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

GB/T 46411-2025

Specification for scientific data harvesting

科学数据收割规范

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1.Structure and Drafting Rules of Standardization Documents". Drafting. Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents. This document was proposed by the Ministry of Science and Technology of the People's Republic of China. This document is under the jurisdiction of the National Technical Committee on Standardization of Science and Technology Platforms (SAC/TC486). This document was drafted by: Computer Network Information Center, Chinese Academy of Sciences; National Science and Technology Infrastructure Platform Center; and China Standardization Research Institute. CAS, National Space Science Center of Chinese Academy of Sciences, Institute of Agricultural Information of Chinese Academy of Agricultural Sciences, Institute of Geographic Sciences and Natural Resources Research of Chinese Academy of Sciences Institute of Aerospace Information Research, Chinese Academy of Sciences, Beijing University of Aeronautics and Astronautics, Institute of Tibetan Plateau Research, Chinese Academy of Sciences, Northwest Institute of Tibetan Plateau Research, Chinese Academy of Sciences Institute of Eco-Environment and Resources, Institute of Microbiology, Chinese

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As a key element of technological innovation, scientific data is experiencing a rapid increase in the scale and frequency of its sharing and exchange, creating a greater need for efficient and timely scientific data exchange. The need is becoming increasingly urgent. Scientific data harvesting, as a method of scientific data interoperability between systems, is initiated by the party acquiring the scientific data. Scientific data or information from another scientific data platform can be obtained through an application programming interface (API). Harvesting operations can be automated and multi-functional. Frequent, on-demand processing reduces manual workload while improving data exchange efficiency. Scientific data management institutions can act as data collection... The party that harvests data can also be the party whose data is being harvested, thereby achieving the goal of on-demand exchange of scientific data between scientific data management institutions. It can effectively improve the standardization and efficiency of scientific data aggregation and exchange among scientific data management institutions. Scientific Data Harvesting Standards

1 Scope

GB/T 46411-2025 is the Chinese national standard covering harvesting metadata from one repository into another - the protocol and the request and response formats, the incremental harvesting since the last run, the handling of deleted records, and the identifiers that keep a harvested record tied to its source. First edition, already in force. Issued on 5 October 2025, it has been in force since 5 October 2025.

This document specifies the content, process, and requirements for the harvesting of scientific data. This document applies to scientific data management institutions conducting scientific data harvesting, biological germplasm and experimental material resource banks, and other physical scientific and technological resources. The platform is used for scientific data harvesting and reference.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

GB/T 30522 Basic Principles and Methods for Standardization of Metadata for Science and Technology Platforms

GB/T 30523 Core Metadata of Scientific and Technological Resources

GB/T 46207 Scientific Data Identification Coding Standard

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1 scientific data In the fields of natural sciences and engineering technology, scientific research activities produce results, as well as those obtained through observation, monitoring, investigation, and testing. Records of original and derived information obtained through methods such as [list of methods], or other data that can be used for scientific research activities. [Source: GB/T 43708-2025, 3.1]

3.2 A set of characters used to uniquely identify scientific data.

3.3 metadata Data that defines and describes other data. [Source: GB/T 18391.1-2009, 3.2.16]

3.4 data entity A set of data content that has a specific theme, can be uniquely identified, and can be processed by a computer.

Note. It generally consists of one or more forms such as data files and databases. [Source: GB/T 39912-2021, 3.7, with modifications]

3.5 Initiated by the party acquiring scientific data, the system proactively obtains scientific data from the other party through interoperability of application programming interfaces between platform systems.