Integrating Population and Housing Censuses with Agricultural Censuses

General Context

Global Strategy
IMPROVING AG-STATISTICS

Outline

- International recommendations on linked censuses.
- Why to have an integrated census programme.
- Modalities of linking censuses and the Integrated Statistical System

Current Recommendations

- The attitude towards integration of the two censuses has changed between the current round of censuses and previous rounds.

- Previous rounds did not encourage joint activities for 2 main reasons
  - ✓ Different enumeration units (household for population census and agricultural holding for agricultural census)
  - ✓ Risk of overloading the population census questionnaire

- However, as a result of increasing integration within data collection programmes, countries are increasingly looking for ways to strengthen the relationship between the population and housing census and the agricultural census

Current Recommendations

- *World Programme for the Census of Agriculture 2010,* FAO 2005
- *Conference of European Statisticians Recommendations for the 2010 Censuses of Population and Housing,* UNECE in cooperation with EUROSTAT, 2006
- *Principles and Recommendations for Population and Housing Censuses, Rev 2,* UNSD 2008 (endorsed in 2007)
- *The 2010 Africa Round of Population and Housing Censuses. Draft Implementation Handbook (A Guide for African Countries),* UNECA 2008

FAO recommendations

- Use of common concepts, definitions and classifications
- Sharing field materials
- Using the population and housing census as a household frame for agricultural census
- Making use of exiting agriculture-related data from the population and housing census (limitations)
- Collecting additional agricultural data in the population and housing census
- Linking data from the two censuses conducted separately
- Conducting the two censuses as a joint field operation

UNSD/UNCE Recommendations

- Most relevant for countries with the bulk of agricultural activities in the household sector
- Definitions should be compatible
- Population census data can be used, during preparation of an agricultural census, for
  - ✓ Demarcation of EAs
  - ✓ Preparation of census frame
  - ✓ Sample design, if applicable
- Linking population and agricultural census data
  - ✓ Will add considerable analytical value to data from both censuses
  - ✓ Reduce the size of agricultural census questionnaire

UNSD/UNCE Recommendations

- Collecting additional agricultural data in the population and housing census for preparation of the agricultural census frame in the household sector (censuses should be carried out close together)
  - ✓ Either during pre-census listing exercise, or
  - ✓ By adding additional questions to the main questionnaires
- For the latter case two alternative non-core agricultural topics are proposed:
  - ✓ Own-account agriculture production
  - ✓ Characteristics of agricultural jobs during the last year
- Joint field operation with separate questionnaires also possible

UNECA Recommendations

- Including questions on agriculture in the population census
- Using data from population census as a household frame for the agricultural census
- Carrying out joint data collection
- Shared field materials, equipment and personnel

Agricultural data in past (conventional) population and housing censuses

- Some data related to agriculture are routinely collected in population censuses
- Specifically, for each economically active person:
  - ✓ Main occupation - can be used to identify persons in agricultural occupations
  - ✓ Industry of main occupation - can be used to identify persons in agricultural industries
  - ✓ Employment status in main occupation - can be used to distinguish between farmers and agricultural employees
- A farm household (**which is of interest for agricultural census**) can be identified as the one where at least one member has both:
  i. an agricultural main occupation, and
  ii. employment status "own-account worker"

Agricultural data in past (conventional) population and housing censuses - limitations

- Underestimates the number of farm households
  - ✓ Activity status and occupation data usually collected for a short reference period (current status approach) thus missing seasonality
  - ✓ A household member may have own account secondary (not main) agricultural occupation (more likely in urban areas, but possible in rural areas as well, e.g. fishing being main activity)
- Not broad enough in scope
  - ✓ No auxiliary information for sample design
- Existing data insufficient:
  - ✓ Need for specific consideration of agricultural data and inclusion of limited number of items

Why integration of the two censuses?

- ***Users perspective***
  - ✓ meeting emerging needs for integrated data for policy-making in rural area (broader scope for agricultural statistics)
  - ✓ improving quality of data collected during the censuses
- ***Implementing agency and country perspective***
  - ✓ cost effectiveness
  - ✓ Integrated statistical system

Emerging needs for integrated data (1)

- **New analytical requirements relating to social aspects of agriculture and rural area:**
  - ✓ rural poverty
  - ✓ rural food security and coping strategies
  - ✓ non-farm income in rural area
  - ✓ rural development
  - ✓ rural welfare

Emerging needs for integrated data (2)

- **Food Security**

✓ Can we feed our citizens?
✓ Impact on farmers and agricultural households of the food price spikes

- **Poverty Reduction**

✓ How to improve household income from sales of crops and livestock?
✓ What is the relationship between increased productivity of smallholder farmers and economic growth?
✓ What factors contribute most to growth in rural household income—that from agriculture or non agricultural activities?

- **Gender**

✓ Which agricultural activities involve women?
✓ What is their economic contribution?

Broader scope for agricultural statistics: Global Strategy

- Global Strategy extends to economic, social and environmental dimensions
- Economic: Agricultural production, markets, farm and nonfarm income and survey data
- Social: Reducing risk and vulnerability, food security, gender
- Environmental sustainability, climate change adaptation, biofuels, land cover and land use

Linking agriculture and population censuses – efficient way of obtaining integrated data

- Linking itself provides a wide spectrum of cross-sectoral analysis of agricultural and social issues
- It provides an excellent integrated master sampling frame for further sample surveys
  - ✓ Sample surveys can be designed to obtain integrated cross-sectoral data
  - ✓ Even if the surveys are conducted separately in two sectors, the integrated character of the master sampling frame will enable to link data from different surveys for analysis

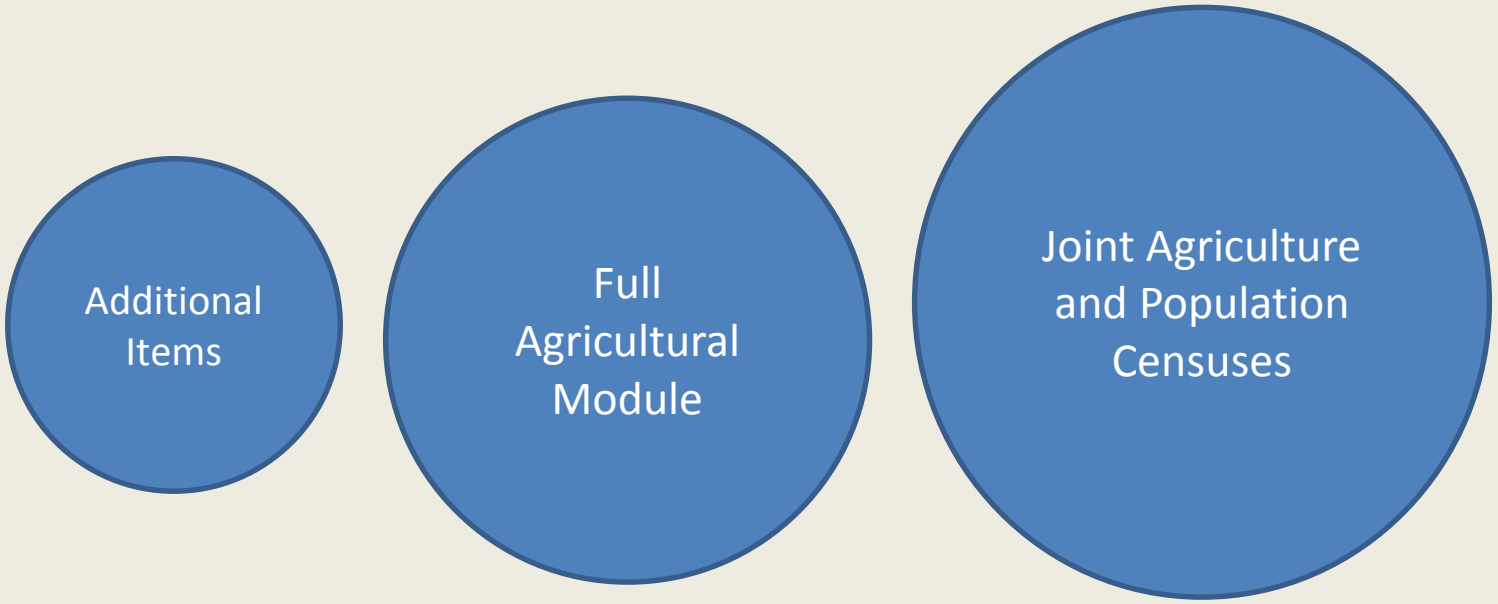
Improved Data Quality

- Up to date sampling frames
  - ✓ For the core agricultural census
  - ✓ For specialized supplementary modules
- Additional information to optimize the sample design
  - ✓ For stratification
  - ✓ Defining optimal sample size
- Better defined agricultural census coverage
  - ✓ When agricultural census is conducted using cut-offs
  - ✓ Provides for planning a survey below cut-offs

Cost effectiveness

- 50 % reduction in some countries
- Coordinated approach rather than two separate collections reduces costs
- Shared infrastructure, logistics, personnel and equipment can be used for both censuses
  - ✓ Particularly census cartography
- Smaller agricultural census possible by including basic agricultural questions in population and housing census
- Common master sample frame
  - ✓ Reduces costs of separate listing to produce frame

Modalities for Linking

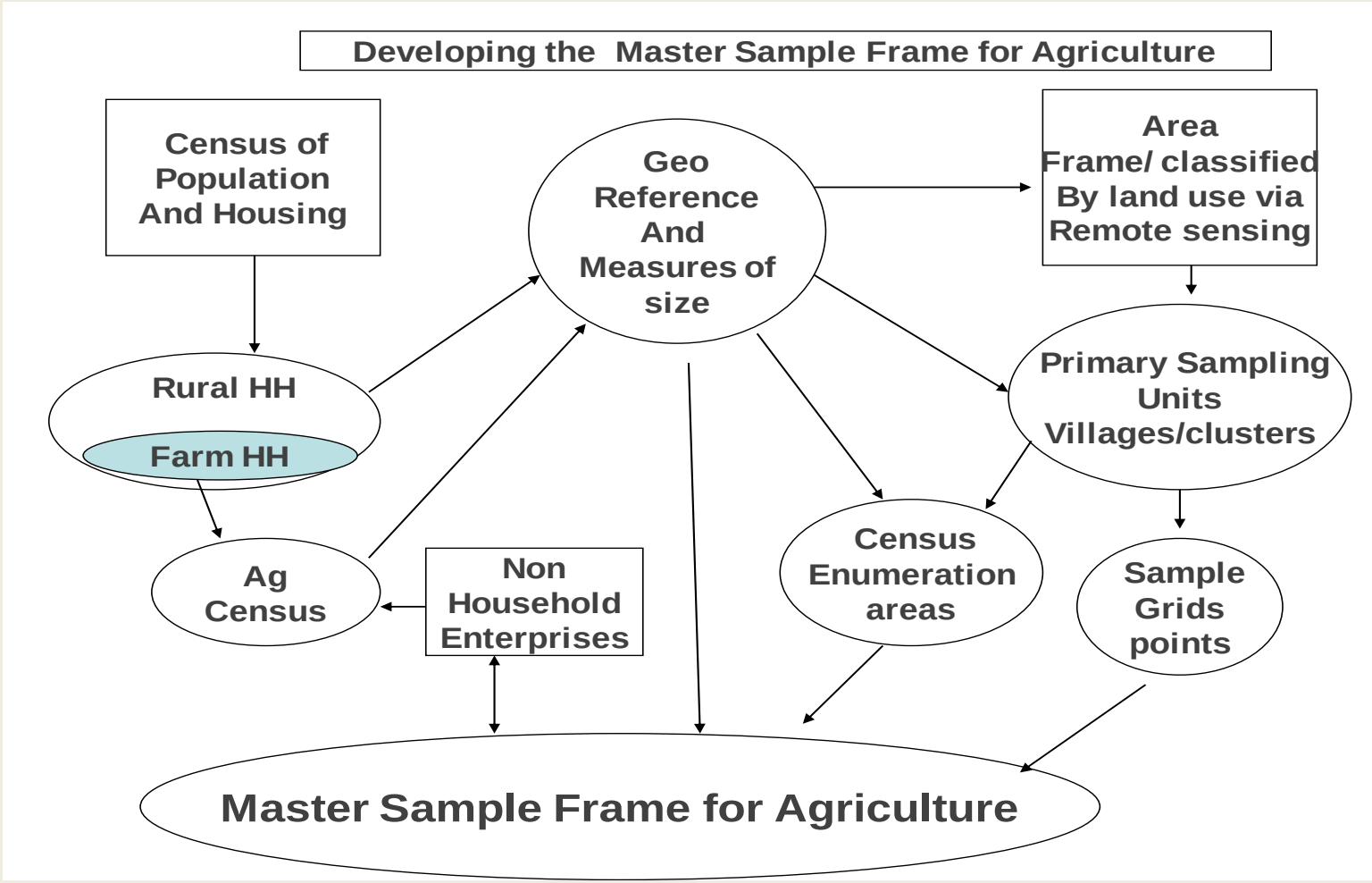


- Choice of modality is part of the programme of data collection in country
- Must be seen in the context of an integrated statistical system

Context of the Integrated Statistical System

- Integrated censuses are part of an integrated statistical system
  - Based on a master sample frame with common samples
- Advantages of integration
  - Avoids duplication of effort
  - Prevents release of conflicting statistics
  - More efficient use of resources

Tools and methodology for integration



Integrated Statistical System
What does it look like?

- Coordinated data collection
  - ✓ Timely, accurate, coherent and comparable data
- Requires coordination among sectoral producers and NSO
- Elements include:
  - ✓ Common concepts, definitions and classification
  - ✓ Coherent results among producers removes duplication of effort
  - ✓ Integrated database – data integrated across various surveys allows cross-tabulations and in depth analysis

NSDS – a tools for development of the Integrated Statistical System

- NSDS develops a framework for Integrated Statistical System
  - ✓ Overall vision for development of NSS
  - ✓ Based on identified statistical needs of policy users. E.g. development of indicators needed to monitor progress of policy implementation
  - ✓ Institutional development – appropriate legal framework
  - ✓ Organizational development including coordinating unit
  - ✓ Human Resource Development – skilled staff
  - ✓ Infrastructure Development
- Includes statistical work programme and planned data collections
- Mobilization of resources within country and externally
- Advocacy for use of statistics in policy making
- Paris21 – capacity development for National Strategy for Development of Statistics

Agriculture in NSDS

- In many countries the first generation NSDS was NSO-centric
- NSDS coverage of agriculture is generally poor - including vital areas such as food security
- Agriculture activities often part of informal economy

  Not well covered by statistics reporting systems

Advantages of Mainstreaming Agriculture into NSDS

Mainstreaming agriculture into NSDS address issues of:

- Statistical legislation not always covering the whole statistical system
- Lack of coordination between NSOs and MoAs or deficient intra-sector coordination
- Not coordinated statistical functions

THANK YOU!

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