

HJ

INDUSTRY STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

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National Ecological Status Survey and Evaluation Technical Specifications-Wetland Ecosystem Field Observation (English Translation)

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1 Scope of application

This standard specifies the general principles, technical procedures, sample plot selection and quadratic setting for field observation of wetland ecosystems, field observation Requirements for the indicator system and field observation techniques and methods.

This standard is applicable to the field observation of terrestrial wetland ecosystems in the national and provincial administrative regions, and other geographical areas may 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 3838 Environmental Quality Standard for Surface Water GB/T 27648 Monitoring Index System of Important Wetlands GB/T 36197 Soil Quality Soil Sampling Technical Guide HJ 615 Determination of Soil Organic Carbon Potassium Dichromate Oxidation-Spectrophotometric Method HJ 710.8 Biodiversity Observation Technical Guidelines for Freshwater Benthic Macroinvertebrates HJ 710.12 Biodiversity Observation Technical Guidelines for Aquatic Vascular Plants HJ 1166 National Ecological Status Survey and Evaluation Technical Specifications--Ecosystem Remote Sensing Interpretation

and Field Verification LY/T 1213 Determination of Forest Soil Moisture Content LY/T 2090 Wetland Ecosystem Orientation Observation Index System LY/T 2258 Technical Specifications for Modeling Methods of Standing Tree Biomass LY/T 2259 Technical specification for sample collection for stumbling biomass modeling NY/T 1121 Soil Testing Series Standards SL 276 Hydrological Infrastructure Construction and Technical Equipment Standard

3 Terms and Definitions

The following terms and definitions apply to this standard.

wetland ecosystem

Ecosystems in which wetland plants grow on the surface too wet or with perennial standing water, including swamps, lakes and river wetlands in this standard.

swamp wetland

Has areas affected by fresh, brackish or salt water, where the surface is often over-wet or has thin layers of water; growing swampy and partially wet, watery *Phytophthora* or halophytes; 3 basic characteristics of natural plants with peat accumulation or, although no peat accumulation, with a distinct trophic layer in the soil layer Complex.

lake wetland

Wetlands formed by the process of swamping of the lake itself and its banks or shallow lakes.

river wetland

Wetlands formed by swamping of rivers, riverbeds, banks and floodplains, including rivers themselves.

4 General

Field observations of wetland ecosystems should follow the principles of normativity, operability, advancement, and economic and technical feasibility.

5 Technical process

This standard formulates the identification of wetland ecosystem types, the setting of sample plots, the construction of observation index system, and the definition of field observation techniques and methods.

and other technical processes, as shown in Figure 1.

6 Types of wetland ecosystems

According to the ecosystem classification system in HJ 1166, the types of wetland ecosystems include swamp wetlands, lake wetlands and river wetlands.

7.1 Plot selection

7.1.1

The selection of sample plots should be representative and typical, and avoid the selection of sample plots in areas with unclear ownership and frequent changes.

7.1.2

Field sampling generally relies on existing fixed sample plots, and is appropriately arranged according to the actual situation of each region, such as in the staggered and the number of plots can be appropriately increased in complex areas, and the number of plots can be appropriately reduced in areas with a single type.

7.1.3

For the observation object, if possible, select at least 2 sample plots that can represent the observation object, the surface coverage is relatively uniform, the sample area is 10,000 m².

7.2 Layout of plots

7.2.1

The plots should reflect the changing characteristics of various wetland ecosystems with terrain, soil and human environment, etc.

in 3 replicates.

7.2.2

Set different square sizes according to different vegetation types of wetlands. The forest wetland sample size is 20 m x 20 m, and the shrub wetland is 10 m x 10 m, and the size of the herbaceous wetland sample is 1 m x 1 m.

7.2.3

For homogeneous ground sample plots, simple random sampling should be performed in the area instead of the overall distribution.

7.2.4

For non-uniform ground sample plots, stratified sampling should be carried out according to the degree of spatial heterogeneity within the sample plot, requiring relatively uniformity within the stratum, and sampling within the stratum.

Local uniform sampling is carried out within the layer to express the parameters of each layer.

8 Field observation index system

Field observations of wetland ecosystems are mainly carried out for swamp wetlands, lake wetlands, and river wetlands, including wetland type indicators, ecological indicators, hydrological indicators and soil indicators. According to different observation contents, different field observation indicators are set (Table 1). Observation result record parameter See Table A.1 to Table A.2 in Appendix A.

9.1 Types of wetlands

According to the size of the survey scope, use the method of field survey to determine the wetland type.

9.2 Wetland vegetation types

Using the sample method, classify and count vegetation types in different quadrats, and classify and count multiple quadrats in the same wetland type area.

As a result, the dominant type is used to determine the vegetation type of the wetland.

9.3 Vegetation Coverage

The vegetation coverage of wetland ecosystems was observed by a combination of visual and photographic methods. Use higher pixel camera to obtain vegetation cover the digital photos of the cover were taken repeatedly for 2 to 3 times. Finally, the vegetation coverage of each photo was calculated separately, and the average value was taken as the vegetation coverage of the plot.

Spend. For areas that are not easily recognized by the camera, the vegetation coverage is observed by visual observation.

9.4 Leaf Area Index

The leaf area index of wetland vegetation is measured by a leaf area meter or a canopy analyzer, as follows.

a) For taller herbs and woody plants, use the leaf area index instrument to measure, and then calculate the quadratic mean leaf area index.

The sampling points are distributed at equal intervals along the two diagonal lines of the sample plot, and the distance between the two points is not more than 5 m, and each diagonal line is observed at least 8 times;

b) For a large number of dwarf grasses, sparse and low herbs, the canopy analyzer is used