

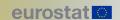
EUROPEAN CONFERENCE ON QUALITY IN OFFICIAL STATISTICS 2024 ESTORIL - PORTUGAL



Management of Quality in a changing data ecosystem: the case of FAO

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The conference is partly financed by the European Union

June 5, 2024

Session 4



Strategic repositioning of FAO and revision of its quality compliance mechanisms (1/3)

2012

Creation of the role of FAO Chief Statistician, together with an Interdepartmental Working Group on Statistics (IDWG) to **enhance** interdivisional coordination and cooperation on statistical programmes

2014/2018

Adoption of the first FAO Statistics **Quality Assurance** Framework (SQAF) and a series of Standards and procedures, leading to an improved governance and quality of FAO statistical activities

2019/2020

- Creation of a Data Lab for Statistical Innovation
- Internal evaluation of FAO's statistical work whose recommendations led to the development of the internal Strategy for the Modernization of FAO statistics. endorsed in 2020
- → The integration and improvement of the governance of FAO data and statistics identified as priority actions (paradigm shift)

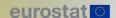
2021/2023

- Adoption of FAO Policies on Data Protection and Intellectual **Property Rights**
- Governance and Coordination arrangements (DCG-T and its Task Forces (TFs))
- Endorsement of a new FAO Data and Statistics **Ouality Assurance** Framework (SDQAF) & revision of the **QAPS** to reflect the paradigm change

...2024

- Revision (ongoing) of other quality compliance mechanisms
- · Creation of a permanent and dedicated Data Ouality Assurance Unit under FAO Statistics Division. mandated to ensure the production and dissemination of high-quality data and statistics related to food and agriculture

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- · Revision of the

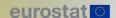


Strategic repositioning of FAO and revision of its quality compliance mechanisms (2/3)

Vision, principles, quality dimensions, and compliance mechanisms of the FAO SDQAF

Ensuring the availability of high-quality international statistics on food and agriculture for decision-making Quality dimensions Enabling institutional environment Principle 1: Professional independence and impartiality **FAO Statistics** Principle 2: High and continuous commitment to quality Principle 3: Adequacy of resources Principle 4: Data protection and statistical confidentiality Principle 5: Development and use of international standards Principle 6: Cooperation with data providers Principle 7: Cooperation with other international organizations producing Accuracy and reliability Robust and effective statistical processes Principle 8: Suitable and trustworthy data sources Principle 9: Sound methodology and appropriate statistical procedures Timeliness ar Principle 10: Cost-effectiveness punctuality Principle 11: Non excessive burden on respondents Coherence and comparability Quality statistical outputs fit-for-purpose Principle 12: Relevance Principle 13: Accuracy and reliability Accessibility Principle 14: Timeliness and punctuality and clarity Principle 15: Coherence and comparability Principle 16: Accessibility and clarity







Strategic repositioning of FAO and revision of its quality compliance mechanisms (3/3)

Expansion and improvement of FAO quality compliance mechanisms, including:

- The update of the Quality Assessment and Planning Survey (QAPS), used to assess ≈100 statistical processes, *non-statistical* data outputs and mixed information systems in 2023.
- The introduction of formal in-depth audits of QAPS results (work-in-progress) through a dedicated checklist to further investigate any issue identified.
- The improvement (ongoing) of the Statistical Accountability
 Framework
- The establishment of a **systematic data and metadata review process** prior to dissemination through SDMX-native tools.







Complementary provisions and revision of existing FAO data and statistical standards

The following activities have been undertaken to reflect the integration and implications of using alternative data sources:

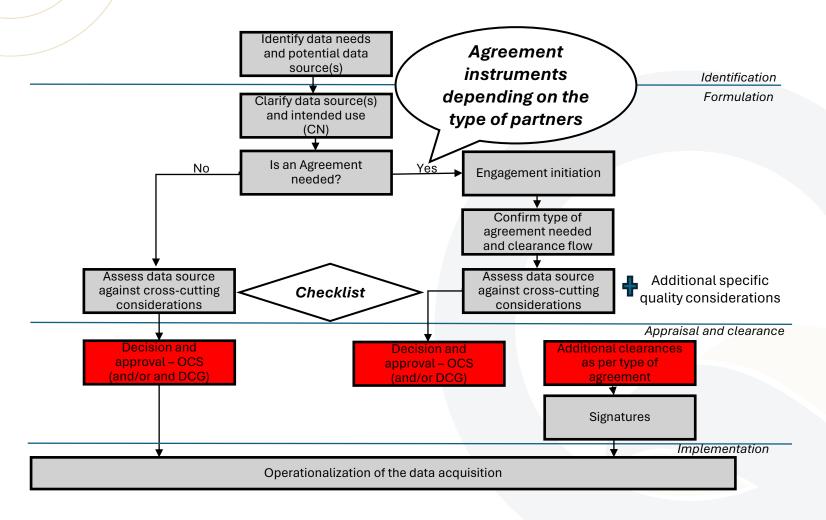
- The adoption of **Policies on Data Protection** in 2021 and **Intellectual Property Rights** in 2023.
- The development of a **Standard on the acquisition and use of non-statistical data sources for statistical purposes** (filling data gaps, developing indirect estimation methods to generate more disaggregated statistics, etc.).
- The revision of several existing standards to ensure alignment and consistency between the various documents.
- The development (ongoing) of other specific standards (metadata for geospatial information, dissemination of dashboards, data platforms and visualisation, etc.)







Specific provisions on the acquisition of non-traditional input data









Quality aspects pertaining to the (pre-) processing of non-traditional data and resulting outputs

Pre-processing & Processing sub-phases (Throughput phase):

• Pre-processing:

Specific recommendations provided for each big data class (web-scraped, social media, AIS, EO, MNO and smart meter) to address relevant quality aspects and error types.

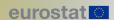
In addition, regardless of the big data class, it is requested from statistical divisions to:

- ✓ use of code reproducibility best practices;
- ✓ document every step of data processing to ensure transparency of the overall process.
- Processing: use of more traditional procedures, not specific to the data class

Output phase:

- Guidance on the assignment of appropriate observation status codes for statistical outputs resulting from the use of mix data inputs (official & non-official), as per the related statistical standard
- Recommendations on guidelines/options to manage possible disputes when using imputation (e.g., ML methods) to fill official data gaps with countries (Statistical standard on Imputation)
- Expansion of the scope of the Standard on metadata dissemination for FAO statistical databases to include information on the use of alternative data sources, but also to ensure compliance with FAO Data Policies on DP & IPR.







Other quality improvement initiatives

- Support from FAO to the UN-CEAG, resulting in the production and pilot-testing of National Quality Assurance Frameworks (NQAFs) for agriculture statistics to support national statistical agencies in assessing the quality of statistics related to food and agriculture through a selfassessment checklist.
- FAO involvement in the UN-CEAG/UN-CEBD joint task team to support countries through the provision of methods, tools, and trainings on the use of earth observation (EO) data for crop acreage and crop yield estimation and mapping.
- The use of AI for statistical purposes: FAO White Paper (2024) proposing additional actions such as the adoption of a framework for responsible use of AI and additional control mechanisms



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Thank you!



