

China Open Science and Open Data Mandate Released

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Notice of the General Office of the State Council on the Measures for Managing the Printing and Distributing of Scientific Data

General Office of the State Council (2018) No. 17

To: The people's governments of all provinces, autonomous regions, and municipalities directly under the Central Government, all ministries and commissions of and departments directly under the State Council

"The Measures for Managing Scientific Data" has been approved by the State Council and is hereby printed and distributed to you. Please implement it carefully.

General Office of the State Council March 17, 2018

(This document is publicly issued)

Measures for Managing Scientific Data

Chapter 1 General Principles

Article 1: For the purposes of further strengthening and standardizing the management of scientific data, ensuring the safety of scientific data, improving the level of open sharing, and better supporting innovation in national science and technology, economic and social development, and national security, these measures are formulated in accordance with the "Law of the People's Republic of China on Scientific and Technological Progress", the "Law of the People's Republic of China on Promoting the Transformation of Scientific and Technological Achievements", and the "Interim Measures for the Administration and Sharing of Government Information Resources."

Article 2: The scientific data mentioned in these measures mainly include data generated through basic research, applied research, and experimental development in the domains of natural science and science of engineering technology. It also refers to the raw data and its derived data obtained through the methods of observation, monitoring, investigation, inspection, and test.

Article 3: These measures are applicable to the activities of collecting, generating, processing, open sharing, and managing and using scientific data supported by government budget funds.

Any unit or individual engaging in activities related to scientific data within the People's Republic of China should implement them in accordance with these measures should such activities fall within the conditions stipulated by these measures.

Article 4: The management of scientific data shall follow the principles of hierarchical management, safety, and controllability, and full utilization for clearly defining the subjects of responsibility, increasing capability building and promoting open sharing.

Article 5: Any unit or individual engaging in the collection, production, use, and management of scientific data shall abide by all relevant local and national law, regulations, and rules, and shall not use such data to engage in activities that endanger national security, public interest, and the legitimate rights and interests of others.

Chapter 2: Responsibilities

Article 6: The management of scientific data shall be carried out under a system of state coordination and division of responsibility among all departments and localities.

Article 7: The State Council's Administration Department for Science and Technology shall play the leading role in the macro-management and integration and coordination of the scientific data of the whole country. Its main responsibilities are as follows:

- (i) Organize research to formulate national scientific data management policies and standards;
- (ii) Coordinate and promote standardized management, open sharing, and evaluation of scientific data;
- (iii) Coordinate and promote the construction and development of the National Scientific Data Center;
- (iv) Responsible for the construction of the national scientific data network management platform as well as data maintenance.

Article 8: The main responsibilities of all relevant departments of the State Council and the provincial People's Governments (henceforth collectively referred to as the competent authorities) with regard to the management of scientific data are as follows:

- (i) Responsible for establishing and improving their respective departments' (respective localities) scientific data management policies, regulations and rules, and publicizing and implementing the national scientific data management policies;
- (ii) Guide their respective legal entities to strengthen and standardize the management of scientific data;

- (iii) In accordance with relevant state provisions, properly perform or authorize one or more relevant units to properly perform the classification for scientific data;
- (iv) Coordinate, plan and establish their respective departments' (respective localities) scientific data centers; promote the open sharing of scientific data;
- (v) Establish perfect and effective incentive mechanisms, and organize and undertake the evaluation and assessment of the scientific data work of the legal entities of their respective departments (respective localities).

Article 9: Related legal entities such as scientific research institutes, colleges, and universities, and enterprises (hereafter collectively referred to as the legal entities) are the main subjects of responsibility for the management of scientific data. Their main responsibilities are as follows:

- (i) Implement national and departmental (local) scientific data management policies; establish and perfect the scientific data management systems of their respective entities;
- (ii) Undertake the collection, processing, production and long-term preservation of scientific data in accordance with relevant standards to ensure the quality of the data.
- (iii) Ensure the confidentiality and safe management of scientific data in accordance with relevant regulations.
- (iv) Establish a scientific data management system, publish open scientific data catalogs and ensure their timely updates, and actively launch the open sharing of scientific data;
- (v) Responsible for the protection of the hardware and software facilities, funds and personnel needed for the operation of the management of scientific data.

Article 10: The scientific data center is an important vehicle for the public sharing of scientific data. It will be established by qualified legal entities entrusted by the competent authorities, and its main responsibilities are as follows:

- (i) Undertake the task of integrating and archiving scientific data of relevant disciplines;
- (ii) Responsible for classifying, processing, analyzing and mining scientific data;
- (iii) Safeguard scientific data, and promote open sharing of scientific data according to laws and regulations;
- (iv) Strengthen the exchange of and cooperation in scientific data at home and abroad.

Chapter 3: Collection, Archiving, and Preservation

Article 11: The legal entities and the producers of scientific data must manage the collection, production, and processing of scientific data in accordance with relevant standards and regulations to form an easy-to-use database or dataset.

The legal entities should establish a quality control system for scientific data to ensure the accuracy and usability of the data.

Article 12: The competent authorities shall establish a scientific data archive system. The archiving of scientific data of their respective departments (respective localities) should be carried out on the basis of the national governmental affairs network and data sharing and exchange platform;

Article 13: All scientific data derived from the science and technology plans (special projects, foundations, and etc.) of all levels financed by government budget funds shall be archived in the relevant science data centers by the leading entities of the projects. The scientific data centers that receive the data shall issue a certificate of receipt.

The managing departments of science and technology plans (special projects, foundations, and etc.) of all levels shall establish a mechanism for first archiving scientific data and then acceptance after inspection of the projects of science and technology plans (special projects, foundations, etc.). All scientific data generated after the acceptance of the project/research question shall also be archived.

Article 14: The competent authorities and legal entities shall establish and improve management systems for the archiving of the data of domestic and foreign academic papers.

When corresponding scientific data have to be submitted overseas for academic papers written and to be published in foreign academic journals using the scientific data generated with the support of government budget funds, the authors shall submit the data to their relevant units for unified management before the paper is published.

Article 15: Scientific data concerning state secrets, national security and the public interest generated by social funds must be archived in accordance with relevant regulations.

The archiving of other scientific data generated by social funds in relevant scientific data centers is encouraged.

Article 16: The legal entities shall establish a system for the preservation of scientific data and provide necessary facilities such as data storage, management, service and security to ensure the integrity and safety of scientific data.

Article 17: The legal entities shall strengthen the building of scientific data personnel teams and establish incentive mechanisms for position creating, performance-related pay, and job title assessment, and etc.

Article 18: The State Council's Administration Department for Science and Technology shall strengthen overall planning. On the foundation of the scientific data centers with

good conditions and obvious resource advantage, it shall optimize and integrate them to form of a national scientific data center.

Chapter 4: Sharing and Utilization

Article 19: The competent authorities shall organize the compilation of scientific data resource catalogs of the scientific data generated with the support of government budget funds according to the principle of openness as the norm and un-openness as the exception. These catalogs and data shall be uploaded to the national data sharing and exchange platform in a timely fashion, open to the public and relevant departments for sharing, and free to be shared on channels used by civilians and the military, with the exception of those specifically stipulated by state laws and regulations.

Article 20: The legal entities shall grade and classify the scientific data, and clarify its confidentiality level and confidentiality period, the conditions under which such data may be released and the person(s) that the data may be released to, and the review procedures; the legal entities shall also publish the open data catalogues of scientific data as required and release it to the public via online download, offline sharing or customized services.

Article 21: The legal entities shall analyze and mine scientific data according to their own needs to form valuable scientific data products and develop value-added services. They shall encourage social organizations and enterprises to develop marketized value-added services.

Article 22: The competent authorities and legal entities shall actively promote the publication and dissemination of scientific data; they shall also support research personnel in organizing and publishing accurate and complete scientific data with clear property rights and high value of sharing.

Article 23: Users of scientific data shall abide by the relevant provisions of intellectual property rights, and indicate and reference the scientific data used when publishing papers, applying for patents, publishing monographs, and etc.

Article 24: When scientific data is required for government decision-making, public safety, national defense construction, environmental protection, disaster prevention and reduction, public welfare research, and etc., the legal entities shall provide such data without compensation. If a fee is really needed, a reasonable standard shall be formulated in accordance with prescribed procedures and the non-profit principle. Such a standard shall be made known to the public and subject to supervision.

For business activities that require the use of scientific data, the parties concerned shall sign a paid service contract to clarify their respective rights and obligations.

All parties concerned shall comply with any special provisions in state laws and regulations.

Chapter 5: Confidentiality and Security

Article 25: Scientific data involving state secrets, national security, public interest, trade secrets or personal privacy shall not be made publicly available. If such data is to be made publicly available, they must be subject to a review of the purposes of use, user qualifications, and confidentiality conditions. In addition, the scope of the release shall be carefully controlled.

Article 26: The collection, production, processing, management and use of scientific data involving state secrets shall be carried out in accordance with relevant state confidentiality provisions. The competent authorities and legal entities shall establish and improve a system for the management and use of such data and strictly manage its production, verification, registration, copying, transmission, and destruction.

If scientific data involving state secrets has to be provided in the course of cooperation and exchanges with a foreign power, the legal entities shall clearly state the type, scope and usage of the relevant data. This shall be reported to the competent authorities for approval in accordance with the confidentiality provisions. After being approved, the legal entities shall complete the necessary formal procedures in accordance with all relevant regulations and a confidentiality agreement shall be signed with the user(s).

Article 27: The competent authorities and legal entities shall strengthen the safe management of the life-cycle of scientific data, formulate data security measures, and strengthen the protection management of data download authentication and authorization to prevent the data from being used maliciously.

The competent authorities and legal entities shall establish a security and confidentiality review system for the open scientific data catalogs that need to be published or scientific data that needs to be provided externally.

Article 28: The legal entities and scientific data centers shall establish a network security protection system in accordance with the national cybersecurity management regulations, use safe and reliable products and services, and improve measures for data management and control, attribute management, identification, behavior tracking, blacklisting, and etc. They shall also improve such security protection systems as tamper proofing, anti-leakage, anti-attack, and anti-virus.

Article 29: Scientific data centers shall establish emergency response management and disaster recovery systems; emergency management systems shall be established according to all relevant requirements for making an offsite backup of important scientific data.

Chapter 6: Supplementary Provisions

Article 30: The competent authorities and legal entities shall establish and improve a system for evaluating the management and open sharing of scientific data.

Article 31: In cases of data forgery, intellectual property rights infringement, and data-archiving not according to relevant provisions, the competent authorities may, according to the severity of the infraction, punish the offending entities by ordering them to make corrections, circulating a notice of criticism, taking disciplinary actions, or meting out administrative punishments according to law.

Units and individuals that violate relevant state laws and regulations shall be prosecuted accordingly.

Article 32: The competent authorities may refer to these measures when formulating detailed rules for implementation. For the management system for scientific data involving national defense, separate regulations shall be made by relevant departments.

Article 33: These measures shall go into effect on the date they are issued.

The article was adapted from this [Press Release](#).

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