

**INDUSTRY STANDARD OF THE  
PEOPLE'S REPUBLIC OF CHINA**

**HJ 710.1-2014**

---

**Technical guidelines for biodiversity monitoring. terrestrial  
vascular plants  
(English Translation)**

**Issued on: October 31, 2014**

**Implemented on: January 1, 2015**

---

**Issued by: Ministry of Ecology and Environment**

## Table of Contents

|                                         |     |
|-----------------------------------------|-----|
| Preface                                 |     |
| 1 Scope                                 |     |
| 2 Normative references                  |     |
| 3 Terms and definitions                 |     |
| 4 Observations Principle                |     |
| 5 Observation Method                    |     |
| 6 Observations content and indicators   | .12 |
| 7 Observation time and frequency        | .12 |
| 8 Data processing and analysis          | .12 |
| 9 Quality control and safety management |     |

## Foreword

To implement the "People's Republic of China Environmental Protection Law", "Regulations on the Protection of Wild Plants People's Republic of China", Regulation Fan of observations of biological diversity, the development of this standard.

This standard specifies the main content of land vascular plant diversity of observation, technical requirements and methods.

The Standard Appendix A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q is for information attached record.

This standard is the first release.

This standard is developed by the Ministry of Environmental Protection Science, Technology organization.

This standard is mainly drafted by. Institute of Botany, Chinese Academy of Sciences, Ministry of Environmental Protection, Nanjing Institute of Environmental Sciences.

This standard MEP October 31, 2014 for approval.

This standard since January 1, 2015 implementation.

The standard explanation by the Ministry of Environmental Protection.

Technical Guidelines for the observation of biodiversity land vascular plants

## 1 Scope

This standard specifies the main content of land vascular plant diversity of observation, technical requirements and methods.

This standard applies to the observation within the scope of People's Republic of China land vascular plant diversity.

## 2 Normative references

This standard refers to the contents of the following documents or the terms. For undated references, the latest edition of to this standard.

GB/T 7714 after bibliographic references packet rules GB/T 17296 Chinese soil classification and codes HJ 623 regional evaluation standards Biodiversity HJ 628 genetic resources collection technical specification (Trial) NY/T 87 Determination of soil total K NY/T 88 Soil Phosphorus Test NY/T 1121.4 soil testing - Part 4. Soil bulk density NY/T 1121.6 Soil Testing - Part 6. Determination of organic matter in soil NY/T 1121.24 Soil Testing - Part 24. Determination of total soil nitrogen automatic azotometer law Determination of NY/T 1377 Soil pH Determination LY/T 1223 forest soil firmness

## 3 Terms and Definitions

Vascular plants vascular plant it refers to a vascular tissue of plants, including ferns, gymnosperms and angiosperms.

Trees tree

Refers to a separate trunk, trunk and crown of a tall woody plants distinctions generally mature individuals height of 5 m or more.

Bush shrub

Refers to non-significant independent trunk and branches unearthed after row, or clustered on the ground is relatively little woody plants, a Like mature individuals height is less than 5 m.

Shrub shrubland

It refers to the formation of shrubs community types.

Herbaceous herb

Xylem less developed, stems herbaceous or fleshy plants.

Population it refers to occupy a certain space in the same period a collection of individual organisms of the same species.

**Dominant species** dominant species Refers to the most important position in the community, structure and the formation of a significant environmental effect of controlling the species, number of individuals are usually or a high quantity of biomass.

**Phenology** phenological period it refers to vascular plants with seasonal climate change to adapt to the morphology of plant organs period of change.

**Abundance**

It refers to a plant species the number of individuals in the community, usually by direct counting or visual estimation method was measured.

3.10

**Coverage**

Land foliage of plants covered by the vertical projection area, usually expressed as a percentage.

3.11

**Frequency**

Refers to a plant in the community of all survey quadrats percentage appears.

3.12

**Density**

It refers to the total number of individuals per unit area of a plant.

3.13

**Species diversity** of species diversity Refers Community species richness or ecosystem, the present standard refers to the richness of vascular plant species, including Uniformity of number of species and species of both, there are a variety of Measure Index.

3.14

**Gradient slope**

It refers to the observation plots slope inclination, ie the normal slope and the horizontal angle.

3.15

**Slope aspect**

Refers to the slope in the horizontal plane normal to the direction of projection, with the projection angle and direction of true north, he said.

#### **4.1 Scientific Principles**

Observation plots and observing the object should be representative, to reflect the observation area of vascular plants (the "Plant") Diversity Overall situation; methods of observation should be unified, standardized.

#### **4.2 Operability principles**

Observation program should take into account the natural conditions of the observation area, which has the human, financial and logistical support and other conditions, to take full advantage with existing equipment, technology, information and results, making observation programs efficient and feasible.

4.3 principles of sustainability, Observations should meet the needs of biodiversity conservation and management of biodiversity conservation and management play a guiding and pre Police role. Observing objects, methods, time and frequency, once established, should remain fairly constant.

#### **4.4 Principle of protection**

Observation programs, technical activities and adhere to the principle of protection, should not individual organisms, community composition and structure of habitats caused Influence or change.

#### **4.5 Security Principles**

Observation activities has certain characteristics of field work. Observers should receive professional training, to take safety precautions.

##### **5.1.1 Programming**

Prepare the observation area vegetation types Figure 1. 10000 topographic maps, weather data, flora and fauna and other information on the observation area Domain field survey, the development of scientific and rational observation programs in accordance with the purpose of observation.

##### **5.1.2 Human prepare**

According to the observed object, tasks and schedule requirements, organizational strength enough observation, clear responsibilities of personnel, organizational observation side Training Act, technology, quality control and management, safety, first aid, wilderness survival techniques and other aspects, to ensure the observation mission of the cis Lee completed.