

GENERAL

The Data Papers in *Ecological Research* aim to significantly contribute to the development of ecology by electronically archiving excellent research data and accompanying metadata on any ecological process to make them available to the public.

Review Process

In the review process, a Data Paper will be firstly evaluated for its ecological significance and overall quality. It also will be examined technically to maintain the usability of the archive. The responsibility for the technical review rests with the Data Paper Editor. The acceptance criteria for all Data Papers are originality, the ecological significance of the data, sufficient description of the content, and suitability of the data format. The data should contribute to the development of ecology. In particular, it is required to be sufficient as a long-term and/or a large-scale ecological study and suitable for being reused.

Publication

The title, author(s), affiliation(s), contact address(es), abstract, keywords, metadata (description on the dataset), and URL(s) of the website where the data and metadata are available will be published in *Ecological Research*. The abstract, keywords, and URL(s) are freely accessed by readers. The general information of metadata will be also published on the website managed by the Japanese Long-Term Ecological Research (JaLTER) Network. Prior to the publication of the Data Paper, data should be archived either on the JaLTER Network depository or other open-access depositories if the file size requires it (see File size limitation, APPENDIX 1). However, the authors should consult with the Data Paper Editor in case they want to use another open-access depository rather than JaLTER Network.

Data Policy

The data and metadata of all Data Papers should be made publicly available. The data and metadata archived in the JaLTER Network will follow the policy of JaLTER Network Data Policy.

<http://www.jalter.org/en/datapolicy/>

Copyright

The copyright for the Data Papers published in *Ecological Research* will be owned by the Ecological Society of Japan. However, authors retain the copyright to the data and metadata. Open Data licenses such as Creative Commons CC BY 4.0 international (CC BY, CC BY-SA) (<https://creativecommons.org/licenses/by/4.0/deed.en>) would be preferred for data licensing.

PREPARATION OF MANUSCRIPTS

Parts of the manuscript

A Data Paper consists of three parts: (1) the abstract and keywords, (2) the metadata with references that describe the content of the data, and (3) the electronic file(s) in which the research data are stored.

(1) Abstract and keywords

Provide an abstract (up to 250 words) and keywords (up to 5).

(2) Metadata

Metadata provides documentation of the content of the data. Metadata should be detailed enough that the secondary data user(s) can clearly understand the nature or character of the data. Pictures, figures, photographs (such as photographs of study sites), conceptual diagrams, or simple statistical summaries may be included in the metadata to explain the characteristics or outstanding features of the data. The authors are requested to assign continuous table and figure numbers. Metadata texts should generally adhere to the Author Guidelines for *Ecological Research*.

The authors should make the metadata a structured document divided into sections. “A guide for the recommended structure” and the *Ecological Research* Data Paper Archives can be referred, but the structure would mainly depend on the properties of the data. The basic construction of metadata is as follows.

- **Introduction:** Describes the background and the ecological significance of the data.
- **Methods:** Provides detailed information about how the data were collected and how the dataset was created. Mind that, for secondary data users, the design of the experiment(s), measurement procedures, names of chemicals and instruments, or methods to verify the quality of the data is important information to understand the nature of the data.
- **Data structure:** The physical structure of a data file (*e. g.* description of data columns), units of values, symbols indicating anomalies, outliers, or missing values, and any additional information about the data should be described in detail. The International System of Units (SI) must be used.
- **Acknowledgments:** These should be as brief as possible. The grants that require acknowledgment can be mentioned. The names of funding organizations should be written in full. Note that the detailed information of research projects that support the data (*i.e.* project titles, personnel, and funding), including joint international researches, should be described in the Project section (see “A guide for the recommended structure”).
- **References:** Information about literature related to the dataset may be helpful for the secondary

data users. If other datasets related to the submitted dataset exist (*e. g.* data collected in the same location by a different type of observations), they should be cited.

(3) Electronic data file(s)

Author(s) must confirm the accuracy and authenticity of the data prior to submission. The data should be readable, and the meaning clear for the secondary data users. If anomalies, outliers, or missing values are included in the data, a distinctive number or symbol should be used to clearly identify those values.

Data should be logically and consistently formatted. A data file should be in a format that is generally and widely used, with the UTF-8 encoding. Tabular data in proprietary spreadsheet formats (*e. g.* Excel) are not acceptable and will be returned for reformatting in tab-delimited, comma-delimited, or space-delimited format. Digital geospatial data should be submitted in formats readable by common GIS software (QGIS, for example). Before submitting other types of data, please consult the Data Paper Editor. Multiple files should be named individually with concise and informative filenames.

File size limitation

Author(s) can use the JaLTER Network depository to archive data. However, the JaLTER Network depository has a size limitation of 1 GB per dataset, and 512 MB per file. Therefore, authors who want to publish data exceeding such limits should consider other open-access archives (see APPENDIX 1).

Technical Advice

Technical questions about Data Papers should be addressed to the Data Paper Editor.

SUBMISSION

Prepare title page (title, author(s), affiliation(s), abstract, and keywords) and metadata (data description) in a Word file for submission. Data files must be uploaded to *Ecological Research* ScholarOne Manuscript as “Supporting Information for review and online publication only”. Multiple data files should be compressed in a .zip file. Note that the .zip file must not include the Word file of the metadata or the tables and figures cited in the metadata.

The ScholarOne Manuscript submission system allows single files up to 100 MB. Therefore, authors should submit download links (*e.g.* from personal cloud storage) to access large files for review. The download links should be submitted by separate in a Supporting Information file, and authors should clearly state in the cover letter that they are providing download links to access such large data files for the reviewing process.

AFTER ACCEPTANCE

Accessible URL for the data

If the paper is accepted for publication, authors will be requested to insert at the end of the abstract the URL of the website where the data and general information of metadata are available.

Sample text:

The complete dataset for this abstract published in the Data Paper section of the journal is available in electronic format in MetaCat in JaLTER at http://sample_URL.org/.

Preparation of the post-print file upon manuscript acceptance

Post-print files upon accepted manuscripts may be deposited at the website managed by JaLTER (MetaCat) as Data descriptors (detailed metadata). The Editorial Office strongly recommends the author(s) to submit the post-print file for the availability. Since Data Paper articles in *Ecological Research* are basically non-open access, if the author(s) deposit the post-print file on a JaLTER website, other potential data users could freely access not only to the electronic data file(s) or the general information of the metadata but also to the detailed description written in the final version of the paper.

Updates

Published materials in Wiley (i.e. published Data Paper) will not be updated. On the other hand, the accepted version of data files, Data descriptors (detailed metadata), and the general information of metadata will be accessible on the JaLTER website. Please inform the Editorial Office when the authors' contact information should be changed, or when there are necessary updates in the data files and/or metadata. Data files and metadata on the JaLTER website can be updated upon request at any time. However, in order to ensure consistency with the published Data Paper, the accepted versions of data files and Data descriptors cannot be replaced. Author(s) can only add their updated files with names that are clearly distinguishable from the accepted version; for example, "X_DB_published_in_ER_on_mmyyyy.csv" on the accepted version and "X_DB_updated_on_mmyyyy.csv" on the updated version. The Ecological Society of Japan and JaLTER provide long-term maintenance of a publicly accessible archival copy on the JaLTER Database. For data stored in other depositories rather than JaLTER (APPENDIX 1), data updates should be made on the authors' responsibility, concurrently with that of the metadata.

APPENDIX 1

The list of public depositories for data archiving authorized by the Data Paper Editor (as of 07 August 2020).

- Dryad (<https://datadryad.org/>)
- Figshare (<https://figshare.com/>)
- GBIF (for biodiversity data only) (<https://www.gbif.org/>)

If authors want to publish data in the global network of GBIF, authors should contact the node of GBIF in their own countries or regions (in Japan, GBIF Japan = JBIF).

<https://www.gbif.jp/v2/en/>

Ecological Research does not cover the cost of uploading data to such public archives unless otherwise indicated.

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