



Food and Agriculture Organization
of the United Nations

MASTER SAMPLING FRAME (MSF) FOR AGRICULTURAL STATISTICS

Module 1 - Session 2:

- What is the Agricultural Integrated Survey (AGRIS)?
- How does an MSF fit in AGRIS or integrated survey programs?

Objectives of the presentation

- Introduce the concept and methodology of the Agricultural Integrated Survey (AGRIS)
- Inform the audience about the benefits of implementing an AGRIS
- Inform the audience about the connection between an AGRIS and an Agricultural Census
- Inform the audience about the relationship between an AGRIS and an MSF

Outline

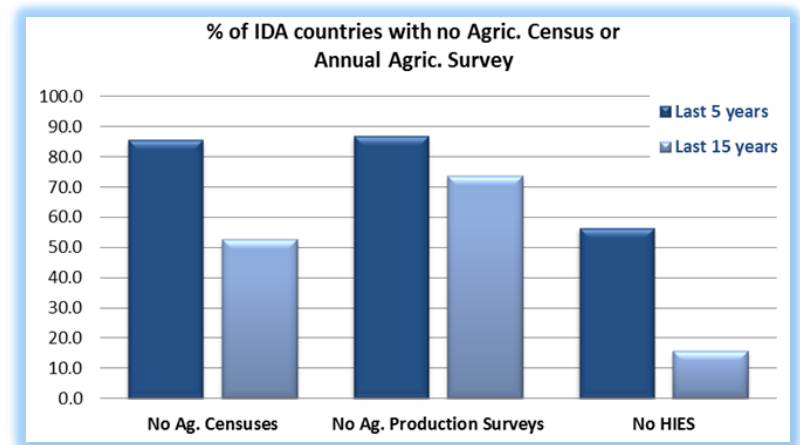
- Rationale
- AGRIS Methodology
 - Connection between AGRIS and Agricultural Census
 - What is AGRIS?
 - Modules (data coverage)
- Implementation
- Relationships between an AGRIS and an MSF



Rationale

Rationale : Few Observations

- Recognition for the need for more, better, cheaper and faster statistical data in the agricultural and rural sector
- An absence of quality data collection, whether censuses or surveys:
 - Consequence of critical gaps on data production in many countries, despite some progress on accessing existing information



Rationale : Strategy and action plan

- The Global Strategy (GS) was instructed to address concerns related to:
 - Poor data availability or quality
 - Lack of capacity in developing countries
- The GS, in compliance with its action plan, should:
 - Provide a conceptual and institutional framework for the production of data
 - Establish a Minimum Set of Core Data (MSCD)
 - Develop cost-effective methodologies for data production and use (such as AGRIS)
 - Establish the necessary governance structures and capacities

Rationale: Framework and contribution of AGRIS

- The AGRIS methodology is being developed by FAO in the context of the Global Strategy to improve Agricultural and Rural Statistics
- AGRIS is synchronized with the Agricultural Census and operates over a 10-year cycle
- Contribution of AGRIS:
 - Decrease the burden of conducting censuses:
 - Thematic data collections are scheduled in-between two census
 - Allow a more regular flow of data:
 - This would be more in line with the limited capacities currently in place for the production and use of statistics.



AGRIS Methodology

- Connection between AGRIS and Agricultural Census
- What is AGRIS?

Connection between AGRIS and Agricultural Census

- WCA 2010: Emphasis has been given to developing the agricultural census within the overall framework of the system of integrated agricultural censuses and surveys
- WCA 2020: A new integrated census/survey modality of conducting the census of agriculture is introduced and aims to re-enforce the integration of the census of agriculture in a multi-year census/survey programme using the Agricultural Integrated Survey (AGRIS) concept

What is AGRIS?

Components of AGRIS

- AGRIS consists of:
 - A core section: 'core module'
 - Enhanced production survey
 - Crop production and livestock production
 - Four rotating modules:
 - "Economy", "Labour force", "Machinery and equipment", and "Production methods and environment"
 - In the process of implementation, modules are scheduled according to data demand priorities
 - Additional modules can be added as needed.

What is AGRIS?

Modules and proposal planning for implementation

- A farm-based modular multi-year survey program

Proposal planning for AGRIS modules

		Years	0	1	2	3	4	5	6	7	8	9	10
Agricultural Census (•) and inter-census survey (o)		•						o					•
Core Module	AH Roster		•	•	•	•	•	•	•	•	•	•	
	Crop/Livestock production		•	•	•	•	•	•	•	•	•	•	
	Other key variables		•	•	•	•	•	•	•	•	•	•	
Rot. Module 1	Economy				•		•		•		•		
Rot. Module 2	Labour			•					•				
Rot. Module 3	Machinery, Equipment, Assets and Decisions							•					
Rot. Module 4	Production Methods and Environment					•					•		

- Designed as a cost-effective way for national statistical agencies to accelerate the production of quality disaggregated data on the technical, economic, environmental and social dimensions of agricultural holdings

What is AGRIS:

AGRIS' modules address gender issue in agriculture

- AGRIS collects sex-disaggregated data on key topics:
 - to identify male / female headed holdings
 - to assess women's contribution to agriculture:
 - Labour
 - Access to and control of productive assets, resources and services



AGRIS Methodology

- AGRIS Modules (data coverage)

Core Module

Objectives and implementation

- Objectives

- Monitor key set of indicators on annual basis, in part. related to agricultural productions
- Identify trends and changes in a timely manner and to make some forecasts on future scenarios and farmers' expectations
- measures key social, economic and technical dimensions of the holding

- Implementation

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

Core module – Data coverage

1. Identification and general characteristics of the holding

Location, holder, manager, respondent, main activity, main destination

2. Agricultural productions

Crops: last 12 months

Crops: next 12 months

Livestock

Meat, milk, eggs and other animal productions

Aquaculture and fisheries

3. Economy

Income

Expenditures

Credits and access to finance

Access to information

4. Production shocks and coping mechanisms

5. Demographics [HS-AH only]

6. Labour

Labour input on the holding

7. Holding housing dwelling and assets [HS-AH only]

Rotating module: Economy Objectives and implementation

- Objectives

- Monitor farm budget ; both 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 the national level
- Fielded every other year
- Holding from the non-household sector: 1 wave of data collection
- Holding from the household (HH) sector:
 - o Option A: 1 visit = 1 wave of data collection
 - o Option B: multiple waves of data collection (3 or 4)

Rotating module: Economy

Multiple waves option

Visit	Data collection	Reference period
1st visit (long), month M After agricultural campaign (after harvesting)	Core module	Last agricultural campaign
	Part of eco module	Current situation referring to the previous campaign
	Diary left and explained	Next 4 months
2nd visit (short), month M+4	Diary checking	Last 4 months
	Diary left and explained	Next 4 months
3rd visit (short), month M+8	Diary checking	Last 4 months
	Diary left and explained	Next 4 months
4th visit (long), month M+12	Core module	Last agricultural campaign
	Part of eco module data	Last agricultural campaign - update
	Diaries checking - totals	Last agricultural campaign (last 12 months)

Rotating module: Economy

Data coverage

1. Main characteristics of the holding

Identification, land ownership and use, livestock ownership

2. Income from agricultural production

Quantity produced, by commodity (from Core)

Quantity sold, by commodity

Total value of sales or average **price received**, by commodity

3. Other sources of income of the holding

Aquaculture and fisheries (sales)

Forestry products (own-use and sales)

On-farm processing of agricultural commodities (total quantities produced, sold and expenses)

Energy/electricity generation (amount produced, sold and value)

Diversification activities (income and expenses)

Other sources of income related to agriculture (income)

4. Subsidies and transfers related to agricultural production

Direct and indirect subsidies; transfers

5. Other sources of income of household members

Salaries, rentals (other than renting of ag land of the holding), investments, etc.

Rotating module : Economy

Data coverage (2)

6. Inputs and production costs

For crop production

For livestock production

Labour (total salaries/wages in cash or in-kind)

7. Taxes and licenses related to the holding

Taxes paid (value) - land, property, etc.

Licenses (value) - water, access rights, etc.

8. Investments and financing

Purchase of capital/fixed assets (value)

Loans (provider, type, value and use on the holding)

9. Insurance schemes

Type, coverage, premium values and repayments

10. Storage facilities

By type and commodity

11. Marketing

% produce sold, market type and characteristics

Rotating module: Labour

Objectives and implementation

- **Labour Rotating Module**

- Measure volume of labour input of HH members and external workers
- Understand the organization of labour in the holdings (who does what?)
- Payments and payments modalities
- Additional labour costs

Data disaggregated by categories of external workers, sex and age

- **Labour questions in the core module**

- Measure volume of labour input of HH members and external workers

Data disaggregated by categories of external workers. Not by sex, age, etc.

Rotating module: Labour

Objectives and implementation

- **Sub-sample of the core** module, results representative at national level
- Implemented **2 times in the AGRIS calendar**
- **2-visit approach is recommended**
 - More costly, but ensure better quality data
 - 1st visit in combination with the core module, 2nd visit as stand alone
- If unfeasible, a simplification of the questionnaire is needed to account for a much longer recall period.
- **Eligible respondents:**
 - holder/s or most informed person for the section on external workers
 - household members for the section on household members' work

Rotating module: Labour Data coverage

A. OVERVIEW OF THE HOLDING'S ACTIVITIES AND LABOUR FORCE

Activities carried out over the reference period, by month

Types of workers involved in each activity

Identification of peak / low months

Need for more workers; main reasons; consequences of labor shortage on farming activities

B. HOUSEHOLD MEMBERS: TIME WORKED AND MAIN ACTIVITIES (*)

Time spent on agricultural activities of the holding; main tasks

Time spent on other non agricultural activities related to the holding

C. HOUSEHOLD MEMBERS: PAYMENTS AND BENEFITS FOR THE WORK ON THE HOLDING (*)

Payments received for the work on the holding

Payment modality

Last payment (in cash, kind)

Benefits (contribution for pension scheme, health insurance received) and their total value

(*) only for household sector holdings

Rotating module: Labour

Data coverage (2)

D. EXTERNAL WORKERS: DEMOGRAPHIC CHARACTERISTICS

Number of external workers, by type of external workers (*), by sex and by adult/children

Number of permanent workers, by sex and by age group

Number of casual workers, by provenience

E. EXTERNAL WORKERS: TIME WORKED AND MAIN ACTIVITIES

Time worked by month, by type of external workers, by sex and by adult/children

Number of external workers mainly employed in agriculture/other economic activities, by type of external workers, by sex and by adult/children

Number of workers, by group of occupations (ISCO), by type of external workers and by sex (**)

E. EXTERNAL WORKERS: PAYMENTS AND BENEFITS

Main payment modality; average rate by worker category

Benefits (contribution for pension scheme, health insurance received) and their total value

F. CONTRACTORS

Use of contractors and corresponding activities contracted out

Total value of payments made to contractors (and last payment made)

(*) permanent, temporary, casual, unpaid

(**) only for non household sector holdings

Rotating module : Machinery and Equipment, Assets and Decisions

Objectives, Implementation and Data coverage

- **Objectives**
 - Collect structural information on holdings and responsibilities within the holding
- **Implementation**
 - Sub-sample of the core module, results at national level
 - Fielded once over the AGRIS cycle, 1 wave of data collection

1. Machinery and Equipment

(types & quantities in use, access & ownership)

- Manually operated equipment
- Animal powered equipment
- Machines for general farm use
- Specialized agriculture machinery and equipment

2. Type of non-residential buildings

3. Assets [HS-AH only]

- Land, livestock owner, operator
- Household dwellings
- Drinking water
- Household assets

4. Distribution of managerial decisions in the holding [HS-AH]

Rotating module: Production Methods and Environment

Objectives and Implementation

- Objectives

- Collect data needed to assess the impact of agricultural activities on the environmental, social and economic sustainability of farming, GHG emissions, etc.
- Enable an analysis of the costs of production for different types of agricultural production methods (linking with eco)

- Implementation

- Sub-sample of the core module, results at national level
- Fielded twice over the AGRIS cycle
- One wave of data collection
- Collects mainly categorical variables

Rotating module: Production Methods and Environment Data Coverage

1. Use of Natural Resources

Land use

Energy sources

Soil management

Irrigation and drainage

2. Crops production systems and resources

Fertilizers

Plant protection products

Crops and seeds varieties and resources

Rice cultivation, specificities

3. Livestock production systems and resources

Livestock types and resources

Animal breeding and reproduction

Animal housing, manure management, equipment and transportation of animals

Veterinary products and use of traditional medical methods

Feed and use of pastures

Rotating module: Production Methods and Environment

Data Coverage (2)

4. Organic farming (certified or in conversion to organic)

5. Agro forestry

6. Access to and use of services, infrastructure and natural resources

Agricultural extension services (incl. veterinary)

Infrastructure (incl. IT, communications, access to market)

Access to natural and common property resources

7. Greenhouse gas and environment

8. Adaptation to climate change and mitigation strategies

9. Waste Management



AGRIS Implementation

Implementation: national priorities and capacity-building

- AGRIS is designed as a national survey program, implemented by national agencies under an official mandate to produce statistical data
- Alignment with national priorities is an overarching principle of AGRIS' implementation
- Some countries had already identified the design and implementation of AGRIS as a priority

Implementation: national priorities and capacity-building

- Interested countries are encouraged to:
 - Use the resources available in the AGRIS Toolkit (it is not prescriptive)
 - Customize the AGRIS toolkit to their specific needs
- AGRIS toolkit:
 - Methodological resources, guidelines:
 - Planning and design
 - Data collection tools
 - Guideline for data dissemination
 - AND Software/Code:
 - Processing, Analysis, Archiving
- Data access: in-line with national policies and central catalog with FAO

Implementation: International coordination

- AGRIS will be implemented within the framework of the Global Rural and Agricultural Integrated Surveys (GRAInS) Partnership.
- GRAInS is a joint initiative of several key international agencies – including FAO and the World Bank – which are involved in the funding or methodological design of agricultural and rural surveys.

Implementation: International coordination

- GRAInS will have its specific governance and will be served by a light Secretariat.
- The longer-term vision: GRAInS has to be formally established as a separate institutional entity and for a common financing instrument (e.g. a multidonor fund) to be created.
 - This will enable the pooling of resources and thus attain a truly joint programme.

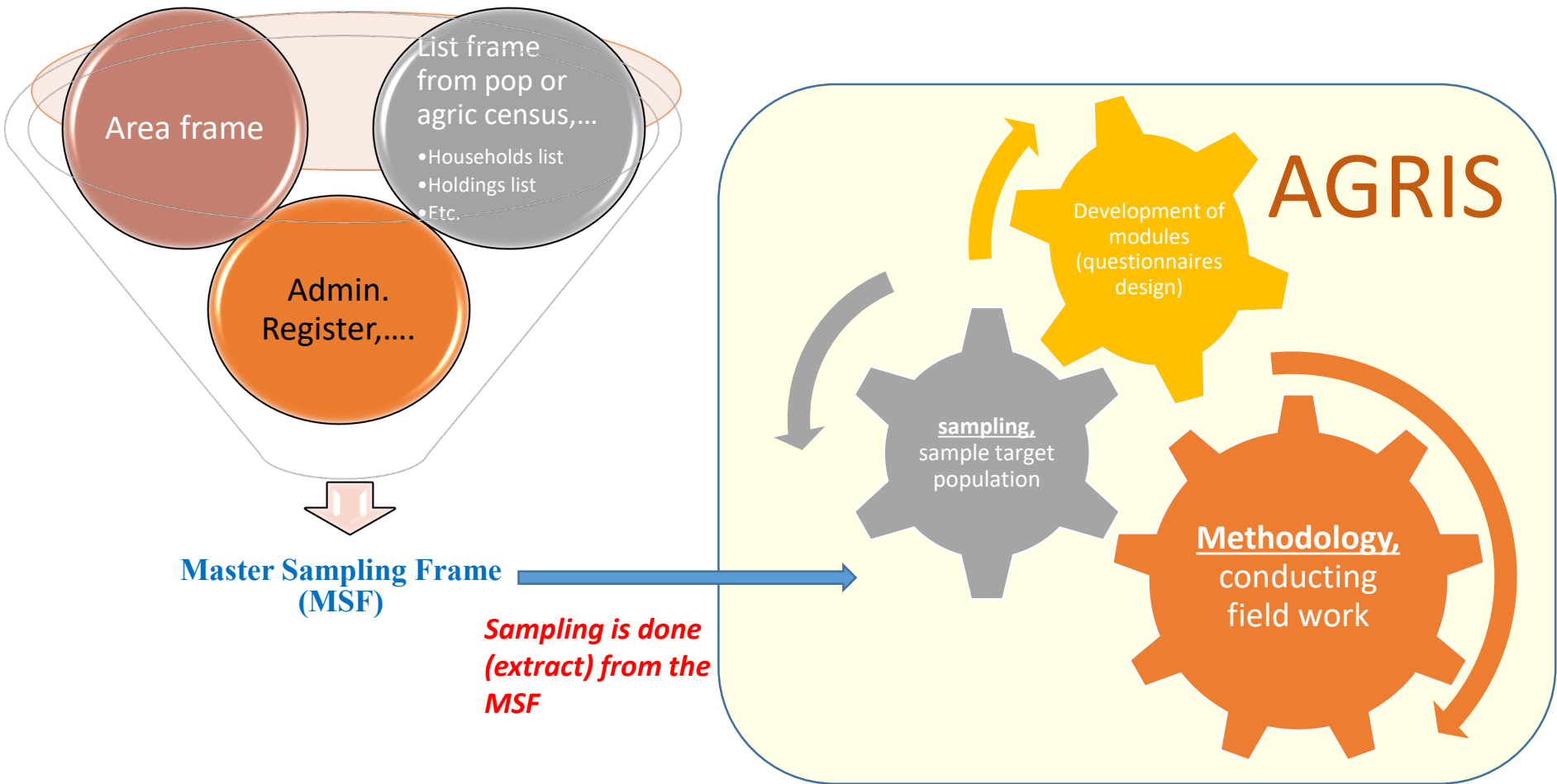


How can an MSF support the implementation of an integrated survey program such as AGRIS?

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- In compliance with AGRIS objective, the establishment of an MSF is an important condition for coordinated planning and optimal implementation of the different AGRIS modules.
- A MSF therefore provides a sampling framework to cover all populations targeted by AGRIS Modules.
- MSF could easily allow benchmarking for the different modules of AGRIS and reconciliation of data

How can an MSF support the implementation of an integrated survey program such as AGRIS? (cont'd)



References

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Thank You