Data Journals:
Bridging Repositories and Traditional Publishing

Data journals are scholarly outlets that disseminate research datasets through data papers rather than traditional analytical articles. These papers describe the context, methods, structure, quality controls, and potential for reuse of a dataset. As formal, citable research outputs, data papers recognize datasets as scholarly contributions, enabling academic credit, increasing visibility, and supporting broader reuse within the research community.

Enhanced Discoverability & Indexing

Most data journals are indexed by major scholarly databases and have an impact factor, providing researchers with visibility and academic credit.

Peer-Reviewed

Data journals provide peer-reviewed quality control, adding detailed context on methods, sampling, and validation.

Amplified Synergy & Impact

Repositories secure and preserve data, while data journals add peer review and context, jointly boosting data reusability and value.

Basic Structure of a Data Paper

Although these sections are commonly included in most manuscripts, you should always review the target journal's submission guidelines to ensure you meet any specific requirements.

Background
The rationale for data collection and its scientific or societal relevance. The problem or knowledge gap addressed by the dataset.

Methods
How the data were generated, including sampling, instruments, experiments, or observations. Description of processing, cleaning, and quality control procedures.

Data Description
The dataset's structure, including files, tables, variables, and units. Temporal and spatial coverage, file formats, and metadata standards.

Data Availability
The repository or archive where the data is hosted, a persistent link, accession number, and licensing terms, along with any applicable access restrictions.

Usage Notes
Guidance for reuse and analysis. Known limitations, caveats, or potential biases.

Acknowledgments
Funding sources, collaborators, and supporting institutions.

Related Outputs
Any protocols, code scripts, or relevant associated publications.

Examples of Data Journals

Field	Title & Access Link
All (Multidisciplinary)	Scientific Data, Data in Brief, Data, Data Science Journal
Biology & Life Sciences	Biodiversity Data Journal, GigaScience, BMC Genomics
Earth Sciences	Earth System Science Data, Geoscience Data Journal
Physical Sciences & Engineering	Journal of Chemical & Engineering Data, IUCrData, Chemical Data Collections, Journal of Physical & Chemical Reference Data
Social Sciences & Humanities	Journal of Open Psychology Data, Journal of Open Archaeology Data, Research Data Journal for the Humanities and Social Sciences, Journal of Open Humanities Data

Note: Some scientific journals also provide the option to publish data papers. For more options, visit https://doi.org/10.5281/zenodo.7082126 or consider consulting with us.

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