Workshop on the Implementation of a National Quality Assurance Framework for Official Statistics in countries of the Africa Region

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Session 4.2: Use of assessment tools

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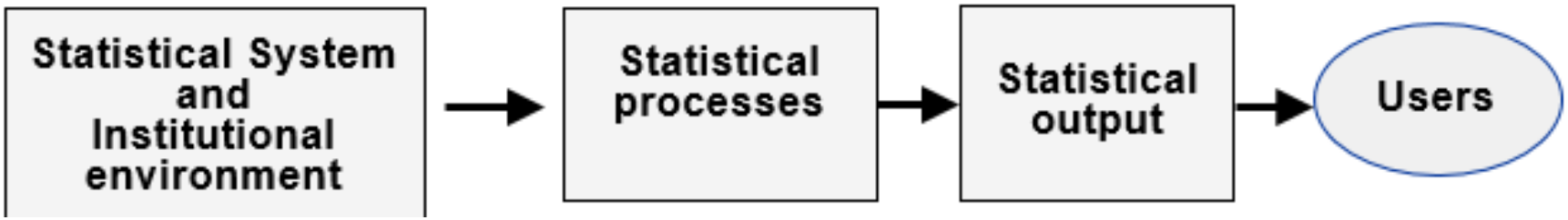
Assessment tools and risk management (Chapter 4)

- Statistical quality assessment is an important part of the overall quality management system of a statistical organization.
- It frequently focuses on the statistical products and the processes leading to their production but can also encompass the statistical system and institutional environment.



Assessment tools and risk management (Chapter 4)

- Quality Principles
  - Product quality
    - UN NQAF (5) (relevance, accuracy and reliability, timeliness and punctuality, accessibility and clarity, and coherence and comparability).
  - Process quality
    - UN NQAF (4) (methodological soundness, cost-effectiveness, appropriate statistical procedures and managing respondent burden).
  - The NSS and institutional environment quality
    - UN NQAF (9) (coordination, relationships with stakeholders, statistical standards, professional independence, impartiality and objectivity, transparency, statistical confidentiality and data security, quality commitment and adequacy of resources).

Assessment tools and risk management (Chapter 4)

- Methods and tools for statistical quality assessment comprise
  - quality indicators (both for products and processes)
  - quality reports
  - user surveys
  - self and external assessments
  - auditing (internal or external quality reviews), including peer reviews
  - labelling and certification.
- An efficient and cost-effective use of these methods requires that they are used in combination with each other. For example, quality reports can be the basis for audits and user feedback.

Assessment tools and risk management

Essential tools for quality assessment (basic level of quality assessment)

- **Quality indicators.** Quality indicators have to be identified (or developed) in order to measure the compliance with the respective quality principles and requirements. They are specific and measurable elements of statistical practice that can be used to characterize the quality of statistics.

Assessment tools and risk management (Chapter 4)

Essential tools for quality assessment (basic level of quality assessment)

- **Quality reports**. Explain and review the main characteristics of the process and its products. While a main target group of a quality report is the users of the statistics, quality reports are also an important monitoring tool for statistics producers and managers.
- **User surveys.** User feedbacks are essential for quality assessment. The statistical agency should regularly consult its users about their needs and perception of quality.

Chapter 4. Assessment tools and risk management

Tools for quality assessment on the next level

- **Self-assessments** are comprehensive, systematic and regular reviews of activities carried out by the organization (i.e. those responsible for the relevant activities) itself. The results are referenced against a model or framework. Compliance with the Fundamental Principles of Official Statistics (FPOS) has been assessed by self-assessments several times.
- **Other internal or external assessments:** Can also be conducted by an internal group not responsible for the assessed statistics or by an external party. The International Monetary Fund (IMF), using its Data Quality Assessment Framework (DQAF), has undertaken assessments under the Reports on the Observance of Standards and Codes (ROSCs) Data Module.

Chapter 4. Assessment tools and risk management

Tools for quality assessment on the next level

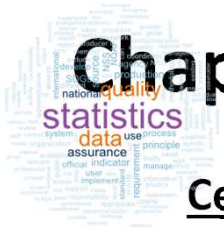
- **Audit**: systematic, independent and documented process for obtaining evidence and determining the extent to which quality requirements are met.
- **Peer reviews**: external audit carried out by others working in the same field.

Chapter 4. Assessment tools and risk management

Labelling and certification

- **Labelling** of statistics conveys a message about the extent to which a set of quality standards are met. It can be attached to statistics or a producer of statistics. The attachment of a label should be accompanied by proper explanation for interpretation.

- **Certification** is an activity which assesses whether a product, service, process or system (e.g. a quality management system) complies with requirements defined by an internationally recognized standard, or other formal criteria.



Chapter 4. Assessment tools and risk management

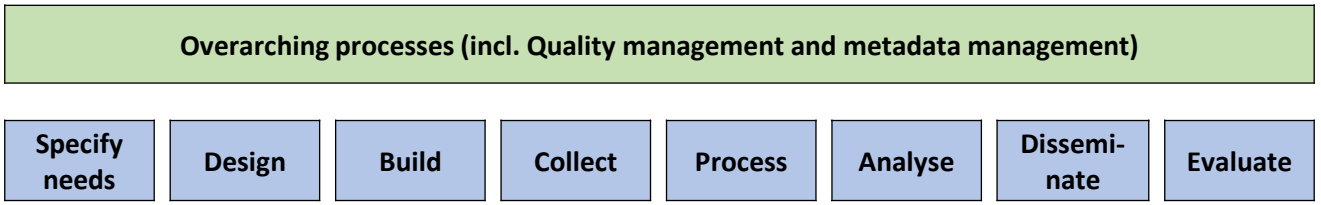
Certification of statistical agencies and statistical outputs

- The NSOs may be called upon to assess and certify the quality of statistical agencies and statistical outputs of other members of the NSS (possibly to label their statistics as official) or even of statistics produced outside the NSS.
- In such cases, the NSO may develop and deploy a checklist for the assessment of statistical outputs in consultation with the concerned stakeholders.
- Such a checklist based on UN NQAF can be used as a self-assessment tool by all producers of statistics.

Chapter 4. Assessment tools and risk management

Quality management using GSBPM

- The improvement in quality of statistical products requires the improvement of statistical processes. The Generic Statistical Business Process Model (GSBPM) describes and defines the set of business processes needed to produce official statistics, and hereby provides a framework for process quality documentation, assessment and improvement.



Chapter 4. Assessment tools and risk management

Metadata management

- The use and good management of metadata is essential for quality and the efficient operation of statistical processes. Metadata management can be facilitated and guided by the use of standard models such as GSBPM and Generic Statistical Information Model (GSIM).
- Requirements for metadata are important in UN NQAF and reflected in requirement 12.5 and 17.1 and in principle 19 on managing metadata

Chapter 4. Assessment tools and risk management

Risk management and the production of statistics

- Traditionally, risk management has been applied within financial management, security and safety.
- The level of risk linked to a source is defined as the product of the likelihood or probability of the event and its consequence or effect on the objective. Objectives can be defined as compliance with each quality principle, such as assuring statistical confidentiality (Principle 7) or assuring accuracy (Principle 15).
- The risk of errors in some statistics can be linked to sources such as the quality of source data, the methodology (e.g. sampling), the production system and the working processes linked to data collection, processing, analysis and dissemination.
- Risk analyses are particularly relevant for statistics where errors can have great impact such as for example the consumer price index, statistics on foreign trade and populations statistics.
- Risk and quality management frameworks are complementary and should not operate independently of each other.


statistics
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SDGs
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THANK YOU