

GEOSTAT 4: GEOCHECK – A Quality Checklist for geospatial processing related to a specific statistical product

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Guidelines for the use of the Checklist

What is GEOCHECK?

GEOCHECK is a generic checklist for a systematic quality assessment of geospatial processing related to a specific statistical product. It is a tool that should support statistical organisations and their teams together with geospatial experts in assessing the quality of the processes involved and considering improvement measures. The checklist is generic in the sense that it applies to every statistical product which intends to produce geospatial outputs.

Who should fill in the checklist?

The checklist has been designed to be filled in by the person responsible for the statistical product (or the main parts of it) in collaboration with the experts responsible for the geospatial-related activities. However, depending on the specific statistical product, it might be useful to involve other experts in the assessment process. Another option to carry out the self-assessment is to fill it in together with the team responsible for the different aspects of the statistical product.

The objectives of GEOCHECK

The checklist has been designed in order to fulfil a number of quite different functions. First of all, it is an assessment tool that should be used to assess the overall quality of the process. The checklist also provides guidance in the consideration of improvement measures and could facilitate a basic appraisal of the risk of potential quality problems. Additionally, it provides a means for simple comparisons of the level of quality over time and across domains (given that data are stored centrally in the statistical agency).

The structure of GEOCHECK

GEOCHECK is structured in a process-oriented way which means that it goes along through the whole process relevant for producing statistics including a geospatial output. Besides providing general administrative information GEOCHECK consists of 6 further parts. First some aspects regarding the design have to be filled out in order to describe some basic concepts of the statistical product. This is then followed by the usual production phases in GSBPM: Collect, Process, Analyse and Disseminate. Finally features of the "Evaluate" phase are under consideration.

Instructions

For each of the following questions, please tick the box which best represents your organisation's assessment related to the specific statistical-geospatial aspect within the statistical product being assessed, and feel free to add any comments and additional observations to explain in more detail your answer, especially when checking "Other(s)" option.

General Information

Name of statistical product:

Reference period:

Name(s) of person(s) involved:

Date for assessment:

Please, click on the date box below and pick the suitable date.

1/14/22

1.Design

1.1. What kind of statistics is involved?

- Survey-based statistics
- Register-based statistics
- Model-based statistics
- Other, please specify:

1.2. What are the units of interest?

- Persons
- Households
- Enterprises
- Other, please specify:

1.3. What is the granularity level of the geospatial input data?

Multiple options can be selected.

- Geographic coordinates
- Addresses, Buildings (unique identifiers)
- Area codes or other geographical classifications
- Other (no geospatial data, geocodes and/or location information)

Comments:

1.4. Do you have a national address register?

- Yes
- In progress
- No
- Not relevant

1.5. Are you applying a national, regional and/or local territorial division?

Examples can be NUTS, LAU and grids.

- Yes,

Describe the territorial division

- No, but another type of territorial division

Please describe:

- Not relevant

2. Collect

2.1. What were the main data sources when collecting geospatial data?

- Derived from authoritative data source (National geospatial agencies or other public institutions responsible for the production and provision of authoritative geospatial data)
- Derived from earth observation
- Derived from mobile operator data
- Derived from another kind of Big Data (e.g., ship tracking, smart meters, etc.)

Which ones:

- Derived during statistical operations

Access to data sources via:

- Exchange of file (e.g., Email, download, etc.)
- Direct access to services (e.g., WMS, WFS, WCS, etc.)
- Direct access to national registers
- Other(s)

If Other(s), please specify:

2.2. Are standardised metadata/documentation for input geospatial data /data sources available?

- Yes

If Yes, please provide last version used:

- No

2.3. Existence of geo-frame: Sampling design includes a geospatial dimension?

Geospatial dimension usually includes geographical areas as Primary Sampling Units (PSU) supporting the sampling frame and design.

Yes, which one

No

Not relevant

3.Process

3.1. Is/Are a standardised or documented method(s) for data matching (geospatial data and statistical data) including quality measures being used?

Yes, which one(s):

- No
 Not relevant

3.2. Is the point-based location (geocoding) used as a matching key variable?

- Yes
 No
 Not relevant

3.3. Are spatial-based criteria being used, when calculating aggregates?

Spatial-based criteria may include point in polygon, nearest neighbour, distance calculations, spatial analyses

Yes, which one(s):

- No
 Not relevant

4. Analyse

4.1. Analyses of statistical information and validation can be enhanced through:

- Operationalisation of spatial analyses
- Depiction of statistical information or results of spatial analysis on maps
- A combination of the alternatives above
- Other(s)

If Other(s), please describe:

- Not relevant

4.2. Are quality requirements followed, when assessing and validating geospatial data/information?

- Yes

Please describe:

- No

4.3. Is/Are any disclosure control method(s) used when managing geospatial data/information?

- Yes

Which one(s), please describe:

- No
- Not relevant

5. Disseminate

The following questions refer to the geospatial output(s):

5.1. Is standardised metadata/documentation for the statistical- geospatial output available?

- Yes, metadata is managed using geospatial standards (e.g., INSPIRE or ISO standards)

Please specify:

- Yes, other type of documentation

Please describe:

- No
 Not relevant

5.2. What statistical-geospatial output formats are available?

- Classic maps (thematic cartography visualisation)
 Geovisualisation tools (e.g., interactive maps, story maps, etc.)
 Dashboards (e.g., statistical indicators monitoring purposes, etc.)
 Open data (e.g., from downloadable files to Linked Open Data)
 Not relevant

6. Evaluate

6.1. Did you produce a geospatial quality report?

- Yes
- No (Please, move forward to question 6.2)

6.1.1. What kind of structure did you use?

- Single Integrated Metadata Structure (SIMS)
- Other(s)

If Other(s), please describe:

- No specific structure

6.1.2. What was the purpose of using the quality report?

- Internal
- External
- Internal and external

6.2. Did you calculate quality indicators?

- Yes
- No (Please, move forward to question 6.3)

6.2.1. What kind of quality indicators?

Please describe:

6.2.2. How do/did you use the quality indicators?

- Internal assessment
- Inclusion in quality reporting
- Other

If Other, please describe:

6.3. Did you collect feedback from prior releases?

- Yes
- No (Please, move forward to question 6.4)

6.3.1. How did you collect it? (e.g., random, survey, etc.)

Please describe:

6.3.2. How much feedback did you get? How many respondents?

- Very rich
- Medium
- Low

Total number of responses: _____

6.3.3. Provide examples for relevant comments on respondents who gave feedback (e.g., professional background, experts, etc.)

Please describe:

6.3.4. Will the feedback help to develop the output?
Was it supportive?

- Very much
- In some way
- Not at all

Please describe the extent to which the feedback was supportive.

6.3.5. Will the feedback help to make the output more meaningful?

- Very much
- In some way
- Not at all

Please describe the extent to which the feedback will help to make the output more meaningful.

6.3.6. Did you change anything based on the feedback?

Please describe:

6.3.7. How do you assess the overall feedback?

- Fully satisfactory
- Broadly satisfactory
- Partly satisfactory
- Not satisfactory

6.4. Do you intend to collect feedback for the actual release?

- Yes
- No

Please provide below any additional observations or comments which did not fit anywhere else in the checklist:
