



The role of quality for geospatial statistics

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Outline

1. The Quality Framework of the ESS
2. GSGF and the Quality Framework
3. Quality – the Geostat 4 approach

The ESS Quality Framework

European Statistics Code of Practice



Definition on Quality

Relevance

Accuracy

Timeliness and Punctuality

Accessibility and Clarity

Comparability

Coherence

Quality Assurance Framework



GSGF Principle 1

Use of fundamental geospatial infrastructure and geocoding of statistical information

Obtaining a **high quality, standardized** physical address, property or building identifier

Assigning **accurate coordinates** to each statistical unit (i.e. at the microdata level).

Time and date stamping

Using **more general location** descriptions and/or larger geographies

Accuracy

Relevance

Comparability

Coherence

Timeliness and Punctuality

Comparability

Accessibility and Clarity

Code of Practice

Principles 11 to 15
(Outputs)

Principle 7
Sound Methodology

Principle 8
Appropriate
Statistical Procedures

GSGF Principle 2

Geocoded unit record data in a data management environment

Linkage of a geocode for each statistical unit within a data management environment

Accuracy

Persistent storage of a high precision geocode

Comparability

Enabling data linking processes that aim to **integrate information of varying nature and sources.**

Coherence

Relevance

Integration and management of the **geocode within the dataset**

Accuracy

Enabling address-to-geocode-linking mechanisms.

Accuracy

Code of Practice

Principles 11 to 15
(Outputs)

Principle 7
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GSGF Principle 3

Common geographies for production and dissemination of statistics

Creating a **common set of geographies**

Relevance

Comparability

Gaining from the **benefits of gridded data**

Accuracy

Ensuring that all statistical data is **consistently geospatially enabled**

Relevance

Comparability

Bring users in a situation to **discover, access, integrate, analyze and visualize statistical information seamlessly for geographies of interest.**

Accessibility and Clarity

Relevance

Code of Practice

Principle 11
Relevance

Principle 12
Accuracy and Reliability

Principle 14
Coherence and
Comparability

Principle 15
Accessibility and Clarity

GSGF Principle 4

Code of Practice

Statistical and geospatial interoperability – Data, Standards and Processes

Official Statistics: Generic Statistical Business Process Model (GSBPM), Generic Statistical Information Model (GSIM), Statistical Data and Metadata Exchange (SDMX), and others...

Geospatial community: General Feature Model (GFM) and the ISO19115 metadata standard, plus a number of application specific standards.

The Generic Statistical Business Process Model (**GSBPM**) **needs to refer, to a larger extent, to** the use of geospatial data and methods in the statistical production process.

Interoperability should consider organizational and human aspects more intensively.

Principle 3

Adequacy of resources

Principle 7

Sound Methodology

Principle 8

Appropriate
Statistical Procedures

GSGF Principle 5

Accessible and usable geospatially enabled statistic

Make sure that geospatial statistics is **accessible and usable in the best possible way**

Accessibility and Clarity

Need to identify or, where required, develop **policies, standards and guidelines**, which support the release, access, analysis and visualization of geospatially-enabled information

Accessibility and Clarity

Ensure that data can be accessed while **protecting privacy and confidentiality**

Accessibility and Clarity

Enabling access to data in order to undertake various analyses **that foster decision-making**

Relevance

Code of Practice

Principle 15
Accessibility and Clarity

Principle 5
Statistical Confidentiality and Data Protection

Principle 7
Sound Methodology

Quality – Geostat 4 approach (I)



Proposing an enhancement of the Quality Assurance Framework related to geospatial aspects.

- New methods
- Enhancement of existing methods

Quality – Geostat 4 approach (II)

Quality reporting

- Recommendation what to include in a quality report
- Quality indicators

Difficult to find suitable indicators

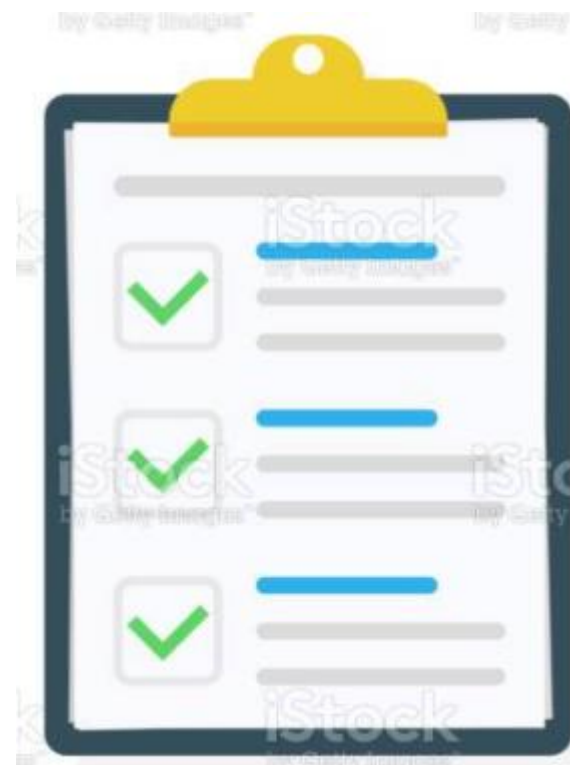
Different language Quality ↔ Geo-community



Quality – Geostat 4 approach (III)

Quality Checklist

- Finding the relevant process steps
- What is necessary to do to achieve sufficient quality when dealing with geospatial aspects in a statistical product.



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