Food and Agriculture Organization of the United Nations

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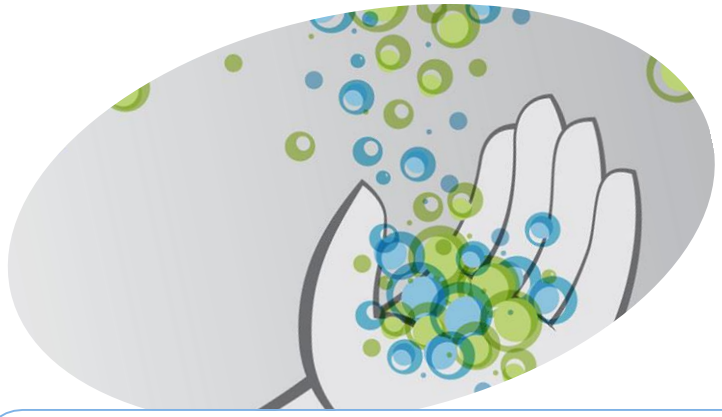
Data analysis, reporting and dissemination



Technical Session 8.3

TABULATION # 1

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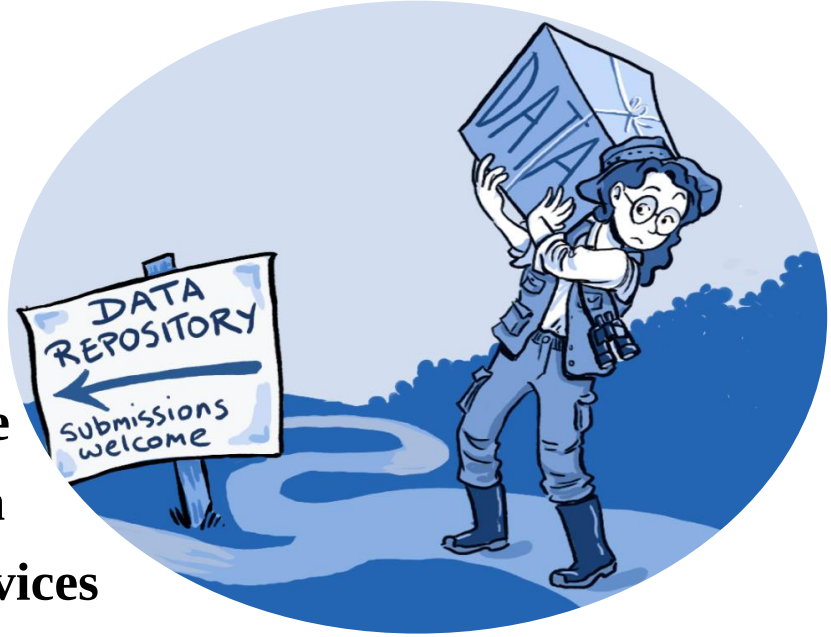

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Dissemination - key census stage

- A key stage of the census where the census data are made available to users and long-term preservation is ensured.
- It should be well organized and discussed with stakeholders and primary data users within the census committee and with other groups of users during the preparatory phase.
- Data from national censuses represent a valuable public good that should be widely disseminated by census offices (COs) in order to enhance its utilization by the various users.
- It can be done in several ways: providing access to summarized data, including macro-databases, interactive web products and safe access to microdata files for more in-depth analysis.

Dissemination strategy and plan

- **Dissemination strategy – key elements:**
  - Identifying, through consultation, the diverse categories of users and their data needs/uses,
  - Products to be developed,
  - The media of dissemination,
  - Metadata to aid in the interpretation of the results,
  - Confidentiality and privacy measures,
  - Assessing the required technologies to meet user needs,
  - Dissemination policy,
  - Quality assurance in terms of accuracy and timeliness,
  - Available financial and human resources.
- The **dissemination plan** outlines the *census products, services, methods and tools* the census agency will use for the dissemination of preliminary and final census results to different types of users.

Dissemination products and services

- **Reports:**
  - Report on preliminary results
  - Report on final results
  - Analytical/thematic reports
  - Technical report
  - Report on quality evaluation (including results of PES)

- **Data products and services:**
  - Tabulated data
  - Access to macro- and micro-databases

- **Other products:**
  - Atlases and other geographic products
  - Brochures and flyers
  - Videos and sketches, etc.

Reports on preliminary results

The advance estimates of principal characteristics of the holdings are provisional and subject to revision once the full data-processing and verification operations have been completed.

- **Preliminary results results could be based on:**
  - Key data on all the holdings enumerated in the census, per example through primary manual tabulations, or
  - A subset of the census data, either a representative sample or a geographic subset.

- **Preliminary results should be issued as early as practical.** According to best practices, countries release preliminary census results within 3 months after the end of the enumeration period and/or 6 months after the end of the census reference period.

- **Both online and printed dissemination media can be used for dissemination of preliminary census results**.

Reports on final results

The final census results must be published as soon as possible: according to good practices - within two years after the end of the census reference period. The Report should include:

I. GENERAL PART

Objectives of the census.
Historical background: a brief history of previous censuses.
A brief description of the country (e.g. geographical area, agro-ecol zones; importance of agric.)
Census scope and coverage.
Census methodology and organization: a short summary.
Main concepts and definitions, including the definition of the statistical unit.
Census enumeration period and reference period/date.

II. RESULTS

Summary of results.
Explanations for use of tables.
Basic (standard) tables.

III. ANNEXES (such as census questionnaire(s), maps).

Analytical/Thematic reports

- The reports may range from volumes presenting extensive and detailed cross-tabulations, to more analytical reports that combine tabular materials with some interpretative or analytical text.
- Must be based on user needs and respond to a country's specific development needs and emerging issues.
- May include time series and trends analyses of main census items and may include other data sources to provide a more comprehensive outlook.
- Must be planned and scheduled during the preparatory phase and published according to the release calendar.
- Examples:
  - Volumes of regional analysis on such topics as: typology of agricultural holdings and their regional distribution; production methods; gender and other socio-demographic aspects of the holdings; land use, crops, livestock, work on the holding, input use, etc.
  - Community profile analysis (when a community survey has been conducted).

Technical report

- A **technical report** is aimed at describing in detail how the whole census operation has been conducted, the methodology, choices made, concepts and definitions applied, difficulties encountered, possible delays and their reasons, the results of quality evaluation, etc., and to use this evaluation for making recommendations for future censuses.
- It may include confidential elements.
- **Suggested structure of the Technical report:**
  - Introduction.
  - Approach to census methodology.
  - Pre-field-work preparation.
  - Field-work.
  - Use of sampling methods (if applicable).
  - Data processing.
  - Quality evaluation of census results (including results of PES).
  - Suggestions for further tasks (foreseeable problems for similar tasks should be listed).

Tabulated data

- **Standard tabulated products (standard tables):**
  - Are designed according to the Tabulation plan.
  - Should provide basic tabulations and cross-tabulations and satisfy the majority of census data users.
- **Additional tables:**
  - Are based on specific users' requests.
  - May require customized tabulations.
  - Could be provided by census agency as soon as the census database has been established and tabulation software packages introduced.

Access to census databases

- **Providing public access to macro-databases**
  - The simplest form of a database for macro-data is a straight copy of a publication on a digital medium, usually on the website of the CO.
  - More advanced:
    - Offers to users the possibility to manipulate the tables in various ways in order to obtain views or results that represent their specific requirements.
    - May include associated graphing and thematic mapping capabilities.
    - Can also cover the results of earlier censuses.

- **Providing public access to microdata**
  - Should meet legislative requirements (e.g. on confidentiality).
  - Institution's capacities to ensure the security and the confidentiality of the individual information.
  - For dissemination purposes, a representative sample of the individual records could be made available. The size of the sample would depend on the capacity and resources of the CO.
- **A basic decision** must be made whether to provide access to macro-database, to micro-data base, or both.

Geographic products

- Value-added products to disseminate census results include cartographic products, either in printed or digital form, such as:
  - Static maps (print and web)
  - Census atlas (print and web)
  - Interactive maps (web)
- Static maps can be part of the final report. However, because of the large number of eventual maps, format used, as well as different (more expensive) printing, and different users, it may be more efficient to publish an atlas separately.
- Most static cartographic products, such as atlases and static maps, can be created using popular GIS and graphics design software.
- Web mapping applications allow for construction of interactive maps, such that users can generate maps that focus on various census themes, targeting specific geographies of interest.
- With modern GIS software and equipment, production of such maps and other GIS products is more efficient and effective.
- GIS embody hardware and software configurations designed to also support the analysis and dissemination of spatially referenced data.

Other products

- **Brochures and flyers**
  - Another way to disseminate basic census data.
  - They should be written in a very easy and comprehensible language with suitable graphics and explanatory material.
  - Are particularly suitable promotional materials for people attending events and exhibitions.
  - As part of census publicity, can be disseminated to stakeholders and key users to present the key preliminary and final results.
- **Videos, sketches and online videos**
  - To promote the use of census data
  - To provide a better understanding of census results among certain interest groups
  - Can be useful in demonstrating how census data can assist policymakers, planners and people in general in understanding the situation in the agricultural sector and in rural areas, identifying problems and assist with the evaluation of solutions.

Methods and tools for dissemination

Methods and tools for dissemination of aggregate census results:

- Printed materials
- Online dissemination
- Other electronic methods (CD-Rom, DVD, Flash Drive)

Methods for safe access to microdata

Online dissemination

- The advantages of **online dissemination** are found primarily in terms of speed, flexibility, cost and accessibility of the results.
- The census agency **website** is probably the first dissemination medium where Internet users would look for census information. One could use the same website for both reserved and broad community communication, with the granting of access rights in certain areas to privileged users only.
- For reasons of efficiency, it is recommended that information heavily requested by users accessing the census website be made available in a static format, as it is faster to download. Letting the user run data extraction on online databases would be a dynamic way of accessing the census information. This method is more resource consuming and should be an additional choice for users to access more detailed data than those available through static pages.

Online dissemination(contd.)

- Advanced interactive web products are growing in popularity. Interactive products allow for complex maps and visualizations, various cross-tabulations and other customized data queries. These products are designed using a combination of scripting languages that can be broadly divided into two groups depending on where they are executed: server-side (on the census agency server) and client-side (on the user's computer or smartphone, for example).
- Security measures, including passwords and call-back procedures can be used to exclude unauthorized access to data. It is also recommended a powerful firewall between the website and the working network of the CO.
- Interactive web-based data tools should enable users to access census data themselves, and build their own customized tables or spatially configure data outputs according to varying spatial requirements.
- Interactive electronic products can also be accessed through other media, including CD-ROM, DVD and Flash Drive.

Social media and other electronic methods

- Various social media platforms have been successfully used by countries for the dissemination of census results. Interacting with followers and users on these platforms provides the census agency with an opportunity to disseminate information, build relationships with established and new users, and engage the public on a regular basis.
- Social media platforms such as Facebook, Twitter and online video sites can be used to post all census-related advertisements and videos.
- The census agency might also provide free mobile phone applications to make census data available anywhere and anytime.
- Technologies such as flash drives, CD-ROM and DVD-ROM provide a medium of distribution for large data sets that are not subject to frequent change or updating. Standard discs are read-only optical media. They have a very large storage capacity, are durable, and can be produced at relatively low cost. As the results of a census are supposed to be final, dissemination on a read-only medium should be satisfactory.

Public events to disseminate census results

- It is a good practice to organise **national** (which might be followed up by **regional) seminars** and **conferences** with the participation, where possible, of a high-profile government or business personality to ensure maximum media attention.
- **Presentations** of preliminary and final census results to different segments of users, such as academia, central and local governments, farm associations, businesses and media are also important to promote the use of census results.
- If relevant, a **demonstration** can be made on how to access and retrieve census data and documentation on the agency website.
- In other cases, users may be willing to use the information but require additional **training** to better understand the data. Such training may be combined with training in statistical dissemination techniques, etc.
- **Symposiums** might be organized by the census agency in cooperation with academia and line ministry(ies) to stimulate researchers to present thematic studies on a wide variety of topics based on the census macrodata and microdata.

Country example

Australia- Agricultural Census 2010/2011: Dissemination of results*

- Preliminary Reports:
  - *Principal agricultural commodities produced* (published on 17 Nov 2011)
  - *Principal agricultural commodities* (published on 2 December 2011)
- Final reports:
  - *Agricultural commodities* (published on 29 June 2012)
  - *Value of agricultural commodities produced* (published on 29 June 2012)
- Analytical/thematic report:
  - *Water use on Australian farms*
- Data cubes
- Maps
- ABS website
- Upon request.

* AC 2010/2011 enumeration period: July 2011 to Nov 2011

THANK YOU!