

Helmholtz Open Access & Copernicus Publications

Earth System Science Data – A Data Publishing Journal

Hans Pfeiffenberger, Sünje Dallmeier-Tiessen

The Problem

The bulk of scientific data is not made available for reuse - however valuable it may be - and not even preserved in too many cases. There are two main reasons for this behavior:

- Scientists, who collected the data in arduous work, expect others not to recognize their "authorship" of data.
- Thoroughly publishing data for reuse needs additional work, which is not rewarded like the regular journal article in personal or institutional evaluations.

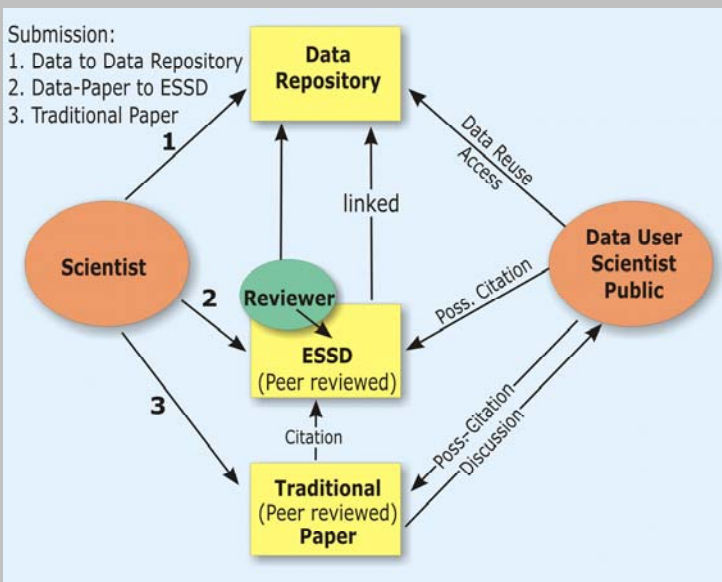
There is no „cultural norm“ in science for publishing and recognizing the value of data.

The Solution: Data in a Peer-Reviewed Journal!

The journal and its publisher will not themselves hold the data but let authors refer to the datasets in certified repositories using persistent identifiers. The articles in ESSD will describe the datasets characteristics in sufficient detail – to facilitate easy reuse (see template below). The editorial board has determined initial criteria for acceptance, which include completeness of documentation, plausibility, usability and significance of the dataset(s) being submitted. The application of criteria of review will vary by discipline.

Result: Data will be peer reviewed, published and is accessible for future reuse. Scientist get countable reward: a paper and possible citations.

Embedding Data Publishing in the Scientific Workflow



Result. 2 publications for the scientists & data published and preserved with full description → future reuse secured. Moreover: enhanced discussion of results and data possible, more citations, more transparency in research.

Manuscript Template – A Data Documentation Template

Basic elements of the manuscripts in ESSD

Data Coverage and Parameter(s) Measured.

List of parameters measured and given in the described dataset, coordinates and world map showing the location or study area.

Instrumentation.

Description of the measurements done and the instrumentation used to produce the given dataset. Special attention is given to error estimates as well as a discussion of potential sources of errors in the dataset.

Provenance and Structure of the Dataset.

A short of summary of the aims and characteristics of the projects or campaigns in which the dataset has been produced.

- Subsets of Data: description of possible subsets and their characteristics
- Related Datasets: datasets connected to the presented dataset and thus of possible interest for readers of this paper.

Data Access.

Repository Reference; Persistent Identifier of the dataset submitted to a certified repository.



Helmholtz Association:

The Helmholtz Association of German Research Centres contributes to solving major challenges facing society, science and the economy with top scientific achievements in six research areas. With 26,500 employees in 15 research centres the Helmholtz Association is Germany's largest scientific organisation.

Mission:

We contribute to solving grand challenges which face society, science and industry by performing top-rate research in strategic programmes in the fields of Energy, Earth and Environment, Health, Key Technologies, Structure of Matter, Transport and Space.

Website:

<http://oa.helmholtz.de>

Picture credits:

AWI, GFZ, GKSS

Presented on occasion of Berlin 6, Open Access Conference at Dusseldorf, Germany 11-13 November 2008