

HJ

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National Ecological Status Survey and Evaluation Technical Specifications-Ecological Issues Evaluation

全国生态状况调查评估技术规范——生态问题评估

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1 Scope of application

This standard specifies the general principles, technical process, index system and technical methods for ecological problem assessment.

This standard is applicable to the assessment of terrestrial ecological problems in national and provincial administrative regions, and other geographical regions can refer to this standard for implementation.

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 19377 Classification index of natural grassland degradation, desertification and salinization
GB/T 24255 Technical regulations for monitoring desertified land
HJ 1173 National Ecological Status Survey and Evaluation Technical Specifications--Ecosystem Service Function Evaluation
SL190 Soil Erosion Classification and Grading Standard

3 Terms and Definitions

The following terms and definitions apply to this standard.

ecological problem

Degradation of natural ecosystems caused by human activities and changes in natural conditions and the resulting adverse ecological environment effects, including water and soil loss, land desertification, rocky desertification, ecosystem degradation, etc.

water and soil loss

Destruction and loss of water and soil resources caused by external forces such as water, gravity and wind.

land desertification Under the sandy surface conditions of extremely arid, arid and semi-arid and partially sub-humid areas, due to natural factors or human activities, the natural fragile ecosystem balance has been destroyed, and aeolian sand activities have emerged as the main symbol and gradually formed wind erosion and aeolian landform structure landscapes.

Land degradation process.

rocky desertification in the karst fragile ecological environment, due to the unreasonable social and economic activities of human beings, the contradiction between man and land is prominent, the vegetation is destroyed, the soil and water the evolutionary process of loss, decline or loss of land productivity, and gradual exposure of rocks on the surface that resembles a desert landscape.

forest degradation

Under the unreasonable utilization, the forest ecosystem undergoes a process of retrograde succession and continuous decline in productivity. Mainly manifested as forest height, Closure, species diversity and productivity decline.

grassland degradation the process of retrograde succession and productivity decline in grassland ecosystems under unreasonable utilization. The main performance is the height, coverage, Yield and quality decline, soil habitats deteriorate, and productive capacity and ecological functions decline.

wetland degradation

Structural damage, functional decline, and biodiversity loss of wetland ecosystems due to changes in natural environment or the impact of human activities A series of ecological environment deterioration phenomena, such as the decline of wetland productivity, the decline of wetland production potential, and the gradual loss of wetland resources.

4.1 Principles

The assessment of ecological problems should follow the principles of normative, operability, advanced and economical and technical feasibility.

4.2 Objectives and Scope

Clarify the severity, spatial distribution characteristics and changes of various major ecological problems in the assessment area; identify the serious ecological problems in the assessment area.

On this basis, judge the overall change trend of ecological problems in the assessment area. time the scope is one or more years supported by data, and the spatial scope is the assessment area.

5 Technical process

This standard formulates the technical process of ecological problem assessment, as shown in Figure 1.

6 Evaluation Index System

The evaluation index system of ecological problems is shown in Table 1.

7.1 Degree of soil erosion

The soil erosion modulus was calculated and graded using the general soil loss equation. For details, see Appendix A.

7.2 Degree of land desertification

The soil wind erosion survey method is used to evaluate the degree of land desertification in combination with the vegetation coverage and desertified land conditions. For details, please refer to Appendix A.

7.3 Degree of rocky desertification

Within the karst area, the assessment is made according to the comprehensive characteristics of topography, vegetation coverage and lithology. For details, please refer to the appendix Record A.

7.4 Degree of forest degradation

The forest degradation status is assessed according to the forest biomass, and the specific method is shown in Appendix A.

7.5 Degree of grassland degradation

The degradation status of grassland is assessed according to the coverage of grassland vegetation, and the specific method is shown in Appendix A.

7.6 Degree of wetland degradation

Wetland degradation status is assessed by wetland shrinkage and eutrophication status. For details, see Appendix A.

8 Evaluation Results

with land degradation (soil erosion, land desertification and rocky desertification) and ecosystem degradation (forest degradation, grassland degradation and wetland degradation) Based on the assessment results, calculate the area and changes of ecological problems at different levels, and analyze the spatial characteristics and changes of various ecological problems.

Identify the key areas where various ecological problems occur and change, and combine the field observation indicators of the ecosystem to comprehensively analyze the causes of ecological problems and the driving factors provide a basis for quantitative assessment of regional ecological problems and overall change trends.