



Food Security and Agriculture Statistics

Data Standardization and Harmonization



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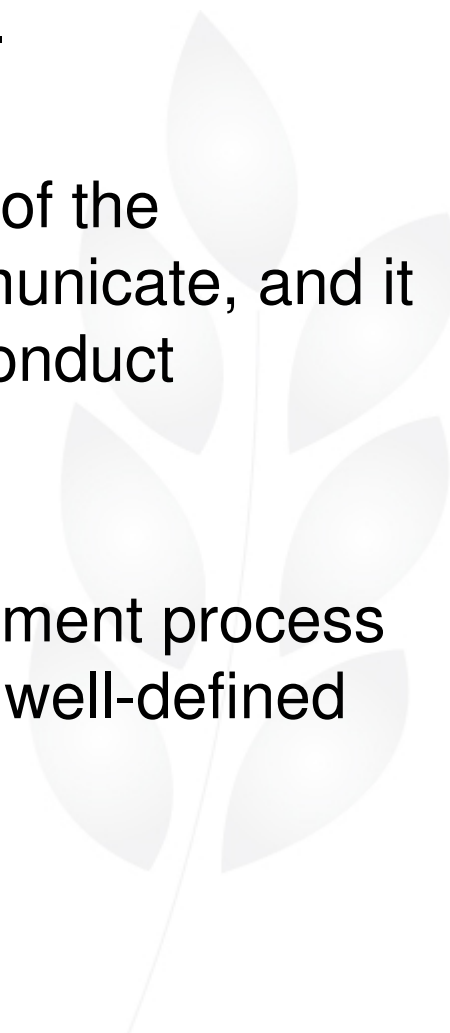
Issues with non-standardized data

- Different organizations, countries or individuals have different database structures and data definitions.
- These differences could affect the kinds of information that users have access to.
- Differences in the kind of information available may have an effect on data analysis.
- Informal data structures and terminology complicate the effective exchange of information among systems or even among different functions within the same organization.
- When non-standardized data is exchanged, it is never certain that the data communicated is what the sender intended or what the receiver understood.



Why is standardization important?

- In the case of data-intensive systems, quality data serves as the foundation of the database.
- Data quality is the basis for the accuracy of the information users hope to obtain or communicate, and it is the source of the facts users need to conduct analyses.
- To achieve quality data, the data development process must follow a disciplined, structured, and well-defined approach.





Benefits of data standardization

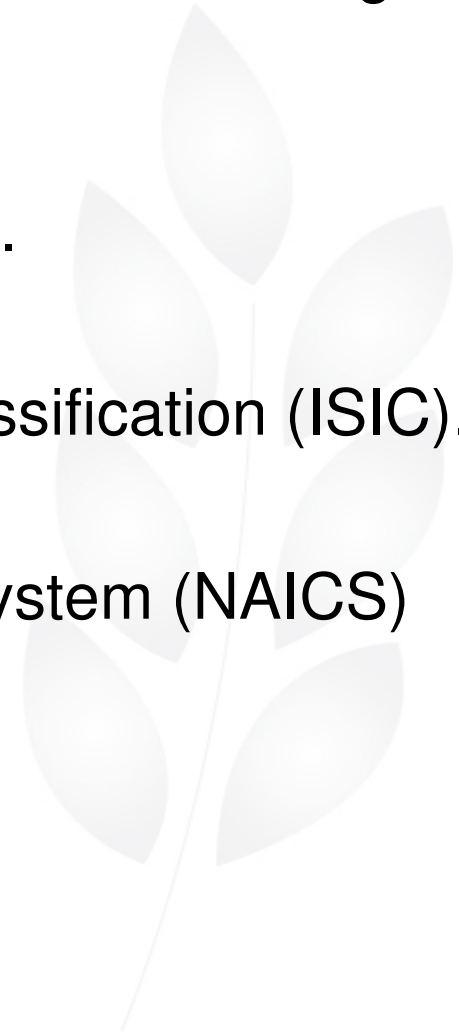
- Facilitates information exchange
- Reduces data maintenance costs
- Provides “rich” data and information
- Allows easy access to information
- Improves communication and coordination
- Improves data analyses





Main International Commodity Classifications

- The Harmonized Commodity Classification and Coding System (HS).
- The Central Product Classification (CPC).
- The International Standard Industrial Classification (ISIC).
- North American Industry Classification System (NAICS)





The Harmonized Commodity Classification and Coding System (HS)

- A multipurpose international goods classification system designed to be used by manufacturers, transporters, exporters, importers, customs, statisticians, and others in classifying under a single commodity code goods moving in international trade.
- The HS is intended to serve as a universally accepted classification system for goods so countries can administer customs programs and collect trade data on exports and imports.



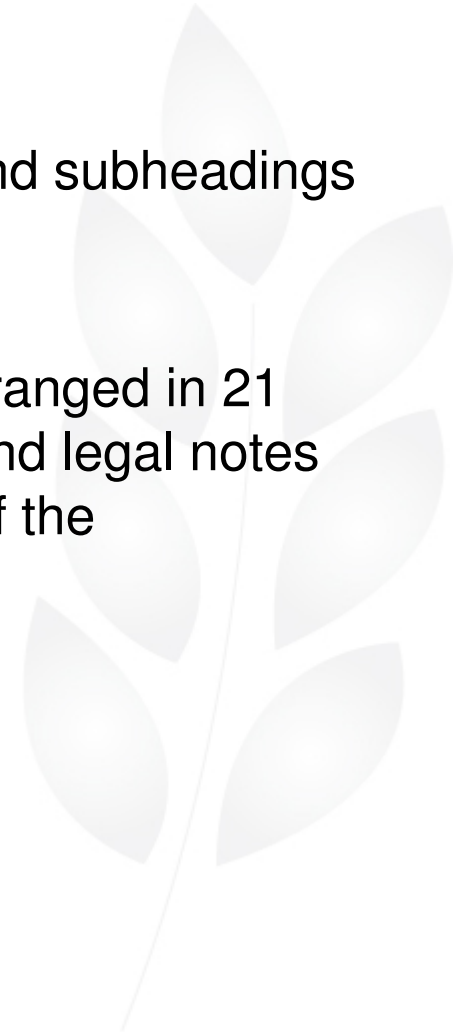
The HS (2)

- The basic system uses a 6-digit number to identify basic commodities.
- Each country is allowed to add additional digits (up to 12 digits) for statistical purposes.
- It was developed under the auspices of the **Customs Cooperation Council (CCC)** now known as the [World Customs Organization \(WCO\)](#).
- The WCO, located in Brussels is an international organization consisting of representatives of about 139 countries or territories.
- The HS provides the building blocks of the CPC and SITC classifications.



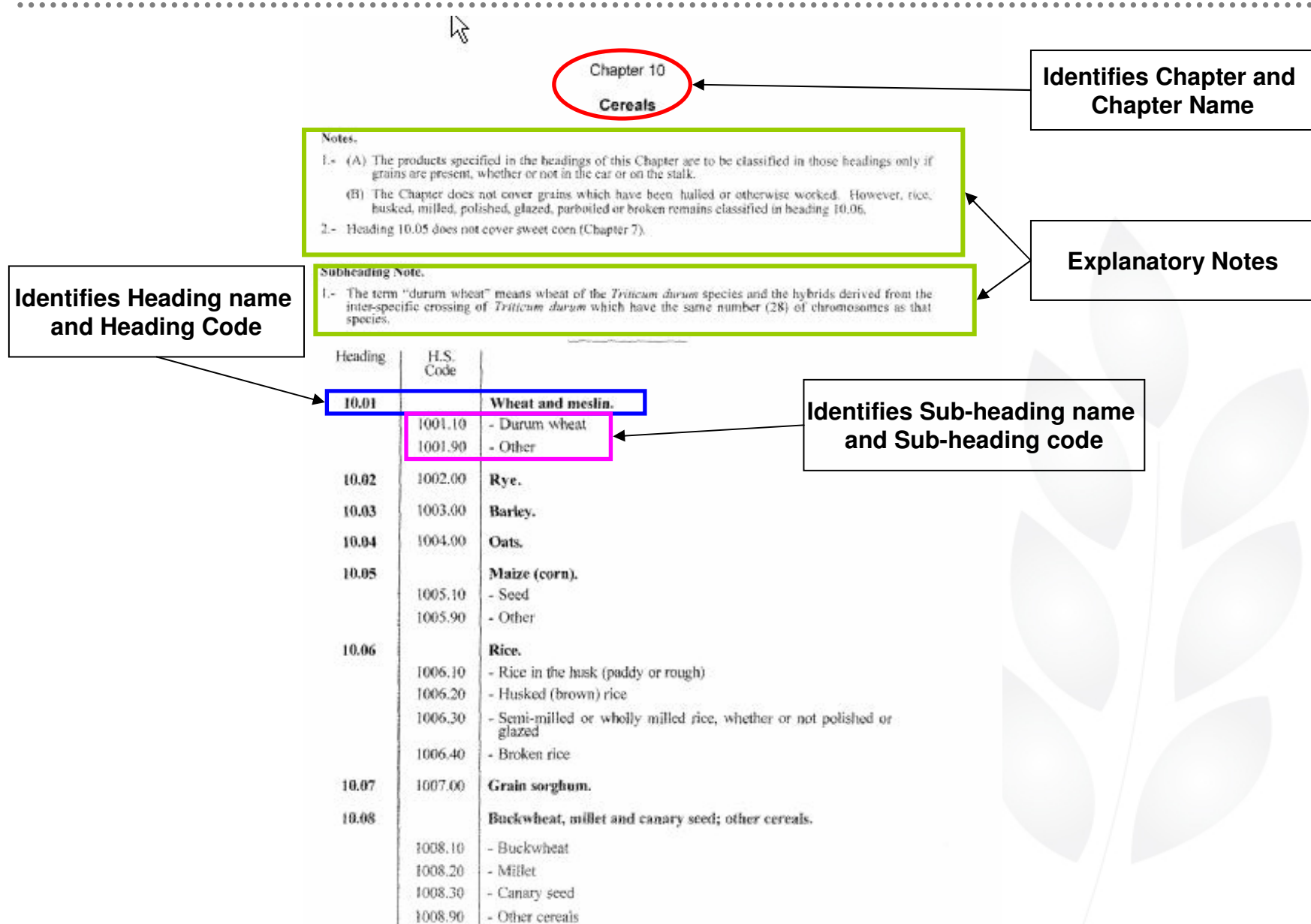
How the HS works

- The Harmonized System is a commodity classification system in which articles are grouped largely according to the nature of the materials of which they are made, as has been traditional in customs nomenclatures.
- The HS contains approximately 5000 headings and subheadings covering all articles in trade.
- These provisions are organized in 96 chapters arranged in 21 sections which, along with the interpretive rules and legal notes to the chapters and sections, form the legal text of the Harmonized System.
- <http://www.wcoomd.org/home.htm>





How the HS Coding and Classification look like:





The Central Product Classification (CPC)

- The CPC is a classification based on the physical characteristics of goods or on the nature of the services rendered.
- Each type of good or service distinguished in the CPC is defined in such a way that it is normally produced by only one activity as defined in ISIC.
- The CPC covers products that are an output of economic activities, including transportable goods, non-transportable goods and services.
- The classification structure comprises:
 - Sections – one digit code;
 - Divisions – two-digit code;
 - Groups – three-digit code;
 - Classes – four-digit code;
 - Subclasses – five-digit code.





International Standard Industrial Classification (ISIC) for all economic classes

- ISIC is a [United Nations](#) system for classifying economic data. The Custodian of ISIC is the UNSD.
- Wide use has been made of ISIC, both nationally and internationally, in classifying data according to kind of economic activity in the fields of production, employment, gross domestic product and other statistical areas.
- ISIC is a basic tool for studying economic phenomena, fostering international comparability of data, providing guidance for the development of national classifications and for promoting the development of sound national statistical systems.
- Rev.4 is a standard classification of economic activities arranged so that entities can be classified according to the activity they carry out.



North American Industry Classification System (NAICS):

- A consistent system for economic analysis across the three North American Free Trade Agreement partners: Canada, Mexico and the United States.
- NAICS is built on a production-oriented or supply-based conceptual framework in that establishments are grouped into industries according to similarity in the processes used to produce goods or services.
- NAICS is a 6-digit hierarchical coding system.
- The first two digits of the code designate the sector that represent general categories of economic activities, the third designates the sub-sector, the fourth digit designates the industry group, the fifth digit designates the NAICS industry, and the sixth digit designates the national industry.



Why use the HS for classifying Food Security Data and Agriculture Statistics?

1. The HS is the most widely accepted international product classification standard. It is currently used by more than 200 countries and several international organizations such as the WB, WTO, UNCTAD, UNIDO, OECD, etc.
2. The HS is the basis for other international classifications such as SITC and CPC. HS headings and sub-headings provide the building blocks for more aggregated product classifications.
3. It is a well-maintained system which is revised every five years. Updates are carried out through a consensus building approach that requires the involvement and agreement of all contracting parties.



New Developments: Indicative Crop Classification (ICC)

- A new crop classification, developed for the 2010 round of agricultural censuses.
- Contained in **Appendix 3** of FAO STATISTICAL DEVELOPMENT SERIES No. 11, **A system of integrated agricultural censuses and surveys, Volume 1, World Programme for the Census of Agriculture 2010**, Food and Agriculture Organization of the United Nations, Rome, 2005.
- Classification based on the draft of the revised **CPC**, the latter being based on the **HS** and compatible with **ISIC**. ICC also compatible with **FAOSTAT**.
- Crops' categories based on **three main elements**:
 - Product type (group and class level i.e. crops are first divided into groups such as cereals, vegetables, etc., and each group is further subdivided by crop type, such as leafy/stem vegetables, fruit-bearing vegetables, etc.);
 - Crops genus or species (not a botanical classification. Groupings based more on the use of the crop, i.e. beverage crops or oilseed crops);
 - Whether the crop is temporary or permanent



Standardization of quantities and currencies:

- Standardisation applies also to quantities, exchange rate sources, and currencies.
- Standardisation of quantities is done by country and by year.
- The first step in standardisation is to convert the units in which product quantities are reported by a country for a particular year into the International System of Units (SI).
- The second step concerns the aggregation of product quantities to obtain quantities for product groups.
- Standardization of exchange rate sources (GIEWS uses only IMF official exchange rate data).
- Standardization of currencies: Default values are given in US dollars but the option to see data in the original currency is made available to the user.



Thank you for your attention

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