

Ecological Research: Guidelines for Data Papers

GENERAL

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

- Review Process

In the review process, a data paper will be evaluated for its ecological significance and overall quality first, and also will be examined technically to maintain the usability of the archive. Responsibility for the technical review rests with the Data Paper Editor. The acceptance criteria for all data papers are originality and ecological significance of the data, sufficient description of the content, and suitability of the data format.

- Publication

Only the abstract and keywords are published in *Ecological Research*, and the metadata will be published on the Web site managed by the Ecological Society of Japan and the JaLTER (Japanese Long-Term Ecological Research) network. http://db.cger.nies.go.jp/JaLTER/ER_DataPapers/ Before the acceptance, the data should be archived either on the JaLTER database or other open-access archives which Data Paper Editor certifies (see Appendix 1). The authors should consult with Data Paper Editor in cases they want to use other archives.

- Data Policy

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

- Copyright

The copyright for the abstracts of 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.

PREPARATION OF MANUSCRIPTS

- Parts of the manuscript

A data paper consists of three parts: (1) the abstract and keywords in *Ecological Research*, (2) the electronic file(s) in which the research data are stored, and (3) the metadata that describe the content of the data.

- Data papers in *Ecological Research*

The title, author(s), affiliation(s), contact address(es), abstract, keywords, and URL of the Web site where the data and metadata are available will be published in *Ecological Research*.

- Data file(s)

Author(s) must confirm the accuracy and authenticity of the data prior to submission. The data should be readable and its meaning obvious for the secondary data user(s). Especially if anomalies, outliers, and/or missing values are included in the data, a distinct 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 as generally and widely used as possible. For tabular data, ASCII (fixed-format, tab-delimited, comma-delimited, or space-delimited) is the preferred format for submission. Tabular data in proprietary spreadsheet formats (e.g., Excel) are not acceptable and will be returned for reformatting in ASCII. Rasterized digital geospatial data should be submitted in IDRISI- or ERDAS-compatible formats; vectorized geospatial data should be submitted in ARC/INFO export format. Before submitting other types of data, please consult the Data Paper Editor.

Multiple files should be named individually with concise and informative filenames and be compressed as .ZIP or .TAR files. They should be uploaded to Editorial Manager as Electronic Supplementary Materials.

- Metadata

Metadata provide 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.

- Methods: Factors such as design of the experiment(s), steps in measurement, names of chemicals and instruments, and processes for checking quality are important for the secondary data user(s) to understand the nature of the data. Provide detailed information of how the data were collected and how the dataset was created.
- Content of data file: The physical structure of a data file (e.g., description of each data column), units of values, symbols indicating anomalies, outliers and/or missing values, and any additional information about the data should be described in detail. The International System of Units (SI) should be used.
- Citation: Information about literature related to the dataset may be helpful for the secondary data user(s). If another dataset related to the dataset exists (e.g., data collected in the same location by a different type of observation), it should be cited.
- Acknowledgments: These should be as brief as possible. Any grant that requires acknowledgment should be mentioned. The names of funding organizations should be written in full.
- HTML metadata file(s)

This type of metadata will be used for publication on the Web site managed by the Ecological Society of Japan and the JaLTER. Pictures, figures, and photographs, such as photographs of the site, a conceptual diagram, and/or a simple statistical summary, may be included in the metadata to explain the characteristics or outstanding features of the data. However, so as to avoid any confusion with regard to the data, authors are requested to exercise discretion in deciding the number of figures to be included.

Authors should make the metadata a structured document divided into sections. Although formal standards for structuring metadata content have not been defined, authors should aim to create metadata that provide an exhaustive and readable document, referring to the metadata files of accepted data papers.

Ecological Research Data Paper Archives:

http://db.cger.nies.go.jp/JaLTER/ER_DataPapers/info

Metadata text should generally adhere to the Instructions for Authors for *Ecological Research*.

The HTML file should adhere to standard HTML specifications. The metadata ideally should be submitted in a single HTML file. If multiple files are required to adequately document the data, provide a group of HTML files linked in a hierarchical format to a default.html master file.

Tables and figures should be embedded in the metadata where appropriate. Tables should be in HTML, and figures should be embedded in .JPG, .GIF, or .PNG files. An equation may be embedded in the HTML file as a graphic when possible or may be written in mathML format or free-text. It is recommended that the width of tables and figures be smaller than 700 pixels.

- Technical Advice

Technical questions about a data paper should be directed to the Data Paper Editor.

- Updates

Inform the Data Paper Editor when contact an e-mail address or other contact information changes.

Data and metadata on JaLTER Web site can be updated at any time. Please inform the Data Paper Editor about the appropriate method of update. The Ecological Society of Japan and the JaLTER provide long-term maintenance of a publicly accessible archival copy on the JaLTER Database. For the data stored in other archives (Appendix I), data update should be made on authors' responsibility concurrently with that of the metadata.

Appendix 1

The list of public archives in which data archiving are authorized by Data Paper Editor (as of 31 April 2016).

Dryad (<http://datadryad.org>)

Figshare (<http://figshare.com>)

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

[Revised 10 June 2016]