

HJ

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National Ecological Status Survey and Evaluation Technical Specifications-Data Quality Control and Integration

全国生态状况调查评估技术规范——数据质量控制与集成

(English Translation)

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1 Scope of application

This standard specifies the general principles, technical process, data quality control index system, data quality evaluation method, data quality control and integration Data integration and convergence requirements.

This standard is applicable to the data quality control and integration in the process of survey and evaluation of the terrestrial ecological status of the national and provincial administrative regions.

The operational links involved in data quality control and integration in the process of status investigation and evaluation can be implemented with reference to this standard.

2 Normative references

This standard refers to the following documents or clauses thereof. For dated references, only the dated version applies to this standard.

For undated references, the latest edition (including all amendments) applies to this standard.

GB/T 2260 Code of Administrative Divisions of the People's Republic of China GB/T 13989
National Basic Scale Topographic Map Framing and Numbering GB/T 15968 Remote
Sensing Image Plan Production Specification GB/T 35643 Optical Remote Sensing
Mapping Satellite Image Product Metadata GB/T 35764 Public Map Content
Representation Requirements

3 Terms and Definitions

The following terms and definitions apply to this standard.

quality control quality control the process of eliminating data deviation or unreasonable data at all stages in the quality cycle by adopting certain technical measures.

data transfer

The process of organizing and submitting survey and evaluation materials and data in accordance with relevant regulations.

quality assessment

The process of evaluating the accuracy and reliability of the survey and evaluation results by building an accuracy analysis and quality evaluation system.

integration control

Check the data sources, process data, and result data data formats, data accuracy, etc. in the ecological status survey and assessment in accordance with the prescribed methods.

process.

4 General

Data quality control and integration should follow the principles of standardization, operability, and whole-process control.

5 Technical process

This standard formulates the technical flow of data quality control index system construction, clear data quality evaluation methods, data integration and convergence requirements, etc.

process, as shown in Figure 1.

6 National Ecological Status Survey and Evaluation Data

The main data involved in the whole process of data collection, data production and processing and data application, including remote sensing image data, Ecosystem type data, ecological parameter data and field survey/verification data.

7 Data quality control index system

This standard specifies the quality indicators of data sources, data production processes and data products in the national ecological status survey and evaluation.

The whole process of source, data acquisition, data production and processing and data application. According to the characteristics of data types, this standard constructs data including remote sensing images data quality, ecosystem type data quality, ecological parameter data quality, and field survey/verification data quality the quality control index system is shown in Table 1.

8 Data quality evaluation methods

The data quality evaluation method is a means of testing the quality of data. Generally, the quality is measured by pass/fail or score.

The report reflects the overall state of data quality.

8.1 Quality evaluation of remote sensing image data

The quality of remote sensing images is evaluated by examining whether the remote sensing image data meets the specific requirements of the index system. Remote sensing images that meet the requirements Data is qualified.

8.2 Ecosystem type data quality assessment

Evaluate the quality of ecosystem type data by examining the classification accuracy and achievement standardization of ecosystem type data. use the wild the survey/verification data set is used to evaluate the accuracy of ecosystem type data for the national ecological status survey and assessment, as follows.

a) The classification accuracy evaluation of ecosystem type data is interpreted as the percentage of the correct number of samples interpreted by each type to the total number of samples Combined with the confusion matrix evaluation method, the overall accuracy and Kappa coefficient can be calculated according to the confusion matrix. Kappa coefficient can evaluate to evaluate the accuracy of the entire classification map, the conditional Kappa coefficient can evaluate the accuracy of a single class. Kappa coefficient in 9 Data Integration and Convergence

9.1 Data content requirements

9.1.1

In accordance with the requirements for completeness of data content, the data type of the submitted content should be complete and accurate.

9.1.2

Completeness of basic ecological environment data, including basic geographic data, environmental monitoring and statistical data, socioeconomic statistical data, and relevant industry data.

9.1.3

Completeness of ecological remote sensing data, including satellite remote sensing finely calibrated images, ecosystem types, ecological parameters, and ecosystem service functions.

Can wait for data.

9.1.4

The completeness of the ground field investigation/verification data, including the on-site observation data of the ecosystem and the long-term monitoring data of the ecosystem.

9.1.5

Completeness of survey and assessment results data, including remote sensing survey and assessment reports, atlases, intermediate data, and results data.

9.2.1 Basic data

9.2.1.1

Ground field investigation/check data. submit the collection form in Excel (.xls/.xlsx) format according to the field data collection template, at the same time, submit the attached field photo data in JPEG (.jpg) format, and the photo name should be consistent with the data record in the Excel file.

9.2.1.2

National long-term monitoring data of ecosystems. submitted in Excel (.xls/.xlsx) format.

9.2.1.3

Ecological thematic spatial data. It is divided into three categories. vector, grid and table. For vector data, in.shp format; raster Grid data is in standard GeoTIFF (.tif) format, including metadata information, index information (such as.mxd files) and quick views;

Tabular data is in Excel (.xls/.xlsx) format and should be accompanied by a metadata description file.

9.2.1.4

Basic geographic data. It is stored in the standard format of 1:250,000 national basic scale, and the vector data is in.shp format;

DEM data is in standard GeoTIFF (.tif) format.

9.2.1.5

Environmental monitoring and statistical data. mainly submitted in the form of documents and forms. Document format data is in Word (.doc/.docx) format, tabular data is in Excel (.xls/.xlsx) format, and metadata description files should be provided with them.