

Regional Training Course on the NSDS
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Quality assurance and user satisfaction



PARIS 21

Partnership in Statistics for
Development in the 21st Century

Outline

1. Quality statistics
2. Users generic requirements
3. Quality assurance
4. Quality in the NSDS design process
5. Official statistics as Open Data

Quality statistics

- **Common definition:** fitness for use/purpose
- **ISO 9000 Quality Management System definition:** the degree to which a set of inherent characteristics fulfils requirements.
- Achieving “perfect” quality is neither desirable nor affordable
- Quality has to be sufficient
 - ✓ any increase in quality does not affect the use or the purpose in any way.

Users' Generic Requirements

General users' expectation:

- Statistical data exist when in need
- Statistical data are relevant
- Statistical data are accurate enough
- Statistics are easily accessible to any and all users
- Statistics are interpretable
- Statistical data sets are coherent
- Statistics are delivered in time for proper use and on predictable short or mid-term schedules

Quality Assurance

Points to consider:

- Users have no means to determine statistics quality on their own.
- Trust in data depends on the credibility and reputation of the data producers who have to take necessary steps to assure them.
- Quality assurance management levels:
 - ✓ Managing the statistical system
 - ✓ Managing the institutional environment
 - ✓ Managing statistical processes
 - ✓ Managing statistical outputs

Quality Assurance

Managing the statistical system (National Statistics Council):

1. Coordinating the whole national statistical system
2. Managing relationships with data users and data providers
3. Managing statistical standards

Quality Assurance

Managing the institutional environment:

1. Assuring professional independence
2. Assuring impartiality and objectivity
3. Assuring transparency
4. Assuring statistical confidentiality and security
5. Assuring the quality commitment
6. Assuring adequacy of resources

Quality Assurance

Managing statistical processes:

1. Assuring methodological soundness
2. Assuring cost-effectiveness
3. Assuring soundness of implementation
4. Managing the respondent burden

Quality Assurance

Managing statistical outputs:

1. Assuring relevance
2. Assuring accuracy and reliability
3. Assuring timeliness and punctuality
4. Assuring accessibility and clarity
5. Assuring coherence and comparability
6. Managing meta-data

Quality in the NSDS Design Process

Assessment leads to an understanding of quality issues, as part of the NSDS process:

- Assessment of statistical outputs
- Assessment of user satisfaction and needs.
- Assessment of statistical capacity of NSS (i.e., governance and institutional arrangements, infrastructure, information technology, etc).

Quality in the NSDS Design Process

Strategising leads to:

- Decide how the envisioned NSS will assure statistics are fit for purpose and responds adequately to users needs – possibly agreeing on a quality declaration **(What and Why quality)**.
- Define strategies for improvement of the quality of statistics **(How to)**.
- Define general structure of a quality system **(Who does What & When)** within the NSS.

Quality in the NSDS Design Process

Action plans would include:

- The set-up of desired operational quality system for the NSS as a whole and for each of its components.
- The data quality improvement program for the program or planning period.

Official Statistics as Open Data

Open data in general is:

- easily available, typically via the internet.
- accessible in both human- and machine-readable formats
 - ✓ allows data to be combined and utilized in different ways using computer programs
- free from legal restrictions, usable and re-usable for any commercial or non-commercial purpose
 - ✓ does not require registration, or need to obtain prior permission.
- available at no cost.

Official Statistics as Open Data

Common terms of use of data from open sources:

- **Attribution:** open data provider may require crediting them for data used.
 - ✓ Allows open data providers to receive credit and for downstream users to know where data came from.
- **Integrity:** open data provider may require data users to provide clarification if data has been changed.
 - ✓ very relevant for governments who wish to ensure that people do not claim data is official if it has been changed
- **Share-alike:** open data provider may impose share-alike requirement
 - ✓ any new datasets created using their data are also shared as open data
- Statistical data are open but subject to **confidentiality constraints**

Official Statistics as Open Data

Open Data 5 Star Model (Tim Berners-Lee)

All the below, plus: Link your data to other people's data to provide context

All the below, plus: Use open standards from W3C (RDF and SPARQL) to identify things, so that people can point at your stuff

as (2) plus non-proprietary format (e.g. CSV instead of excel)

Available as machine-readable structured data (e.g. excel instead of image scan of a table)

Available on the web (whatever format) but with an open license



Linked Open Data



Resource Description Framework



OPEN FORMAT



REUSABLE



OPEN LICENSE

Tim Berners-Lee, inventor of the World Wide Web

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