

A Practical Approach to Quality Control of Geographic Information

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SUMMARY

More and more spatial data is used for decision making on detailed level. Automated decision-making methods are introduced. It has become increasingly important to control and document the quality of spatial data. This is underlined by the preparation of international standards. However, many businesses experiences that it is difficult to fully understand and therefore to apply the international standards on geographic information, for example the ISO standard on spatial data quality (ISO19157). Terminology and evaluation methods could be difficult to understand. A more practical tool is needed to help entities with executing quality control of spatial data, for example businesses that have a mandate to produce data with metadata, or to evaluate data before publication.

At the request of the authority responsible for the National Spatial Data Infrastructure in Namibia, it has been produced a handbook along with an e-learning program, targeting staff with less knowledge about data quality control. We believe that a similar handbook could be useful to other institutions.

For quality control of spatial data, it is normally sufficient to assess the quality elements of logical consistency, completeness, thematic accuracy, positional accuracy, and temporal quality. The handbook describes the process and methodologies for quality control of each of these quality elements, applied to different types of spatial data.

Quality of a dataset is generally defined as the level of meeting predefined specifications, which established the concrete quality measures for the relevant quality elements. A catalogue of measures relevant to spatial data along with the related evaluation methods are presented in the handbook.

The quality measure to be applied for a specific quality element should be defined before executing quality control. However, in many cases proper product specifications will be lacking. The handbook describes how to deal with this issue by collecting information from different sources to establish temporary product specifications.

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