Second Regional Training Course on Sampling Methods for Producing Core Data Items for Agricultural and Rural Statistics

Module 1: **Sampling in the Context of the Global Minimum Set of Core Data Items**

Session 1.1: Global Strategy for Agriculture and Rural Statistics

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Statistical Institute for
Asia and the Pacific

IMPROVING AGRICULTURAL STATISTICS
Global Strategy

BPS, Statistics Indonesia

Contents

- Why do we need a global strategy?

- What is the global strategy?

- Conceptual Framework for Agric. Stat

- Key components of the strategy : Three pillars of the global strategy

- The way forward

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Why do we need a Global Strategy?

Three main reasons:

* Basic data requirements are not met, especially in developing countries

* Agricultural statistics <u>not integrated</u> in the National Statistical System

* <u>Emerging data</u> needs (impact of agr. on environment; investment in agr.; biofuels; water and land use, etc.)

Why do we need a Global Strategy?

Basic data requirements not met

* Countries' capacity in agricultural statistics declined since early '80s

* Declining number of countries reporting basic production

* Declining resources allocated to agricultural statistics by countries and development partners (low priority)

Why do we need a Global Strategy?

Agricultural statistics <u>not integrated </u>in the National Statistical System

* Lack of coordination between NSO & Min. of Agriculture
* Duplicative efforts-conflicting numbers
* National Statistical Plan do not cover agricultural stat.

Why do we need a Global Strategy?

<u>Emerging data </u>needs

* Need of a new conceptual framework for assessing
  * impact of agriculture on environment;
  * investment in agricultural biofuels;
  * water and land use, etc.
* *Lack of sound basis for Agri. Development, FS policy formulation, implementation, monitoring and evaluation*

What is the Global Strategy?

* An initiative of the United Nations Statistical Commission

* Partnership between International Agencies, developed and developing countries

* 2 intergovernmental process for its adoption:
  - UNSC and National Statistical Offices
  - FAO Governing Bodies and Ministries of Agriculture

* Basis for a renewed initiative of capacity building in agricultural statistics: mobilization of resources

Global Strategy

* Global Strategy to improve agricultural statistics provides a framework for national and international statistical systems to produce and to apply the basic data and information needed to guide decision making in the twenty-first century.

* The Global Strategy is developed by the FAO thru' consultation with national and international statistical organizations

* Refer: http://www.fao.org/fileadmin/templates/ess/documents/meetings_and_workshops/ICAS5/Ag_Statistics_Strategy_Final.pdf

8

Three Pillars of the Strategy

The strategy is founded on three pillars:

* **First pillar**: determining a minimum set of core data

* **Second pillar**: integrating agricultural statistics into NSS - by implementing a set of methodologies like
    * development of a master sample frame for agriculture,
    * implementation of an integrated survey framework, and
    * making the results available in a data management system – in form of an integrated database.

* **Third pillar**: foundation that will provide the sustainability of the agricultural statistics system through governance and statistical capacity building.

First Pillar

The pillar consists of

* Identifying a Minimum Set of Core Data and Determining National Priorities – the starting pont.

* This core set of data will provide national and international policy makers necessary information.

* The Global Strategy provides a core set to which countries may add items of national interest to the set of core data

* Each country to determine the content of the core set and the frequency of producing different kinds of data.
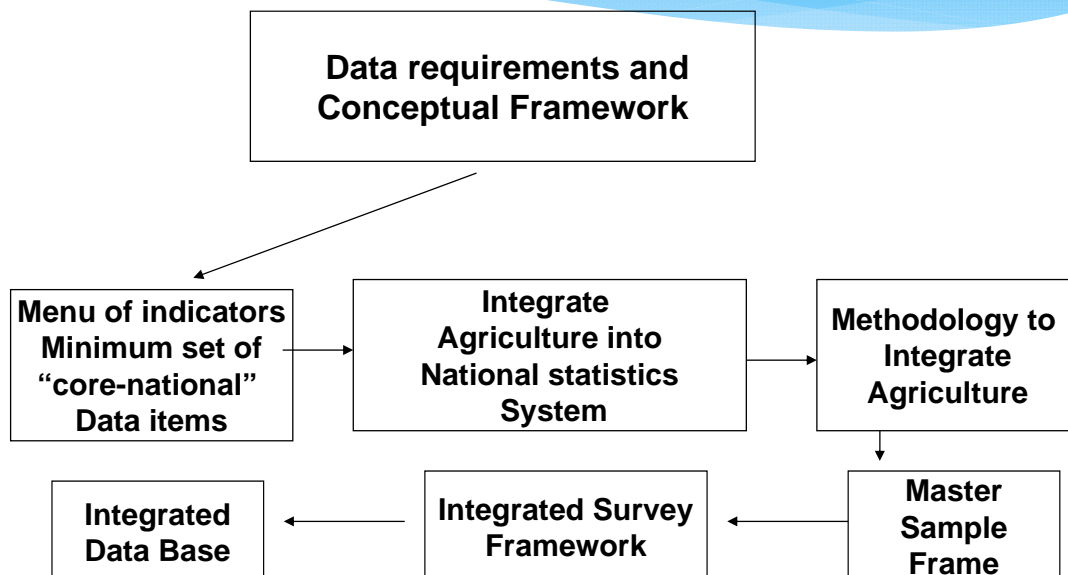
Second Pillar

Integration of Agriculture into National Statistical Systems.

It consists of the following elements:

* Removal of duplication of efforts in producing statistics that is so common in developing countries.
* Achieve the integration based on development of a master frame for agriculture.
* Using the master frame in an integrated survey system, and
* Implementation of a data management system.

The second pillar : Integration into national system

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│  Data requirements and      │
│  Conceptual Framework       │
└─────────────────────────────┘
                │
                ▼
┌──────────────────┐    ┌──────────────────┐    ┌──────────────────┐
│ Menu of indicators│   │    Integrate     │    │  Methodology to  │
│  Minimum set of  │───▶│ Agriculture into │───▶│    Integrate     │
│ "core-national"  │    │National statistics│    │   Agriculture    │
│   Data items     │    │     System       │    │                  │
└──────────────────┘    └──────────────────┘    └──────────────────┘
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│   Integrated     │◀───│ Integrated Survey│◀───│     Master       │
│   Data Base      │    │    Framework     │    │  Sample Frame    │
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Third Pillar

Sustainability of Agricultural Statistics by Governance and Statistical Capacity Building: This consists of

* A conceptual framework for integration of agriculture into national statistical systems

* Requirements for governance to coordinate the efforts of different stakeholders, especially the NSOs and M/o agriculture.

* Inclusion of the fundamentals of the Strategy in the national strategies for the development of statistics.

13

Third Pillar

* Integration of statistical systems to
  * avoid duplications of effort,
  * preventing the release of conflicting statistics, and
  * ensuring the best use of resources.
* Standardizing concepts, definitions, and classifications
* Development of a **master frame** for collection of agricultural statistics.
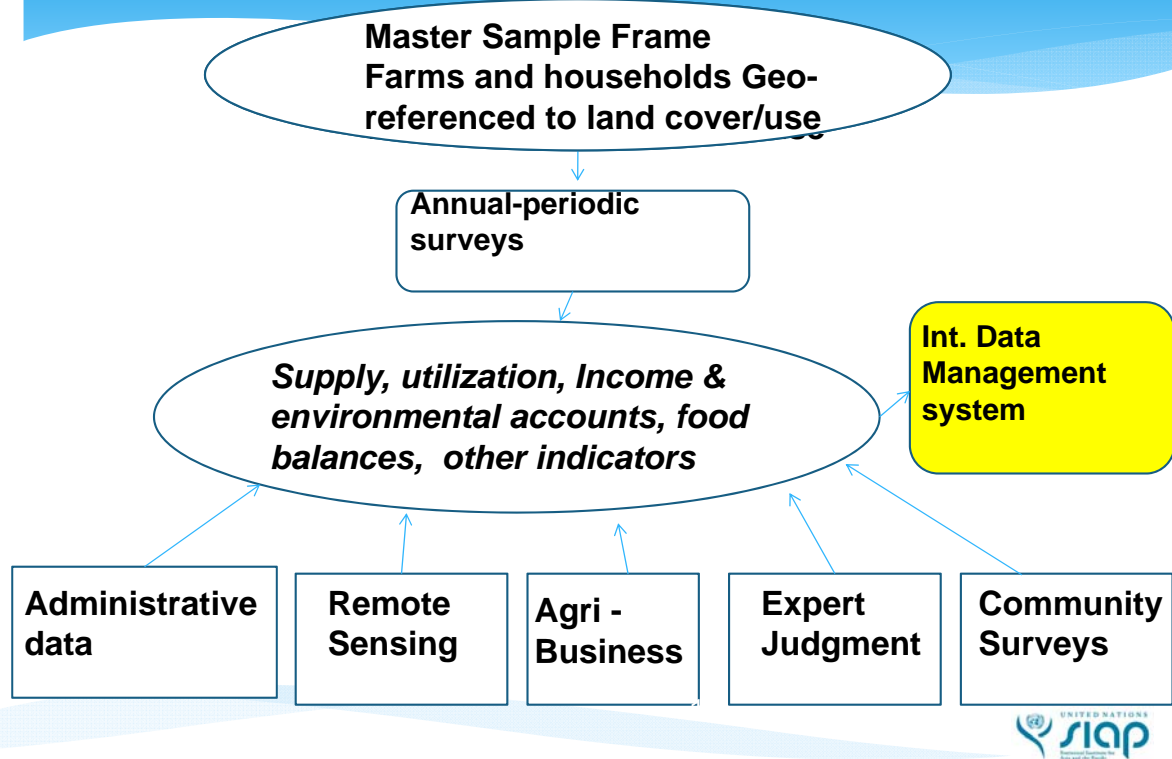
14

The Master Frame (1)

* Developing countries agricultural statistics are usually collected from samples of farms obtained by
  - first selecting enumeration areas,
  - screening them for farms or households, and then
  - selecting a subsample for the surveys.
* Other countries prepare registers of farms for sampling purposes and must devote considerable resources to keep them up-to-date.
* A less used approach: area sample frame - country's land mass divided into sampling units.
* A final approach is to use multiple frames to create a master frame built on the advantages of area frames and registers.

15

Second Pillar

The Master Frame (2)

* The basis for the selection of probability-based samples of farms and households
* Permitting linking the farm and household characteristics and then
* connect both to the land cover and use dimensions.
* linking to land use, obtaining satellite imagery of the country's area (a useful starting point).

16

The second pillar : Integrated Survey Framework

Master Sample Frame
Farms and households Geo-referenced to land cover/use

Annual-periodic surveys

Supply, utilization, Income & environmental accounts, food balances, other indicators

Int. Data Management system

| Administrative data | Remote Sensing | Agri - Business | Expert Judgment | Community Surveys |

Integrated Survey Framework

* The complete survey framework includes
  ➢ sample design,
  ➢ questionnaires,
  ➢ data-collection methods,
  ➢ analysis, and
  ➢ estimation.
* **The timing and frequency of data collection**
* Considering the data sources in addition to sample surveys that provide input into the survey framework.
* The technical and methodological elements made part of the implementation plan.

18

Steps Involved

* Determine the set of core items for which at least annual data are required.

* Select a replicated sample for the annual core items using MPPS.

* Design a survey questionnaire to obtain the annual core data items and frame supplemental questions regarding one of the subject matters described above.

* Each year, one of the sets of panel data will be linked to the annual core items.

19

Thanks

20