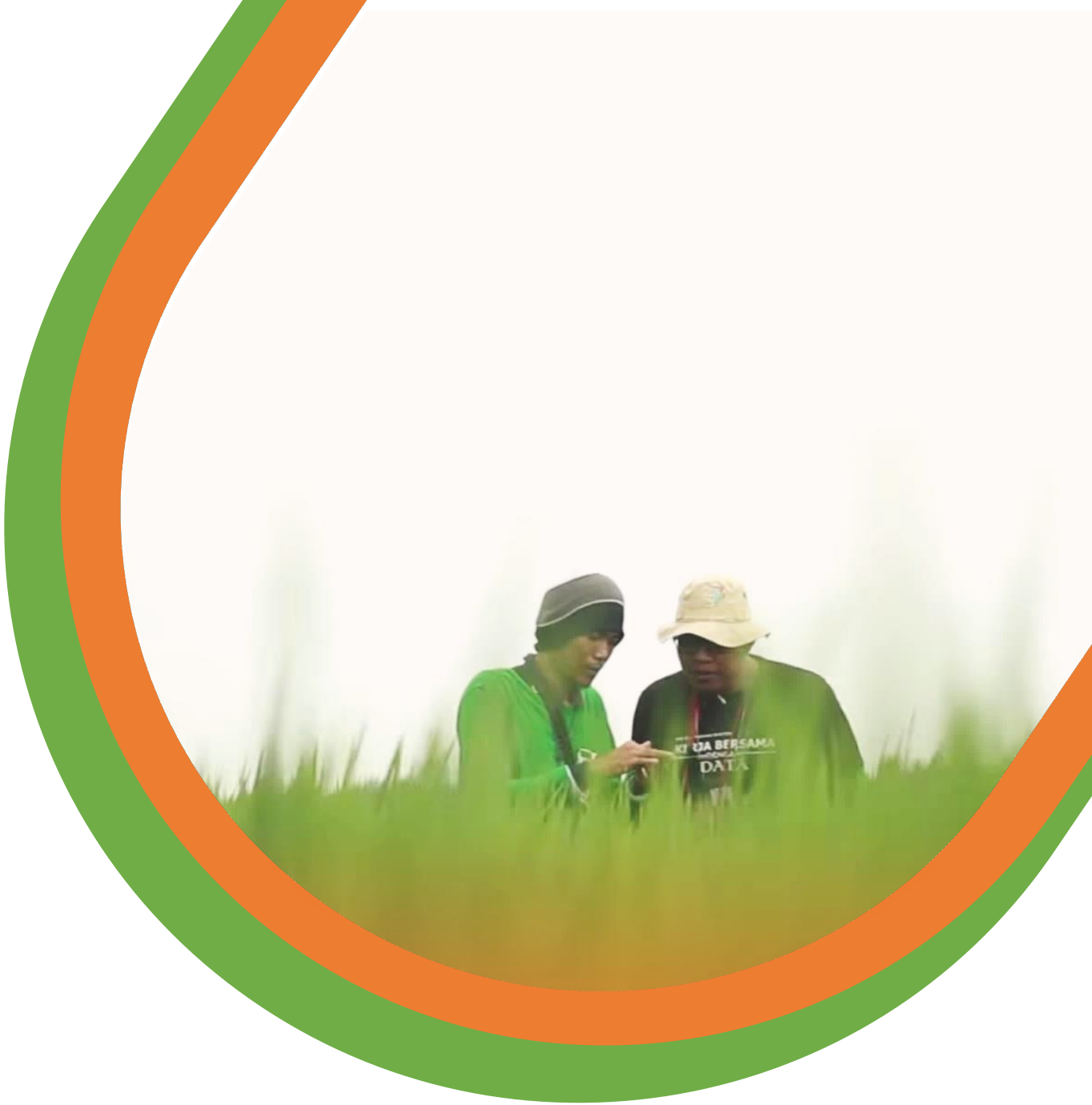
INDONESIA'S EXPERIENCE

in Conducting AGRIS



COVERAGE
AGRIS/SITASI 2021

Subsector

CROPS:
- Food Crops
- Horticulture
- Plantation

LIVESTOCK

FISHERY

FORESTRY

AGRICULTURAL SERVICE

Statistical Unit, SampleTarget, dan Data Collection Modes

298,779 Agricultural household
Using **CAPI/PAPI**

1,219 Non Agricultural household
Using **CAPI/PAPI**

1,177 Agricultural company
Using **CAWI/CAPI**

Area coverage

SITASI 2021 conducted in **34 Provinces** in Indonesia and **513 Districts/Municipality** (exceptJakarta Pusat, DKI Jakarta)

13 thousands surveyors

SAMPLING DESIGN
AGRIS/SITASI 2021

Sampling Frame and Sampling Procedure

Agricultural household

STAGE 1:

Selecting **Census Block (CB)** using sampling method

Sampling frame:

Built from Agricultural census 2013 data, supplemented with information on the number of farm households and dominant subsector businesses.

STAGE 2:

Selecting Farm Households by sampling method (10 households)

Sampling frame:

Results of household updating, supplemented with information on the main subsectors cultivated

Non Agricultural household

STAGE 1:

Selecting villages (with identified Non Ag. household) by sampling

Sampling frame:

Constructed from Agricultural census 2013 data, (updated in 2016 for Non Agricultural household of Horticulture subsector)

STAGE 2:

Selecting Non-Household Business Units by sampling method

Sampling frame:

Results of updating non-household agricultural business units in each selected village

Agricultural company

STAGE 1:

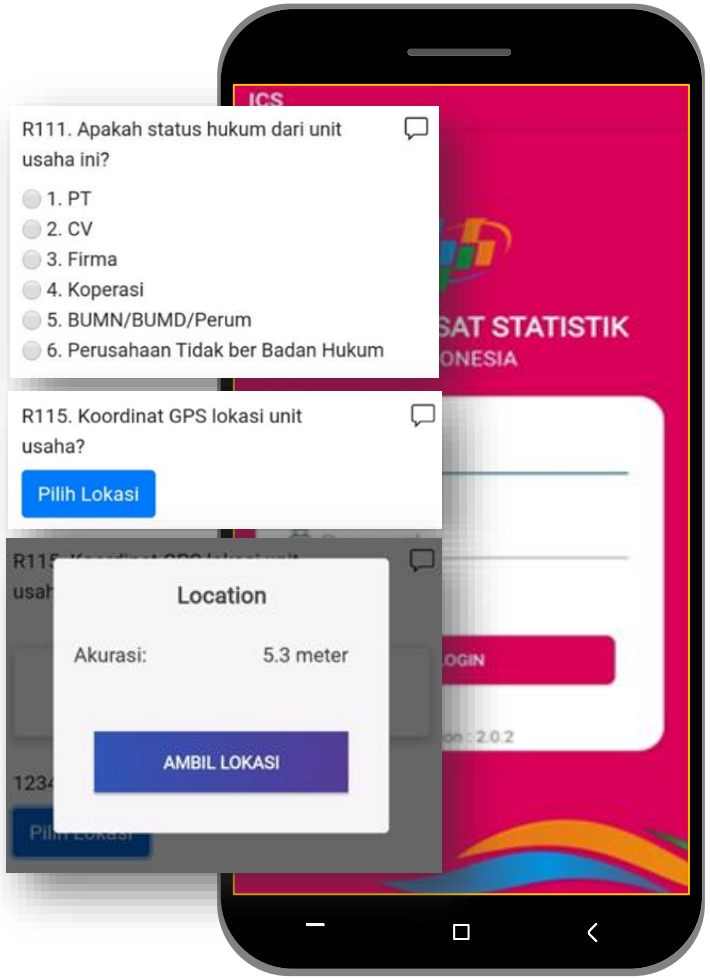
Selecting Agricultural Companies with sampling at the district level

Sampling frame:

From the Directory of Agricultural Companies (2020 Condition)

INSTRUMENT
AGRIS/ SITASI 2021

Screenshoot of CAPI

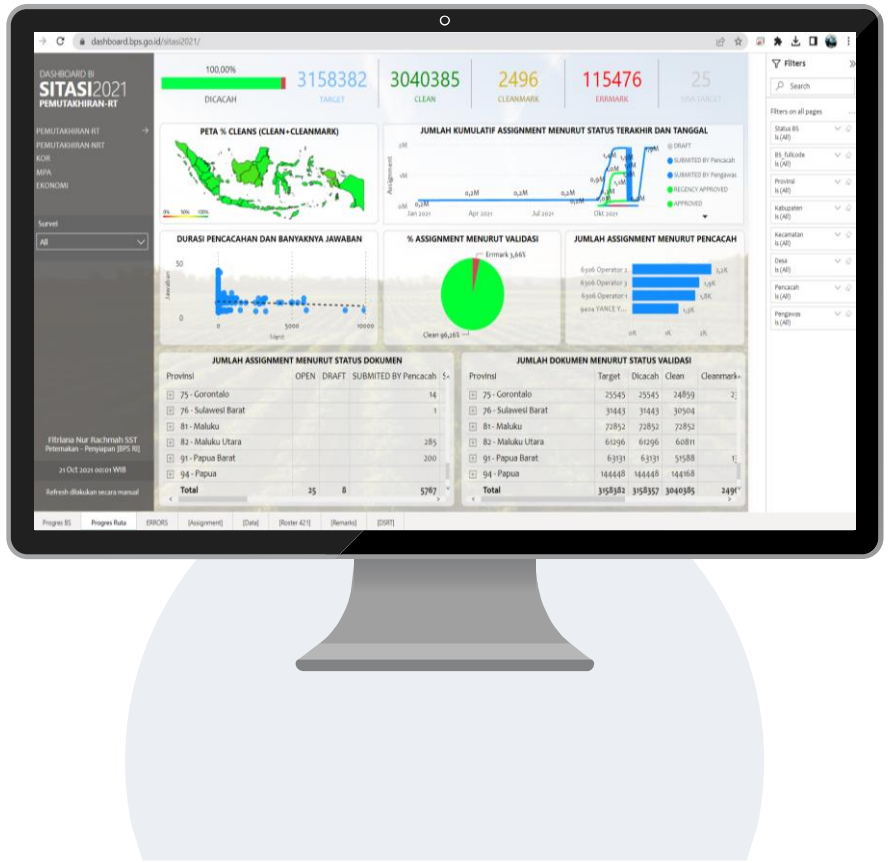


Overview
CAPI SITASI 2021

Overview
CAWI SITASI 2021

Map, Manuals, and Questionnaire SITASI 2021

Web Monitoring during the implementation of SITASI 2021



IMPLEMENTATION STAGES

AGRIS/ SITASI 2021

1 Survey Preparation

- Make tabulation design
- Designing the questionnaire
- Built sampling design
- Training for surveyor

2 Data Collection

- Updating of Agricultural Businesses (Farm Households and Non-Ag. households)
- Selecting Sample
- Data collection (Oct - Dec 2021)

3 Data Processing

- Monitoring through dashboard
- Data cleaning and imputation (Jan - July 2022)
- Data analysis
- Calculation of SDGs Indicators:
  - Stage 1: July - Oct 2022
  - Stage 2: Nov - Dec 2022

4 Data Validation

- Preliminary result (Nov 2022)
- Final figure (Dec 2022)

5 Data Dissemination

- Agricultural SDGs Indicators (Dec 19, 2022)

AGRIS DATA

SDG's Indicators

Food Security and Wellfare

Minimum Set of Core Data (MCSD)

- **Economic:** outputs, trade, resources, inputs, prices, agro-processing; final expenditure; rural infrastructure
- **Social:** employment status, education level, household composition, family workers, sex-disaggregated data
- **Environmental:** soil degradation, water population, greenhouse gases (GHGs), agricultural practices on water use, land use, etc

2 ZERO HUNGER

SDG's INDICATOR 2.3.1

Volume of production per labour unit by classes of farming/pastoral/forestry enterprise size

SDG's INDICATOR 2.3.2

Average income of **small-scale food producers**, by sex and indigenous status

SDG's INDICATOR 2.4.1

Proportion of agricultural area under productive and **sustainable agriculture**

5 GENDER EQUALITY

SDG's INDICATOR 5.a.1

5.a.1 (a) : Proportion of total agricultural population **with owners or secure rights** over agricultural land, by sex

5.a.1 (b) : share of **women** among owners or rights-bearers of agricultural land, by type of tenure

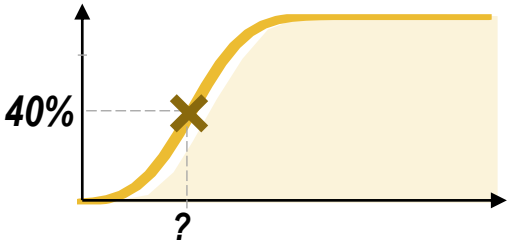
15 ADDITIONAL SDG'S INDICATORS

INDICATORS FROM AGRIS/SITASI2021

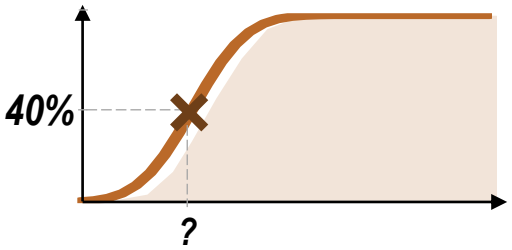
Small Scale Food Producer

Physical Size

The physical size *of the agricultural holding includes the agricultural area utilized or the livestock that are kept.*



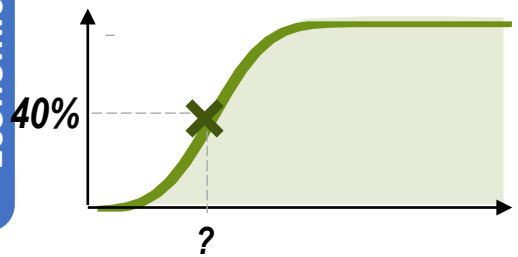
Farmers are in **the bottom 40 percent** of the land area distribution of all agricultural holdings (in hectares)



Farmers are in the **bottom 40 percent** of the distribution of the number of livestock owned of all agricultural holdings.

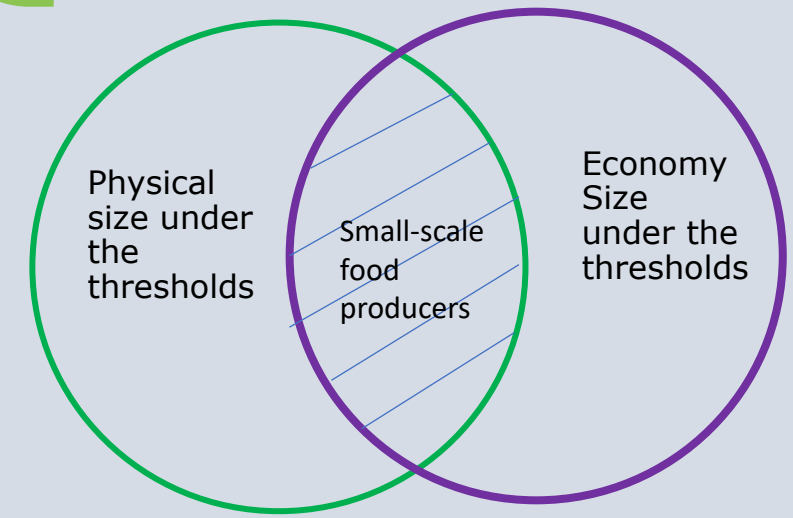
Economic Size

The economic size *defined by the income or production value of the agricultural holding for a year.*



Bottom 40 percent of the distribution of total agricultural production income of all agricultural holdings (measured by *Purchasing Power Parity*)

Who is ***Small Scale Food Producers?***



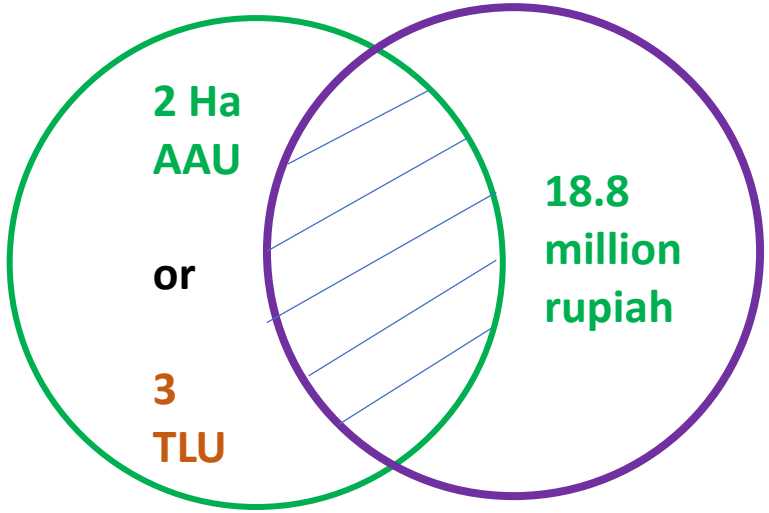
An agricultural holding or respondent is categorized as a **Small-Scale Food Producer** if it meets all the above categories.

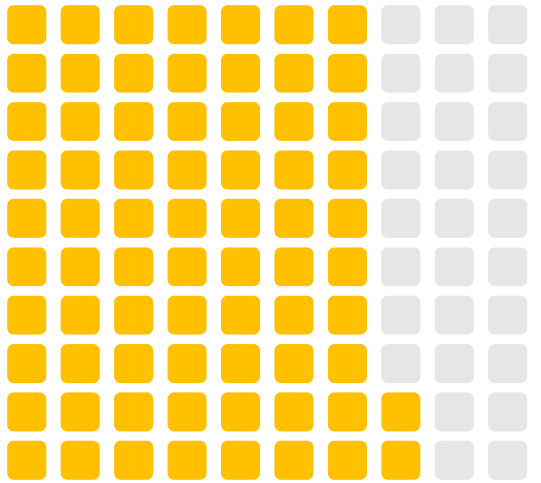
RESULTS OF SITASI2021

Small Scale Food Producer

Threshold

For measuring small-scall food producer





Small-Scale Food Producer

In Indonesia in 2021:

72,19%

RESULT OF SITASI2021

SDGs Indicator 5.a.1

5.a.1 (a):
Men

52,09%

5.a.1 (a):
Women

13,61%

5.a.1 (b):

19,65%

The results of SITASI 2021 indicate that there is still a huge gap in secure agriculture land ownership between men and women

INTEGRATED AND SUSTAINABLE DATA COLLECTION

Census and AGRISurvey

2020
Pilot Survey of SITASI

- *Jawa Barat*
- *Jawa Timur*
- *Nusa Tenggara Barat*

2021
SITASI 2021
All provinces in Indonesia

***Releases in** Dec 2022*

2022
***SITASI** was postponed*

2023
Agricultural Census

2024
SITASI** as a part of **advanced Agricultural Census:

- ***Agricultural Economic Survey***
- ***Production Method and Environment Survey***

2025 - 2032
AGRIS/SITASI implementation until the next Agricultural Census

2033
Agricultural census

- **Agricultural census** as a frame for agricultural survey
- **Agricultural census and SITASI** will fulfill agricultural data needs in terms of::
  1. *Minimum Set of Core Data (Global Strategy)*
  2. Fulfill data needs for government policy planning in agricultural development and research purposes.
  3. **Helping to monitor the Agricultural SDGs** by providing the maximum possible data that has not been able to be provided by BPS and Ministries/Institutions.

THANK YOU

TERIMA KASIH