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

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Ecosystem assessment - Regional ecosystem survey methods

生态系统评估 区域生态系统调查方法

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part

1. Structure and drafting rules for standardization documents" Drafting. Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents. This document was proposed and coordinated by the National Technical Committee for Environmental Management Standardization (SAC/TC207). This document was drafted by: Satellite Environment Application Center of the Ministry of Ecology and Environment, Ecological and Environmental Research Center of the Chinese Academy of Sciences, China Standardization Research Institute Institute of Forestry, Chinese Academy of Forestry, Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences, Shandong University, Beijing Normal University, CECEP Ecological Environment Co., Ltd., China Railway Shanghai Design Institute Group Co., Ltd., China Power Construction Group Northwest Survey and Design Institute Co., Ltd., Beijing Construction Engineering Environmental Restoration Co., Ltd. The main drafters of this document are: Hou Peng, Wang Qiao, Ouyang Zhiyun, Xu Bingsheng, Zhai Jun, Chen Yan, Zhang Lijia, Zhu Hanshou, Gao Haifeng, Cui Lijuan, Zheng Hua, Huang Lin, Jin Diandian, Yang Min, Ren Yufen, Xu Weihua, Xiao Yi, Zhang Lu, Kong Lingqiao, Jiang Weiguo, Zhang Qingzhu, Wang Guoqiang, Zhao Yanwei, Cao Wei, Song Zijian, Hou Shan, Zhao Lei, Li Cui, Pei Fuyun, Liu Jianhong, Fan Junlin, Gao Zhen, Guo Lili. Ecosystem Assessment Regional Ecosystem Survey Methods

1 Scope

GB/T 43681-2024 describes the Chinese methods for surveying a regional ecosystem, the field and data work that has to come before any assessment of ecological condition can be made. It is the measurement half of a policy machine: China assigns ecological quality

targets to provinces and to protected areas, and a target is only as good as the survey behind it. The document sets the basic principles, the basic process from survey design through field observation to data processing and quality control, and the survey indicators and methods themselves, covering the ecosystem pattern and its composition, the vegetation and the biological communities, the soil, the water and the abiotic environment, and the human disturbance. It is written to work with the field observation specifications for forest, grassland, wetland and desert ecosystems, and it applies to surveys of administrative regions and of physical geographical regions alike. It takes effect on 1 July 2024.

This document describes the basic principles, basic process, survey indicators and methods of regional ecosystem surveys. This document is applicable to ecosystem surveys in administrative and natural geographical areas.

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document. For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to This document.

HJ1167 Technical Specifications for National Ecological Status Survey and Assessment
---Field Observation of Forest Ecosystems

HJ1168 Technical Specifications for National Ecological Status Survey and Assessment--Field Observation of Grassland Ecosystem

HJ1169 Technical Specifications for National Ecological Status Survey and Assessment
---Field Observation of Wetland Ecosystems

HJ1170 Technical Specifications for National Ecological Status Survey and Assessment
---Field Observation of Desert Ecosystems

3 Terms and definitions

The following terms and definitions apply to this document.

3.1 Regional ecosystem The whole formed by plants and the environment within a specific spatial range through material circulation, energy flow and information transmission.

Note. Mainly includes forests, grasslands, deserts, wetlands and other ecosystems.

3.2 The composition, quantitative characteristics and spatial distribution of various ecosystems.

3.3 The material circulation and energy transfer process of the ecosystem and the various functions and effects it manifests.

3.4 Sensors mounted on high-altitude platforms such as satellites and drones are used to obtain ecosystem reflection and radiation information, and this is used as a basis for studying various Characteristics of ecosystem structure and pattern, process and function.

3.5 Field investigation Based on statistical sampling methods, ground positioning and observation instruments are used to obtain data reflecting ecosystem patterns and structures, processes and functions. Parameters and information.

4 Basic Principles

4.1 Applicability Taking into full consideration the characteristics of the ecosystem and natural geographical environment of the survey area, the main objectives and contents of the regional ecosystem survey should be