Conceptual Framework for the Collection of Agricultural and Rural Statistics

Fourth RAP Regional Workshop on Building Training Resources for Improving Agricultural and Rural Statistics: Survey Methods for Agricultural Statistics- Current Practices and International Recommendations

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Content

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- Data Sources and Constituents of Agricultural Statistics
- Conceptual Framework
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Agriculture

A broad definition:

Rearing (growing, taking care and helping propagation) of *domesticated plants and animals*.

Includes:

- Cultivation (of crops, plantation, orchards & cultivated forest)

- Animal husbandry

- Fishery

Agriculture – Standard Definition

- By activity: **ISIC** *Rev. 4* [*p*. 59]: *Section A*
    - Group 011: cultivation of crops, market gardening, and horticulture.
    - Group 012: "farming of animals," and
    - Group 013: mixed cultivation & animal farming

    This a narrow definition by 'activity'.

- By commodity: CPC

By activity: **broad definition** also includes:
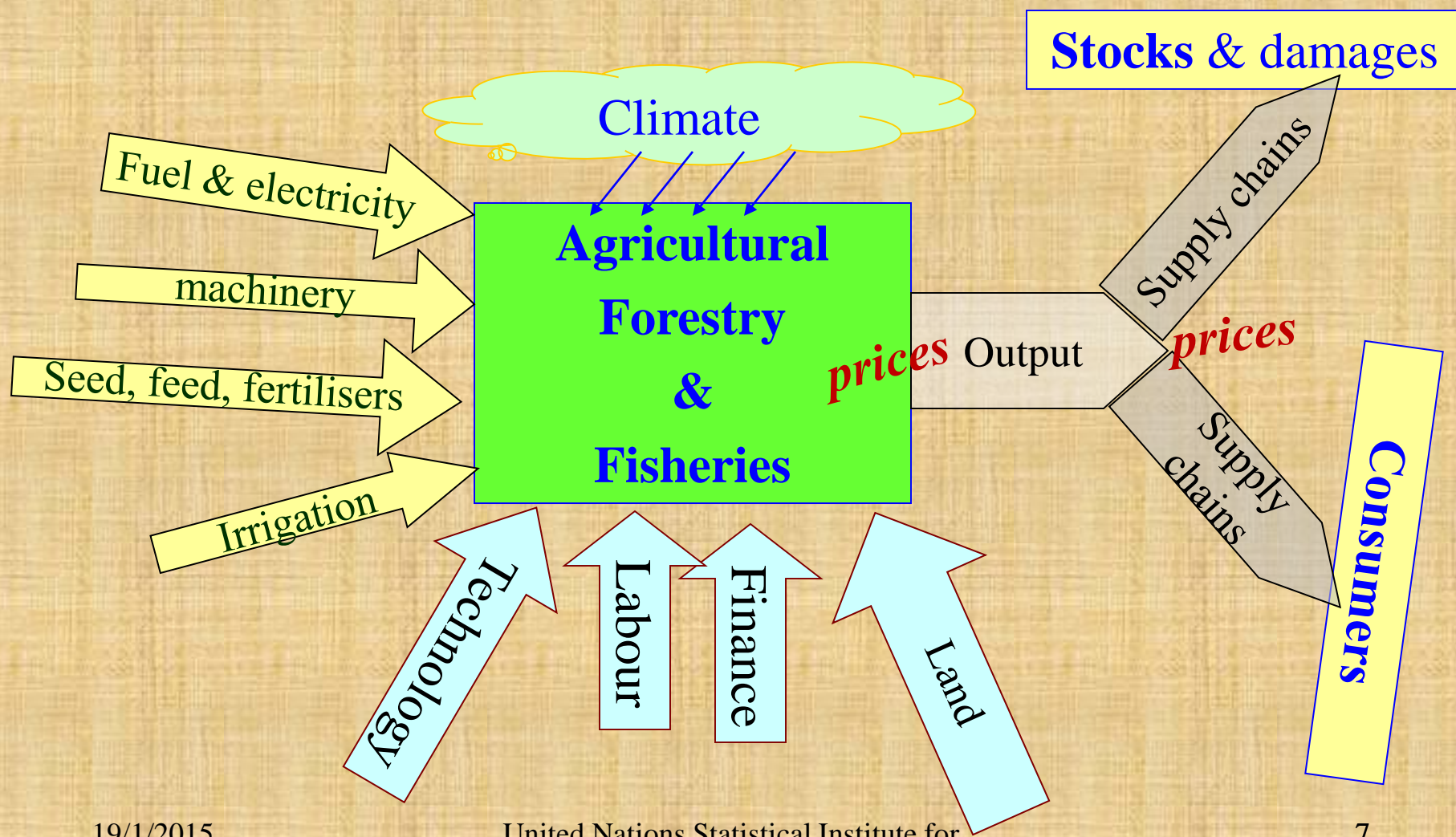   - Agroforestry and aquaculture

Food, Agricultural and Rural Sector

Role of agriculture and rural sector

- Resource function: Provider of food, fodder, fiber (primary)

- Raw material for industry (secondary)

- Market for secondary and tertiary products

- Employment: income and entitlements

- Environmental protection
  - two way relationship

Food and Agriculture System

Stocks & damages

Climate

Fuel & electricity

machinery

Seed, feed, fertilisers

Irrigation

Agricultural Forestry & Fisheries

prices Output

Supply chains

prices

Supply chains

Consumers

Technology

Labour

Finance

Land

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Food & Agricultural System

- **Factor Resources**:
    - Land,
    - Labour,
    - Finance (credit) and
    - Technological know how
- **Other resources**:
    - Infrastructure – irrigation, electricity supply, roads, communication etc.,
    - Machinery & livestock
- **Climate**
- **Inputs**: seed, feed, fuel / electricity
- **Market**: distribution, food chain, prices
- **Food stocks**, post harvest losses and food wastage

Exogenous factors

- Climate change:
  - Weather: Risk and limitation on choice
  - Soil: Constraints on choice of crop
  - Water: droughts and floods
- National Values (self-sufficiency) and Development Goals (industry or agriculture)
- World Prices: Volatility
- Too many players

Sources – broad categories

- ➢ Census – agricultural & livestock
- ➢ Agricultural Surveys
- ➢ Administrative sources
- ➢ Business Sources

Constituents of Agriculture Statistics

- Structure of agriculture: Census (at least decadal)
- Production & consumption: Current surveys (annual or seasonal)
- Cost of cultivation: use of inputs, agricultural labour wage rates
- Agro-processing
- Market Information
  - **Prices**: farm gate, wholesale, retail, indices, border
  - Market arrivals, quantities transacted, international trade

Constituents of Agriculture Statistics

- Land use and use of other natural resources

- Infrastructure

- Finance – rural / agricultural credit

- Technology and stock of resources: agricultural machinery and equipments

- Analytical / derived statistics:

  – Food balance sheets and food accounting matrices

  – Number of under-nourished & other Development indicators

- Climate:

Conceptual Framework

- Global Strategy aims at rebuilding Agricultural statistic systems based on good understanding of the user requirements;

- Data needs analysis led to a comprehensive conceptual framework for agricultural statistics.

Conceptual Framework

- Link between Economic, Social, Environment dimension of the agriculture

- Provides a 'roadmap' for the development of Agr. statistics.

- Facilitates the integration, and therefore the cost-effectiveness and analytical capability of statistics

Conceptual Framework: Scope and coverage of agricultural statistics

- **Scope:** should cover not only **economic** but also **social** and **environmental** dimensions;

- **Data Items**: linking items from different dimensions

- **Organization**: SNA for the economic statistics; SEEA for environmental statistics; Social statistics? Wye Handbook?

Conceptual Framework: Scope and coverage of agricultural statistics

- **Coverage:** all activities within the scope of agricultural statistics without any cut-offs on the basis of size, importance, location etc.

- **Units:** economic statistics = farm business; social statistics = household; environmental statistics = land parcel.

- **Classifications:** ISIC = agricultural activities; CPC = agricultural commodities; ISCO = agricultural occupations; Classifications of land + forest cover and land use

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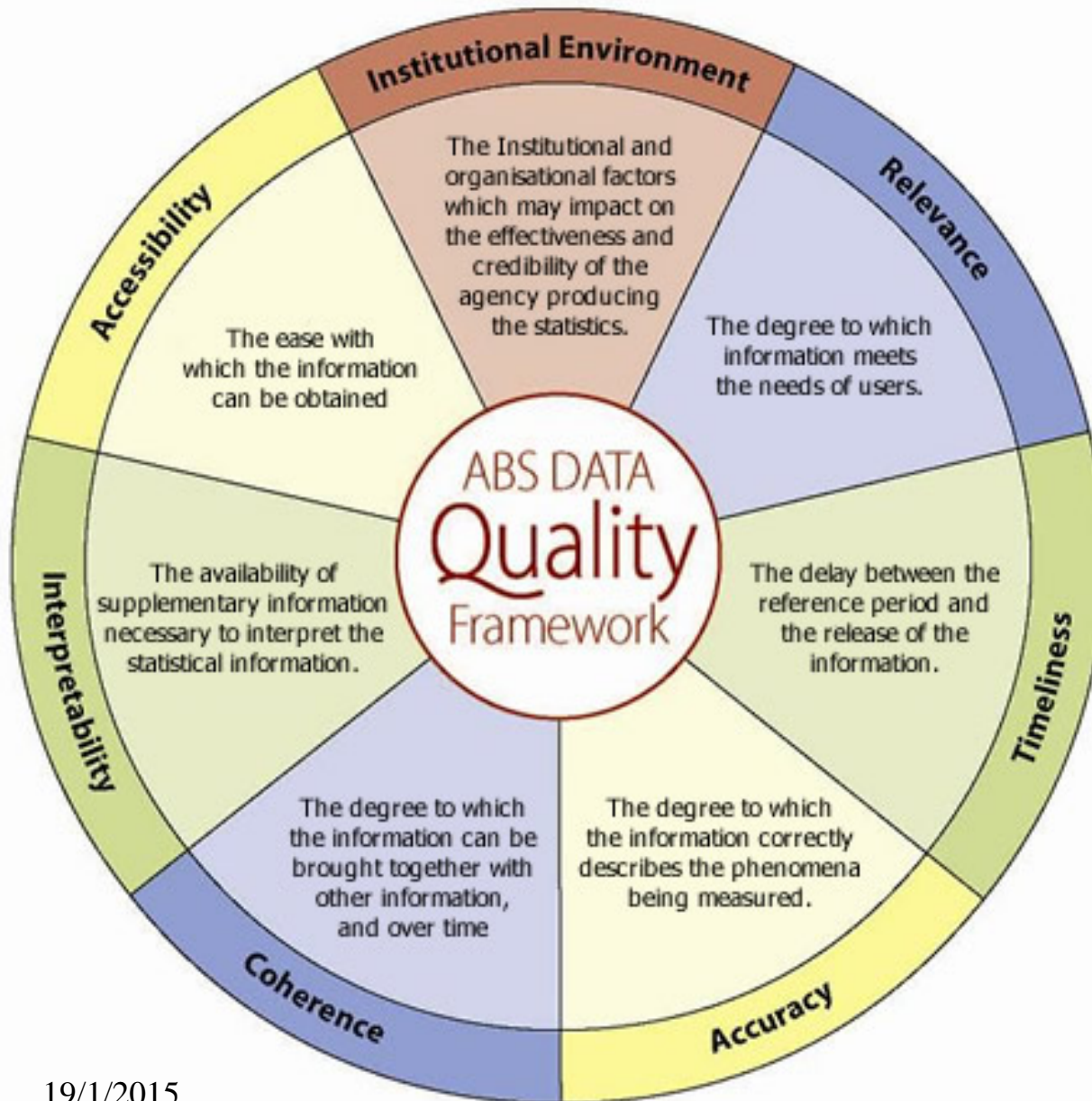By activity: **broad definition** also includes:
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Definition of Quality

- Survey quality is not determined by just survey error - data accuracy.

- The quality of statistical data depends on
  - **Relevance**
  - **Accuracy & reliability**
  - **Timeliness & punctuality,**
  - **Coherence and comparability** and
  - **Accessibility and Clarity** (interpretability).

Data Quality Issues

ABS DATA Quality Framework

- **Institutional Environment**: The Institutional and organisational factors which may impact on the effectiveness and credibility of the agency producing the statistics.
- **Relevance**: The degree to which information meets the needs of users.
- **Timeliness**: The delay between the reference period and the release of the information.
- **Accuracy**: The degree to which the information correctly describes the phenomena being measured.
- **Coherence**: The degree to which the information can be brought together with other information, and over time
- **Interpretability**: The availability of supplementary information necessary to interpret the statistical information.
- **Accessibility**: The ease with which the information can be obtained

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Thanks