MRL Policy for Depositing & Sharing Paper Related Data

1. The Significance of Paper Related Data Sharing

"Paper Related Data" refers to the data generated through basic research, applied research, experimental opening, etc. to support the publication of academic papers, as well as data obtained through observation, inspection, investigation, inspection and testing, etc. and used to form papers' charts and the raw data or its derived data support the research conclusions of the paper. The sharing of paper related data is an important evidence for the research results and conclusions of the paper, improving the verifiability and transparency of the research; the sharing of data improves the attention and influence of scientific journal papers; the reuse of data saves manpower and material resources, allowing scientists focus on innovative research; paper related data as a new type of academic achievement will promote innovative cooperation and talent training among disciplines, and promote open scientific practice.

2. Types and Requirements of the Paper Related Data

The data used to directly support the conclusions of the paper shall be shared; the data generated from the research of the paper and reflected in the paper, or the data reused or analyzed for the research of the paper are encouraged to be shared; the raw data, unprocessed data from paper related experiments or observations that are not reflected in the paper are shared voluntarily. Data involving research ethics issue, sensitive information, confidential information, or sharing data that would damage the legitimate rights and interests of third parties should not be shared. For data that should not be shared, if irreversible desensitization processing has been performed or it can be shared for other legitimate and reasonable reasons, the data author can share it after providing a desensitization statement or other supporting documents.

Magnetic Resonance Letters (MRL) encourages authors to submit the paper related data for public preservation, to ensure that the conclusions of the paper are verifiable and reusable, improve the credibility of the paper, and maintain the academic reputation of the paper author. The paper which submitted the related data will be eligible for priority review, priority acceptance, and priority publication. If there is an excellent paper selection activity in the journal, priority will be given to papers that have submitted the related data.

3. Preferred File Format

The journal does not impose restrictions on the format or subject area of the data submission. However, in terms of data reusability and long-term access, it is better to refer to the list of recommended formats first.

If the file format you use is not in the below list, the journal suggest you evaluate it by the three criteria, your submission should meet all or most of the three criteria:

(1) whether the format is common in your discipline;

(2) whether the format has open standards;

(3) whether the format is independent of a peculiar software application, developer or supplier.

Magnetic Resonance Letters (MRL) encourages authors to submit raw data of spectral or image processing (including but not limited to MR images, NMR, LC-MS, GC-MS spectra, XRD patterns).

File type	Preferred format
Plain text	Unicode text(.txt)
Markup language	XML(.xml) HTML(.html) Related files: .css, .xslt, .js, .es
Text documents	PDF/A(.pdf)
RDF	RDF/XML (.rdf) Trig (.trig) Turtle (.ttl) NTriple (.nt) JSON-LD
Spreadsheets	CSV(.csv) ODS(.ods)
Databasefile	SQL(.sql) SIARD (siard) DB tables (.csv)
Statistical data	SPSS Portable (.por) STATA (.dta) DDI (.xml) Data and setup (.csv +.txt) R
Raster images	JPEG (.jpg, .jpeg) TIFF (.tif, .tiff) PNG (.png) JPEG 2000 (.jp2) DICOM (.dcm)

File type	Preferred format
Images (vector)	SVG (.svg)
Audios	BWF (.bwf) MXF (.mxf) Matroska (.mka) FLAC (.flac)
Videos	WMV (.wmv) AVI (.avi) FLV (.flv) MP4 (.mp4)

4. Data License

Authors can choose from the following 8 international data licenses:CC0, CC-BY 4.0, CC BY-SA 4.0, CC BY-NC 4.0, CC BY-NC-SA 4.0, CC BY-ND 4.0, CC BY-NC-ND 4.0 (in descending order of openness of the above data license) and ODbL (for database). Data users must use the data in accordance with the data license agreement chosen by the author.

In order to better disseminate and share paper related data, the journal recommends authors to use the CC BY-NC 4.0 license agreement.

5. Data Sharing Method

(1) Data Access

There are two kinds of data access options. Authors could choose one applicable option for the data sharing.

A. Open Access

When authors choose the open access mode, the submission will be open accessed immediately once acceptance. The open content includes both metadata and data files.

B. Conditional Access

- Accessing after the embargo period

This option is applicable for data that should not be shared immediately. Authors are allowed to set an embargo period for your research data. During the period, only metadata could be accessed openly, and data files would be forbidden to the public. After the embargo period, the data is automatically converted to open access status, and its metadata and data files are accessible to the public.

• Accessing on requesting

This option is applicable for data that should not be shared openly but can be accessed on reasonable requesting. The decision whether to grant/deny access is solely under the responsibility of the data authors. However, in this option, authors should explain the reason in writing and provide necessary supporting materials to the journal.

(2) Data repository

The paper related data encourage to be submitted and shared in a data repository. Our selection criteria and recommended list of data repositories are as follows:

A. Selection Criteria: The data repository shall follow the FAIR principle to ensure the discoverability, accessibility, interoperability and reusability of scientific data. Specifically, it includes the following contents and requirements:

➢ The data repository shall provide discoverable data identifiers for scientific data.

➢ When data is stored in the repository, links and publicly shared permanent access addresses should be provided for editorial department and reviewers to review.

➢ Metadata and files should support interoperability and provide an open metadata harvesting interface.

➢ The data repository should support the reuse of data, provide a common standard metadata and dissemination distribution path, and provide support for data reuse.

B. Recommendation List

➢ Science Data Bank (ScienceDB)

6. Data Review

This journal will execute the stylistic review of the paper related data submitted by authors, mainly reviewing whether the data has been uploaded, whether the uploaded data is accessible, and whether authors submit the Data Availability Statement (if requested), etc.

Authors should complete the data submission during the paper submission stage.

7. Data Availability Statement

"Data Availability Statement" is an explanatory document or text on whether the paper related data can be obtained and the specific way of obtaining it. It mainly includes the storage method and access link of the paper related data. The use of the "Data Availability Statement" helps to improve research transparency and reproducibility, and is of great significance to the repeated verification of the paper's conclusions, data reuse, and research integrity.

The Data Availability Statement should include the following: how the data is stored and access links, a unique identifier for the data (if any), and the name of the software

or tool that opens or uses the data. If the paper related data is data that should not be shared, the specific conditions and methods for accessing the data should be clearly stated and given. Authors should attach the Data Availability Statement after the main body of the paper and before the reference.

The Data Availability Statement template is as follows, for author's reference:

1. General Template: The related data (DOI/CSTR:____) for this paper is available in the (database name)database(permanent web link).

2. Data requiring special software tools to open: The related data (DOI/CSTR:____) of this paper can be accessed in the (database name) database(permanent web link), and the software for opening the data is (software name).

3. Data that should not be shared: The related data of this paper is data that should not be shared, and can be obtained from the author for reasonable reasons. The author's contact information:___.

8. Data Citation

(1) Why data should be cited formally

As a kind of research output, research data should be credited. Formal data citation in publications can not only provide positive incentives to data sharing but enhance the transparency of the research and effectively facilitate the tracking of data reuse. The journal requires to cite data in publications formally.

Paper related data should be credited as the result of the author's intelligent labor. Data citation can enhance the influence of scientific data and provide evidence for the research that cites the data. This journal provides standardized data citation format for the data.

(2) How to cite research data

ScienceDB supports a variety of data citation format such as GB/T 7714-2015 for users to choose and copy directly.

MRL requires others to formally cite the paper related data and to follow the citation format as: China National Standard GB/T 7714-2015 (numeric).

Author name(s). Dataset title[DS/OL]. Science Data Bank, Year of Data Publication [Date of Access]. <Dataset URL>. <DOI>.

For example: Liu Qiao, Nie Yong, Wang Xin, et al. An inventory dataset of glacier and glacial lake related hazards (events) along the China-Pakistan Economic Corridor[DS/OL]. Science Data Bank, 2020[2022-11-03]. https://doi.org/10.11922/sciencedb.j00001.00145. DOI:10.11922/sciencedb.j00001.00145.

9. Help and Support

(1) Data Submission Process: Science Data Bank (ScienceDB)

- Registration and Login: The author can choose the account of the data repository to register and log in, or select the third-party user to authenticate login supported by the repository.
- Data Submission and Edit: The author creates a new data through the data submission entry, at which time the data is assigned a unique identifier (CSTR and DOI) and private link. In this process, the author fills in metadata information, uploads data files, selects open sharing mode and other information. At this time, the author can temporarily save the draft and edit the information until submission. After data submission, if the data auditor revises the data, users need to modify the data until the data is approved. Before data release, data can only be reviewed by editorial department through the private link.
- Data Release and Dissemination: After releasing, the unique identification of the data takes effect and the data can be retrieved on the repository and dissemination index platform.
- Data Update: Once the data is published, if additional files or other data update operations are needed, the author shall initiate the creation of a new version of the data and submit the updated information. As with the old version, the submission needs to be reviewed first before releasing.

(2) Contact Information

For more questions about paper related data submission, please contact:

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