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Japan Science and Technology Agency (JST)

Implementation Guidelines: JST Policy on Open Access to Research Publications and Research Data Management

The revised “JST Policy on Open Access to Research Publications and Research Data Management” (hereinafter referred to as “JST Open Science Policy”) aims to reflect both the domestic and international situation, and further promote Open Science.

Described below are common subject matters related to implementing this policy in each program.

1. Open Access to Research Publications

The publications resulting from research projects funded by JST (hereinafter referred to as “research publications”) should be made Open Access in principle. In particular, peer-reviewed research articles (including review papers, and conference papers that are accepted for publication in conference proceedings) should be made openly available within 12 months of publication. Open Access refers to publishing academic outputs in a way that allows everyone to access free of charge via the Internet without restrictions. The JST Open Science Policy is as follows:

[1] Make final accepted peer-reviewed manuscripts¹ and other relevant submitted versions (hereinafter referred to as “accepted author manuscripts”) publicly available by depositing them in an institutional repository² or other relevant mechanisms.³

¹ Refers to authors’ manuscripts after peer review. When publishers accept manuscripts, they enter the editing process for proofreading and formatting (e.g., page layout, logo placement) in preparation for publication.

² Refers to an online archive system for preserving and disseminating digital intellectual output generated by institutes and universities. The list of institutional repositories can be found on the following website:

NII Institutional Repositories List (<https://www.nii.ac.jp/irp/list/>).

³ The approach to making authors manuscripts publicly available is generally called Green Open Access (Green OA).

[2] Publish research publications in journals committed to Open Access.⁴

Approach [1] is recommended, but [2] can be selected.

(1) Applicability

These requirements will apply to all research publications that have been submitted from the official announcement regarding JST Open Science Policy onward.

(2) Research projects in scope

All research projects

(3) Scope – details of Research Publications

JST's open access requirements for research publications apply to peer-reviewed research articles (including review papers, and conference papers that are accepted for publication in a conference proceeding). Research publications under this definition are not necessarily the same as research outputs, which arise from each funding program.

(4) Approaches to making author manuscripts publicly available

It is recommended that accepted author manuscripts should be made publicly available by depositing them in an institutional repository. Other approaches to making them publicly available on websites run by universities, research institutes, or individual researchers are allowed; sharing preprints⁵ is also permitted.

Since consideration should be given to licensing conditions⁶ and length of the embargo period⁷ suggested by academic journals in which research results are published, JST shall discuss with publishers, if necessary, in moving forward with the implementation of this

⁴ The approach to making research publications publicly available in academic journals committed to Open Access is generally called Gold Open Access (Gold OA).

⁵ A version of a paper that precedes publication in a peer-reviewed journal

⁶ The licensing conditions of academic journals are usually described in policies on copyright; they can usually be found on the website of publishers and academic societies or in the following copyright directories:

SHERPA/RoMEO (<http://www.sherpa.ac.uk/romeo/index.php>)

Society Copyright Policies in Japan (<http://scpj.tulips.tsukuba.ac.jp/index/>)

⁷ Certain period at which access to full text of publication in repositories is not allowed to users.

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policy.

(5) Approaches to publishing research publications in academic journals committed to Open Access

Publishing research publications in journals committed to open access is one approach to making them publicly available. The other approach is to pay additional charges to the journal at the time of submission.

Publication charges required or article processing charges (APCs) can be reimbursed as a research result publishing expense within the direct expense of a research project funded by JST.

(6) Other

In achieving Open Access, it is preferable to specify terms of the copyright and the usage rules clearly when the reuse of the research results is allowed, in line with journal policies and the researcher's intention.

2. Handling Research Data

The researcher responsible for a research activity plan of a research project (Principal Investigator, hereinafter referred to as "PI") is required to preserve and manage research data of research projects (hereinafter referred to as "research data") appropriately based on the data management plan developed (hereinafter referred to as "DMP").⁸ Research data underlying publication should be made openly available. The release of other research data, except for underlying data, is also expected. However, data recognized as requiring special considerations in terms of release should be treated appropriately such as exemption of release. In addition, the PI is required to create the metadata, according to the rules set by JST, on research data listed in the Data Management Plan etc.⁹

(1) Applicability

These requirements will be applied to all research projects for which proposals have been called for from the official announcement of JST Open Science Policy onward. The requirement for the creation of metadata on research data listed in the Data Management

⁸ Please also refer to the guidelines established by affiliated institutions or research communities, if available.

⁹ Research data that researchers described in DMP etc. as the objects of the management and utilization.

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Plan etc. will be applied gradually after JST establishes a way to process the metadata.

(2) Research projects in scope

All research projects

(3) Development of DMP

The DMP explains the procedures for managing research data generated as research results from research projects implemented by researchers. Specifically, it refers to the descriptions of policies and plans for preservation, management, release/non - release of research data, restrictions, and so on.

The PI¹⁰ is required to develop the DMP and submit it to JST before the research project begins at the latest.

The DMP should include the following items:

- Policies on preserving and managing research data
- Policies on open/closed
- The framework for providing research data that can be made openly available
- Anticipated methods of reusing data
- Plans to be addressed to promote reuse of openly available research data

(4) Preservation and management of research data

Since preserving and managing research data are essential tasks for advancing research data sharing, they are required to be implemented appropriately based on the DMP and the possibility of continuously preserving data after completion of the research project.

(5) Make research data openly available

(Definition of “openly available”)

“Openly available” in this policy means to release data without any restrictions of users. However, data that require special considerations in terms of release may be exempted.

In terms of reuse of research data, the steps for handling research data generally include the following.¹¹ In this policy, “openly available” refers to [3].

¹⁰ It is anticipated that the PI will develop the DMP; however, other researchers are allowed to do so if it is deemed that they would be better suited to this task.

¹¹ Academic Information Committee, subcommittee of the Council for Science and Technology of the Ministry of Education, Culture, Sports, Science and Technology (http://www.mext.go.jp/b_menu/shingi/gijyutu/gijyutu4/036/attach/1378756.htm)

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- [1] Designate data as not open to the public.
- [2] Share data exclusively among constituent members of research groups¹² or make them available only to specific individuals or groups.¹³
- [3] Open to the public.

Specify the method of handling research data in the DMP, including data that is not open to the public, considering the characteristics of research, surrounding circumstances, and progress of research, as well as economic and social contributions.

(Exceptions to the release of data)

The Academic Information Committee, the subcommittee of the Council for Science and Technology of the Ministry of Education, Culture, Sports, Science and Technology, lists the following research data to be exempted from release.⁸

- Examples of data that should not be released:
 - Data related to confidentiality, trade secret, national interest, or national security¹⁴
 - Data collected for commercial and industrial use
 - Data possessed by private enterprises
 - Data that should be restricted in terms of release under joint research agreements and similar entities
- Examples of data that should be restricted from release:
 - Data that should be protected in terms of privacy protection
 - Data that should be protected in terms of proprietary interest

Agreement between related parties should be respected (e.g., handling of research data resulting from joint research funded both publicly and privately and research projects

¹² Share data exclusively among participants of the research projects and/or within a collaborative research group.

¹³ Permit access to research data only to persons whose IDs have been registered or approved based on their applications (except for participants and research collaborators involved in research projects).

¹⁴ Take note of Rules for Security Export Control System based on the Foreign Exchange and Foreign Trade Act (<http://www.meti.go.jp/policy/anpo/>).

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undertaken at a public research center involving participation of the private sector).

(Release of research data)

It is preferable that research data be made openly available by depositing them in an existing public database or common disciplinary repositories established by academic societies to facilitate reuse of research results. If there is no appropriate public database, institutional repositories could also be used. In some cases, the academic journals to which research publications are submitted suggest designated repositories to deposit data.

(Embargo)

Some cases may require an embargo period and delay in data release to protect the rights of researchers who generate research data and prevent any obstruction to their research activities. Researchers should be involved in the determination regarding whether and how to institute embargoes.

(6) Specify rules for usage of research data

In terms of ensuring incentives for researchers who generate data, it is preferable that the rules for usage of research data by others should be specified and lubricate reuse of data without causing any disadvantages for the researchers.

It is important to select the method and format to be used in managing research data appropriately in order to facilitate reuse. It notes that the data as well as metadata should be managed in the format that accords with the practice and/or recommendation of the respective discipline.

(7) Creation of Metadata on Research Data

JST requires PIs to create the metadata, according to the rules set by JST, on the research data listed in DMP. Metadata is generally defined as the data which consists of a set of information for describing other data. This includes items such as “name”, “summary”, “administrator and his/her contact information”, “location”, “plans for preservation, publication, and sharing of research data” etc.

3. Other

JST may ask for researchers' cooperation in monitoring the achievement status for the handling of research results.

4. Reference Documents

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- “Promoting Open Science in Japan - Opening up a new era for the advancement of Science,” Expert Panel on Open Science, based on Global Perspectives, Cabinet Office (<http://www8.cao.go.jp/cstp/sonota/openscience/>).
- “Promoting Openness of Academic Information (A Summary of Deliberations),” Academic Information Committee, Subdivision on Science, Council for Science and Technology, Ministry of Education, Culture, Sports, Science and Technology (http://www.mext.go.jp/b_menu/shingi/gijyutu/gijyutu4/036/houkoku/1368803.htm).
- “The Release of Research Data for Promoting Open Access of Academic Information” (Draft), Academic Information Committee, Subdivision on Science, Council for Science and Technology, Ministry of Education, Culture, Sports, Science and Technology (http://www.mext.go.jp/b_menu/shingi/gijyutu/gijyutu4/036/attach/1378756.htm).
- “Tsukuba Communiqué,” G7 Science & Technology Ministers’ Meeting in Tsukuba, Ibaraki (http://www8.cao.go.jp/cstp/kokusaiteki/g7_2016/20160517communiqué.pdf).
- “The Basic Idea of Management and Utilization of Publicly Funded Research Data,” Cabinet Office Council for Science, Technology and Innovation (<https://www8.cao.go.jp/cstp/tyousakai/kokusaiopen/sanko1.pdf>)