



EUROPEAN CONFERENCE ON QUALITY IN OFFICIAL STATISTICS 2024 ESTORIL - PORTUGAL



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

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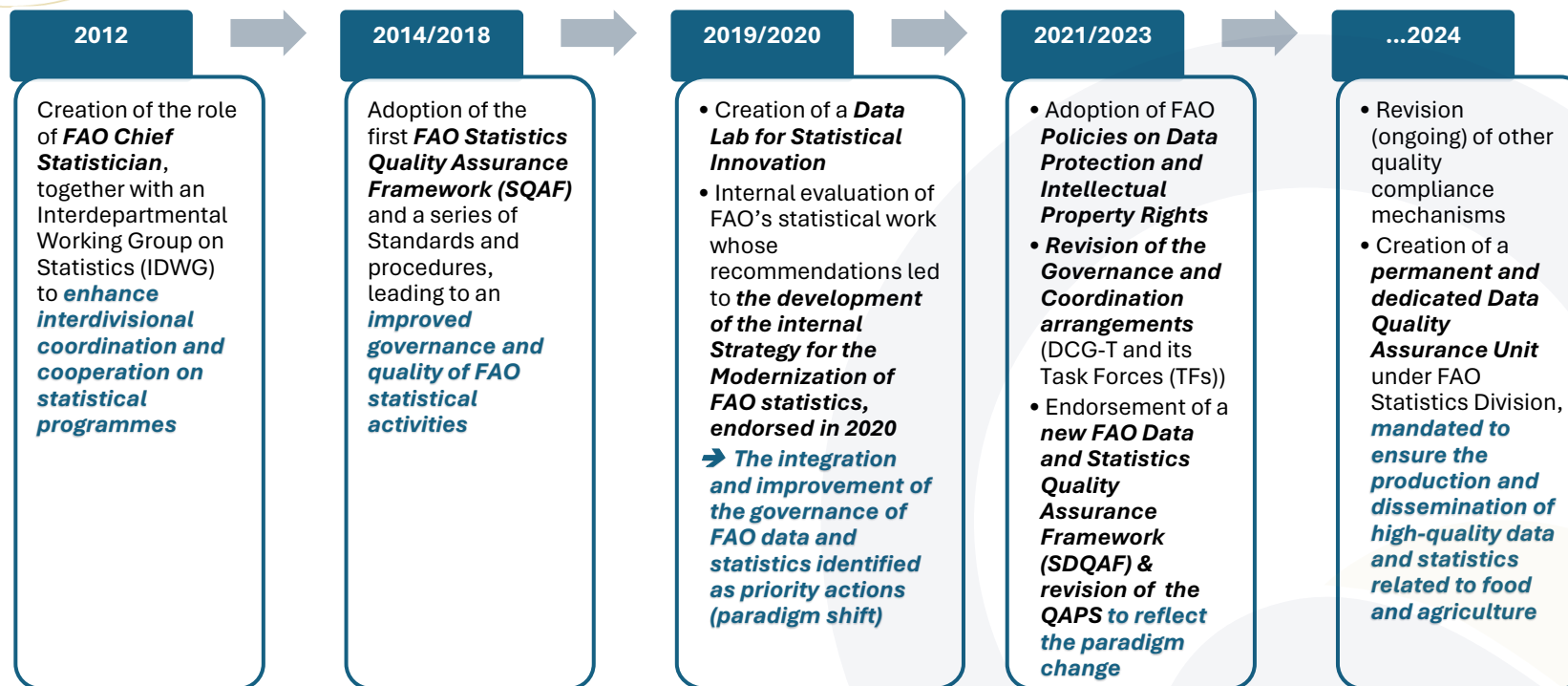
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Session 4



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





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

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





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.



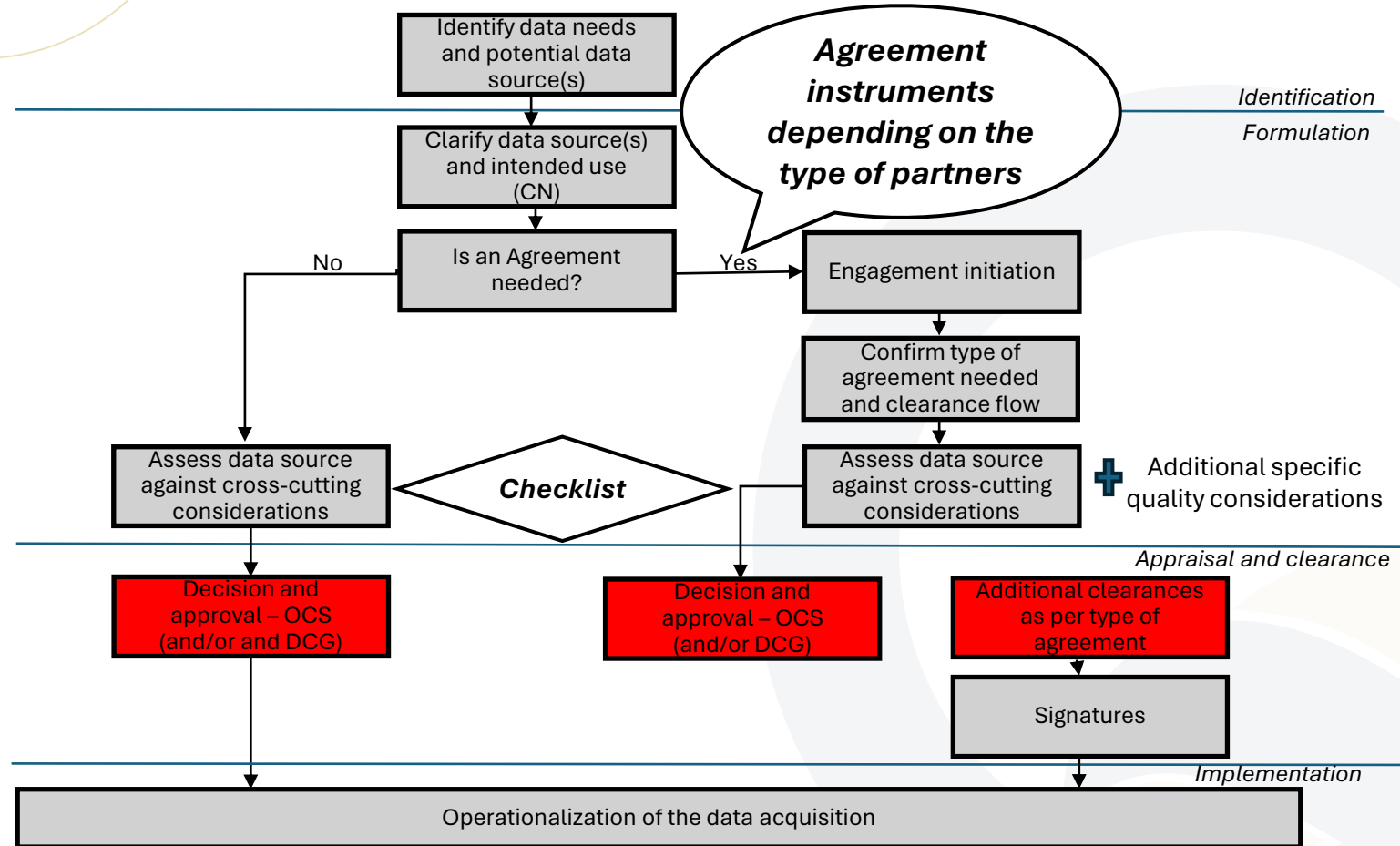
Complementary provisions and revision of existing FAO data and statistical standards

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 self-assessment 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!



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