



## Global Strategy to Improve Agricultural & Rural Statistics: Minimum Core Data



### The Three Pillars

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1. Establish a *minimum set of core data* that countries will disseminate on a regular basis to meet current and emerging demands
2. *Integrate agriculture into national statistical systems* in order to meet the requirements of policy makers and other data users that statistical information be linked across the economic, social and environmental domains
3. Foster the *sustainability of agricultural statistical systems* through governance and statistical capacity building

# DATA SOURCES: SUMMARY

## Primary Data Sources

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- Censuses
- Sample surveys
- Administrative records
- International & Other Sources

## Censuses: (of agriculture, aquaculture and fisheries)

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Characterized by:

- Wide area coverage
  - full enumeration or very large sample.
- Results for smaller areas than sample surveys
- Narrow subject matter scope
  - mainly structural variables
- Done infrequently
  - because of high cost and intended use

## Census Uses

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- Small area statistics not available from surveys, e.g. data on land use, livestock & forest inventory
- Update benchmarks every 10 years or so
- Frame data needed for designing inter-census sample surveys
  - small area data not available from publications
- International obligation

# Sample Surveys

Characterized by:

- Wide scope (thick questionnaire) , includes temporal variables such as areas planted, production, prices, livestock numbers.
- Provide time series , e.g quarterly, annually; but ...
- Not intended to provide reliable estimates for small areas
- Complex sample survey design, which requires advanced technical human resources.

# Community ‘Censuses’

- These involve full coverage of local government units (LGUs)
  - respondents are key informants, e.g. LGU chief
  - Rule of thumb: do not ask same question asked from household (census)
- Full coverage administrative reporting systems (ARS) may be considered community censuses
  - but these often violate above rule of thumb vis-à-vis other censuses and surveys, resulting in duplicative and conflicting statistics.

# Administrative Records: GOs (national & LGUs), NGOs

Use sometimes constrained by:

- (Non)**comparability** -- different LGUs-different methods.
- In**completeness** -- some do not report, or not on time.
- (Non)**sustainability** -- LGU leadership change, funding stopped
- **Accessibility** -- processing behind data volume growth; different data management methods.
- Suspected **bias** -- same agency doing project implementation and data collection, report subject to LGU review.
- Limited **scope** -- e.g. to agency's mandate
- No **measure** of measurement **errors**.

On the other hand, these data are cheaper, relevance to agency needs is assured.

## International and other sources

Main sources of -- other countries' data, data compiled externally, data not collected/compiled by individual countries

- FAO, USDA, UN databases, country databases, e.g. CountryStat.
- Remotely sensed data & maps, e.g. Google, NOAA, MODIS, SAR.
- Internet & media; e.g. Bloomberg, Reuters

# 1. Minimum Set of Core Data

- Not possible to meet every data requirement every year
  - e.g., FAO database includes over 150 crop items
- Global Strategy defines a minimum set
  - 15 commodities – 95% of world production
    - Wheat, maize, barley, sorghum, rice, sugar cane, soybeans, cotton
    - Cattle, sheep, pigs, goats and poultry
    - Core aquaculture and fisheries commodity (country specific)
  - Key economic, environmental, social indicators

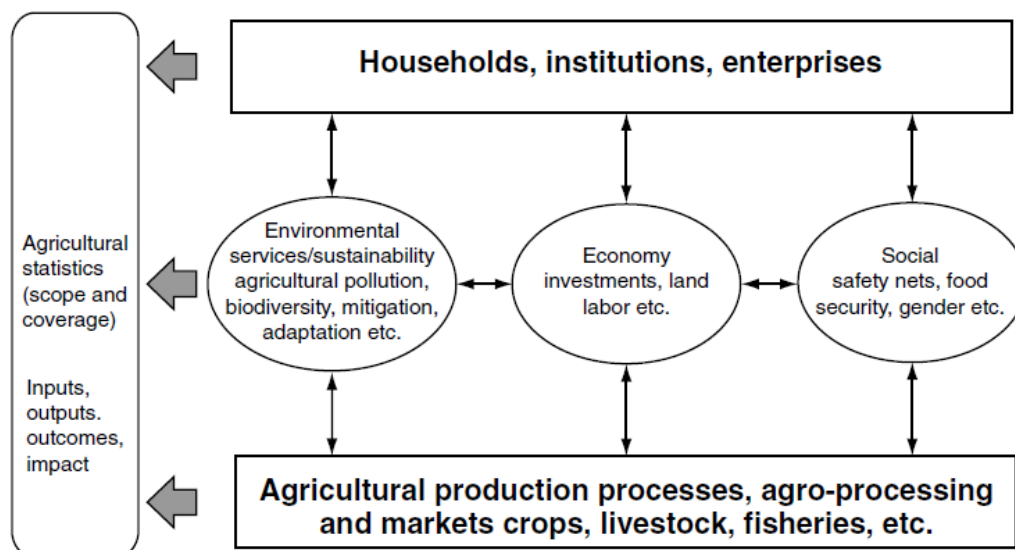
## Core Data items are...

- Selected on the basis of their importance to agricultural production globally
- Contribute to many indicators needed to monitor and evaluate development policies, food security and progress towards meeting MDGs
- Provide inputs to the national accounts and global balances of supply and demand for food and other agricultural products
- Crops which
  - account for a major proportion of land use
  - contribute significantly to farm and rural household well-being
  - Have an effect on the environment and climate

# Core Data Items ...

- *A starting point for building agricultural statistics systems*
- *Countries can delete items not relevant to the country and add other items which are important to the country*

**FIGURE 2:** The conceptual framework for agricultural statistics



## Minimum Core Data: Economic

Group	Key Indicators	Core data items
<b>Economic</b>		
Output	Yield / Productivity	Yield (MT/hectare) of paddy, corn, cereals, potato, cassava, sugarcane, peanut, soybean and other main perennial crops
Trade	Exports in quantity and value	Exports volume and value of rice, coffee, rubber, cashew, tea, seafood and other fishery and forestry products
	Imports in quantity and value	Import volume and value of cotton, dairy products, meat and meat products

## Minimum Core Data: Economic

Group	Key Indicators	Core data items
<b>Economic</b>		
Stock of Resources	Land cover and use	Annual crop land, perennial crop land, forest land, water surface for aquaculture, land for sea salt production
	Economically active population	Number of people involved in farming/agriculture production, fishery, forestry and sea salt production
	Livestock	Number of live buffaloes, cattle, goats, sheep, pig, chicken, ducks, geese
	Machinery	Quantity (unit) and capacity of tractors, ploughs, sowing machines, harvesters, milling machine, dryers, generator, motorized boats and ships for aquaculture



## Minimum Core Data: Economic

Group	Key Indicators	Core data items
<b>Economic</b>		
Inputs	Water	Quantity of water withdrawn for agricultural irrigation; number of pump stations in the commune; length of irrigation channels under commune or cooperative management
	Fertilizers in quantity and value	Source, kind and quantity of fertilizer used for main crops
	Pesticides in quantity and value	Source, kind and quantity of pesticides (e.g. fungicides herbicides, insecticides, disinfectants) by core crops

## Minimum Core Data: Economic

Group	Key Indicators	Core data items
<b>Economic</b>		
Inputs	Seeds in quantity and value	Value and volume of seeds bought by household for production of rice, vegetables and other perennial crops
	Feed in quantity and value	Value and volume of feeds used for livestock production
Agro Processing	Volume of core crops/livestock/fishery	Volume of processed meat, dairy, dry pig skin, seasoning, spices and other used in processing food products used as ingredients
	Value of output of processed food	Revenue received from processing (salting, refrigerating, drying)
Prices	Producer prices	Producer prices and indexes of agriculture (i.e rice, corn, potato, cashew), forestry and fishery products
	Consumer prices	Consumer prices and indexes of agriculture (i.e rice, soybean, peanut), forestry and fishery products

## Minimum Core Data: Economic

Group	Key Indicators	Core data items
<b>Economic</b>		
Output	Production	Production (MT) of paddy, corn, cereals, potato, cassava, sugarcane, peanut, soybean and other main perennial crops
		Production of meat and meat products; dairy and poultry products
Production of wood and timber		
Production of main fishery and aquaculture products		
	Area harvested and planted	Cultivated and harvested areas (hectares) of paddy, corn, cereals, potato, cassava, sugarcane, peanut, soybean and other main perennial crops; area of concentrated forest

## Minimum Core Data: Economic

Group	Key Indicators	Core data items
<b>Economic</b>		
Final Expenditure	Government expenditure on agriculture and rural development	Public investments, subsidies
	Private Investments	Investment in machinery, in research and development, in infrastructure
	Household consumption	Consumption of rice, corn, peanut, tea, fish and other fishery and aquaculture products
Rural Infrastructure (Capital Stock)	Irrigation/roads/communications	Area equipped for Irrigation / Roads in Km / number of communes with telephone lines connected, with local radio systems

## Minimum Core Data: Social

Group	Key Indicators	Core data items
<b>Social</b>		
Demographics of urban and rural population	Sex	Number of female and male household member
	Age in completed years	by sex
	Country of birth	by sex
	Highest level of education completed	Educational, professional level of each household member
	Labor status	Employed, unemployed, inactive by sex
	Status in employment	Self Employment and employee by sex
	Economic sector in employment	Number of employed household member (agriculture and non-agriculture)
	Stability of employment	Steadily employed , contractual, seasonal
	Total income of the household	Monthly average income of each economically active household member

## Minimum Core Data: Social/Environmental

Group	Key Indicators	Core data items
<b>Social</b>		
Demographics of urban and rural population	Household composition	by sex
	Number of family/hired workers on the holding	by sex
	House condition	Type of building, character, main material, etc.
<b>Environmental</b>		
Land	Soil degradation	Variables will be based on above core items on land cover and use, water use, and other inputs to production.
Water	Pollution due to agriculture	Causes of pollution

## Minimum Core Data: Geographic

Group	Key Indicators	Core data items
<b>Geographic Location</b>		
GIS coordinates	location of the statistical unit	Province, districts and communes
Degree of urbanization	Urban/Rural area	

### Assessing Data Sources: ARS vs CSS

- **CURRENT SOURCE**
- **STRENGTHS & WEAKNESSES**
- **RECOMMENDATIONS FOR IMPROVEMENT**