Global Strategy
IMPROVING AG-STATISTICS
ASIA PACIFIC REGION

An Overview of Agricultural Statistics and Emerging Issues and Challenges

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Overview

- What is Agriculture?
- Why is it different?
- Emerging Issues
- Challenges
- Consequences of current situation
- Example of derivation of important statistics
- What next?

What is Agriculture?

- Interpretations using ISIC (Rev 4)
  - Groups 011 to 015, comprising the two basic activities of production of crop products and production of animal products
  - Division 01 which also includes service activities incidental to agriculture, as well as hunting, trapping and related activities
  - Section A which also includes forestry and logging as well as fishing and aquaculture
- Relevant ISIC categories
  - A - Agriculture, forestry and fishing
    - 01 - Crop and animal production, hunting and related service activities
    - 02 - Forestry and logging
    - 03 - Fishing and aquaculture

What is Agriculture? ctd

- ISIC, which was developed to help measure economic activity accurately, is a good starting point
- But an ISIC code is essentially allocated to economic units, what about subsistence households?
- Should we measure production from subsistence households?
  - From an overall economic point of view they are not always important as they generally only represent a small proportion of total production
  - From a humanitarian point of view these are the types of households which make up most of the 'poor'
- Thus, agriculture should be broadened to include all households engaged in agricultural activities

What is Agriculture? ctd

- The first MDG is to “Eradicate extreme poverty and hunger”
- Elements related to this include
  - Reducing hunger
  - Reducing food insecurity
  - Reducing malnutrition
  - Reducing rural poverty
- Most rural communities consist of agricultural households, or those reliant on agriculture for a living
- So Agriculture statistics should also include information about these rural communities
  - Thus the scope of the Global Strategy has been broadened to include Agricultural and Rural Statistics
  - Issues relating to the environment and social conditions need to be covered as both have strong linkages with agriculture
  - More information on the types of statistics required is provided in the next session

Why is Agriculture different?

- In most developing countries
  - Agriculture is still a large proportion of GDP
  - There are large numbers of households involved in agricultural activities
  - A very large proportion of the rural population is involved in agriculture or dependent on it for their livelihood
  - Agricultural production is unpredictable because of its heavy reliance on weather, particularly rain
  - Food shortages may lead to political unrest
- This makes agriculture different from all other economic sectors

Emerging and Important Issues

- Undernourishment
  - In 2010-12 there were 563 million people in Asia suffering from undernourishment
  - Equates to 14% of the population (MDG target is 11.6% by 2015)
- Food price stability
  - The food price spike in mid-2008, and its devastating impact on the poor, amplified the need to reinvest in agriculture in developing countries
- Poverty Reduction
  - 2.5 billion people depend directly on agriculture
  - 1.5 billion live in small farm households (of which 85% <2ha)
  - 75% of poor are rural and the majority will be rural to about 2040
- Environmental sustainability
  - Agriculture uses 70-75% of fresh water resources
  - Agriculture uses 40% of land area
  - Agriculture generates 25-30% of greenhouse gas emissions

Challenges

- Quality and availability of agriculture data
  - Results are not timely
    - Lack of timeliness of production data was a contributor to food price crisis
  - Data for key commodities like maize and cattle have high levels of imputation
    - Weakens food security, food balance sheets and other measures that rely on production data
  - Data sets are production oriented
    - No data on numbers of farms, agricultural households, rural households, and their characteristics
    - No capability to link the welfare of rural and agricultural households with agricultural production, and land use
- Integration of data
  - Help reduce duplication and waste of resources
  - Lead to more coherent data

Consequences of current situation

- **Without basic production data**, fundamental policy decisions are compromised
  - Food Security - can we feed our citizens?
  - How could food price crises be avoided?
  - Trade policy - what positions should be taken on imports/exports?
  - What policies lead to improved income from sales of crop and livestock?
  - Did farmers and agricultural households benefit from the food price spikes?
  - Are policies to increase agricultural productivity effective?
  - Do policies to protect the environment affect agricultural productivity?

Consequences of current situation

- **Without connecting economic, social and environmental domains**, emerging policy decisions cannot be effective
  - How does growth in agricultural output affect poverty?
  - What factors contribute most to growth in rural household income—that from agriculture or non agricultural activities?
    - What is the distribution of economic activity by gender?
  - How do policies to increase crop and livestock production affect
    - The environment through deforestation, changes in water use and quality
    - Food security and poverty when products are diverted to Bio Fuels
  - What is the impact of deforestation on rural and agricultural household income?
  - How to absorb rural households into the economy as farms

Example - Undernourishment

- One of the MDGs is to reduce the prevalence of undernourishment by half by 2015.
- Statistics are needed to monitor this measure
  - But measuring the number of undernourished people is a very complicated process, involving a large amount of statistical data
  - the following slides illustrate this complexity

Food Balance Sheets

- Food balance sheets (FBS) allow the calculation of food available for human consumption as well as selected nutrient equivalents on a per capita basis – this provides key data for estimating undernourishment
- FBS employ a supply use analysis framework, so **for each country and each food item** (commodity or processed item):
- Food available for human consumption = (production + imports + opening stocks) minus (exports + re-exports + usage as inputs for processed food + seed + feed + non-food usage + wastage + closing stocks)
- This then needs to be converted to nutrition availability through nutrient levels of food
- Already you can see that this involves a huge amount of data

Nutrient consumption

- The FBS give for each country a mean per capita nutrition intake
- The next step is to use a Household Consumption survey to estimate the distribution of consumption across the population.
  - Using this distribution, the proportion of the population below a certain level (minimum dietary energy requirement) can be calculated
  - This is the measure of the proportion of the population which is undernourished.
- You can see that this requires a vast amount of data and missing data or poor quality data in any of the components can have an impact on the final figure

What next?

- The Global Strategy is an attempt to address a number of these issues of quality and availability