COPDESS

(COALITION FOR PUBLISHING DATA IN THE EARTH & SPACE SCIENCES)

www.copdess.org

OUTLINE

- **Brief introduction to COPDESS**
- **Updates:**
  - COPDESS Directory
  - Best Practices for Journal Guidelines to Authors
    - Slides
  - TOP Guidelines
- **Next foci**

COPDESS

- **founded in October 2014**
- **permanent international coordinating conference of publishers and data facilities & consortia on Earth and space science data publication**

Workshop Oct 2014

COPDESS: GOALS

- **foster consensus and consistency among publishers, editors, funders, and data repositories on how data that are part of scholarly publications should be curated and published**
- **help data repositories collect the data that are within their scope more easily and comprehensively, raise their visibility**
- **help authors properly submit their data to repositories up front**
  - Simplify data submission process
  - Provide sufficient information about it
- **help journals, funding agencies, and the research community by doing all of the above**

- **reaffirm and ensure adherence to our existing journal and publishing policies…regarding data sharing and archiving...**
- ***Earth and space science data should, to the greatest extent possible, be stored in appropriate domain repositories that…follow leading practices*, and can provide additional data services.**
- **released 15 January. Article in Eos.org**
  - https://eos.org/agu-news/committing-publishing-data-earth-space-sciences
- **additional signatories still welcome**

STATEMENT OF COMMITMENT COPDESS.ORG


AMERICAN METEOROLOGICAL SOCIETY
AGU
American Geophysical Union
The Geological Society
serving science and profession
WILEY
Publishers Since 180
NSF
OpenTopography
BCO-DMO
Biological & Chemical Oceanography Data Management Office
LACCORE
LacCore.org
National Lacustrine Core Facility
PALEONTOLOGICAL SOCIETY
1908
CCHDO
CLIVAR & Carbon Hydrographic Data Office
EARTHCUBE
DRYAD
COS
Community Inventory of EarthCube Resources for Geoscience Interoperability
CINERGI
LACCORE
LacCore.org
National Lacustrine Core Facility
EUROPEAN GEOSCIENCES UNION
ELSEVIER
MINERALOGICAL SOCIETY OF AMERICA
NEOTOMA
Paleoecology Database
Plio-Pleistocene to Holocene
CUAHSI
universities allied for water research
Springer
icdp
UNAVCO
COOPEUS
IEDA
GFZ
Helmholtz Centre
POTSDAM
nature
AAS
GDC
Geological Data Center
geochemical society
Copernicus Publications
The Innovative Open Access Publisher
NSIDC
National Snow and Ice Data Center
IRIS
ICSU
WORLD DATA SYSTEM
Science
AAAS
Nordicana D
Magnetics Information Consortium

COPDESS YEAR 1

- Web site established
- Develop the COPDESS directory of data facilities
- Outreach at relevant conferences & workshops
- Organization of the 2nd COPDESS workshop in Oxford, UK

NSF

ALFRED P. SLOAN FOUNDATION

CENTER FOR OPEN SCIENCE

COPDESS Directory of Repositories

Submit Repository

COPDESS

Coalition on Publishing Data in the Earth and Space Sciences

"This directory will help you, as an Earth and Space science researchers, author, or journal, find the right repository for your data, based on data type, discipline, and other relevant repository factors."

Repositories Submission Form

Starred (*) fields are required.

Repository Name*:

Repository name that will be displayed to users.

Web Address/URL*:

The home page or main page for accessing or entering data.

Persistent Url:

Accepted Taxonomy*:

Select the terms that best describe your repository scope. Think something is missing here? Suggest an addition.

- 1 All Terms
  - 51 Geoscience
  - 52 Interdisciplinary
  - 53 Cyberinfrastructure and Computer Sciences

Accepted Data Types*:

Enter key words or phrases that describe the data and data types you allow; click add after each entry; can also list data types or sources you do not accept if that provides important clarity.

Can't find a specified datatype? Enter one here.

- Collection
- Dataset
- Event
- Image
- Interactive Resource
- Moving Image
- Physical Object
- Service

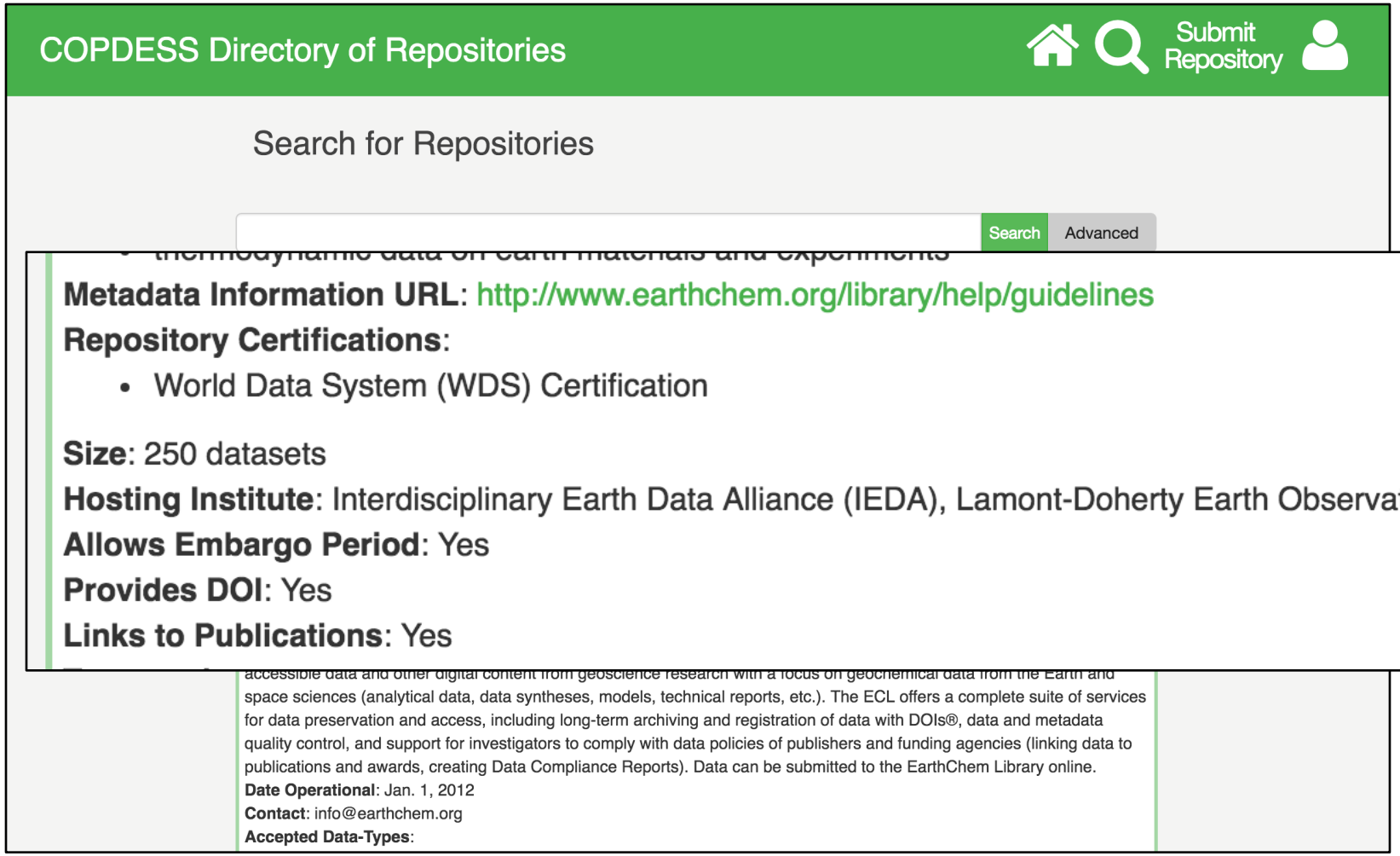
Description:

Provide a description of your repository.

Hosting Institution:

List the hosting institution for the repository if appropriate.

COPDESS DIRECTORY



RE3DATA.ORG & COPDESS

- Goal: Avoid multiple repository directories!
- Action: Enable COPDESS to dynamically query and embed a subset of selected records into its website (currently being developed by COS) and add/extend selected vocabularies.
- Memorandum of Understanding between re3data.org and Center for Open Science.

2ND COPDESS WORKSHOP

OCTOBER 20-21, 2016, OXFORD, UK

ACTION ITEMS
2ND COPDESS WORKSHOP

- Develop guidelines for standardizing publishers' recommended best practices.
- Publishers to make sure that aspects of data are included in author workshops.
- Publishers start implementing the Joint Declaration of Data Citation Principles and stronger messages about use of IGSN and ORCID.
- Increase outreach to researchers and editors.

BEST PRACTICES FOR JOURNAL GUIDELINES

COPDESS

Coalition on Publishing Data in the Earth and Space Sciences

Search …

COPDESS Suggested Author Instructions and Best Practices for Journals

The Coalition on Publishing Data in the Earth and Space Sciences (COPDESS) develops and recommends best practices for journal author instructions around data and identifiers as a resource to the community. These best practices are consistent with and based on the COPDESS Statement of Commitment and have been developed with guidance from participants in COPDESS.

Data Policy Statement
Data Citation
Sample Citation and Identification
Crossref Funder Registry
ORCIDs

EXAMPLE: BEST PRACTICES FOR DATA CITATION

- Journals should include data citations in the reference section of articles.
- Instruct copy editors to endeavour to identify data citations that are in line in the text and query authors about creating citations following guidelines above in references.
- encourage authors to deposit relevant data sets in domain repositories, or if a domain repository is not available, general repositories, rather than as supplementary information.

EXAMPLE: BEST PRACTICES FOR SAMPLE CITATION & IDENTIFICATION

- Encourage editors, reviewers, and staff to check that samples are cited l
- Journals should pr publications.
- The IGSN should b institutional sampl names.

Site	IGSN	Date (yyyy-mm-dd)	Lat (°N)	Lon (°W)	source (km)	Elevation (masl)	precipitation (mm a^{-1})	area (km^2)	age (Ma)
Fraser at Fitzwilliam	GRO000009	2009-08-03	52.8526	118.6063	50	1085	594	672	764
	GRO000027	2010-10-14							
	GRO000073	2011-06-03							
Fraser at McBride	GRO000011	2009-08-04	53.3023	120.1411	230	713	679	6907	738
	GRO000030	2010-10-14							
	GRO000070	2011-06-02							
Fraser at Hansard	GRO000012	2009-08-04	54.0817	121.8462	480	604	644	18,088	700
	GRO000038	2010-10-16							
	GRO000066	2011-06-01							
Fraser at Stoner	GRO000018	2009-08-08	53.6384	122.6652	615	550	641	80,731	345
	GRO000041	2010-10-19							
Fraser at Lillooet	GRO000022	2009-08-10	50.7080	121.9132	1050	200	330	152,364	254
	GRO000045	2010-10-21							
	GRO000058	2011-05-28							
Fraser at Lytton	GRO000008	2009-08-01	50.2479	121.5910	1110	145	433	156,342	251

SLIDES FOR FEEDBACK: WHY, WHERE, HOW?

- Rationale: data/software/samples are relevant for reproducibility and need to be re-usable and need to be fully disclosed and cited properly
- Disclosure of data: where data should be made accessible, which repositories are acceptable (COPDESS directory)
- How to cite data used in a publication
- Different emphases for authors, editors and reviewers

DATA PUBLICATION: REVIEWERS WHY?

- Funders are increasingly requiring that data are open
- Checking for current compliance and future funding
- Enable better decision-making
- Datasets starting to gain credence as primary research outputs
- Data-driven research methods

DATA PUBLICATION: REVIEWERS WHERE?

- **Ideally in a trusted repository such as those found on the COPDESS registry**
- **Somewhere appropriate according to community expectations**

DATA PUBLICATION: REVIEWERS HOW?

Metadata

- Does the metadata establish the ownership of the data fairly?
- Is enough information provided (in data description document also) to enable the data to be re-used or the experiment to be repeated?
- Are the data present as described, and accessible from a registered repository using the software provided?

- *The data themselves*
- Are the data easily readable, E.g. do they use standard or community formats?
- Are the data of high quality e.g. are error limits and quality statements adequate to assess fitness for purpose, is spatial or temporal coverage good enough to make the data useable?
- Are the data values physically possible and plausible?
- Are there missing data that might compromise its usefulness?

SCIENTIFIC STANDARDS

Promoting an open research culture

Author guidelines for journals could help to promote transparency, openness, and reproducibility

By **B. A. Nosek,* G. Alter, G. C. Banks, D. Borsboom, S. D. Bowman, S. J. Breckler, S. Buck, C. D. Chambers, G. Chin, G. Christensen, M. Contestabile, A. Dafoe, E. Eich, J. Freese, R. Glennerster, D. Goroff, D. P. Green, B. Hesse, M. Humphreys, J. Ishiyama, D. Karlan, A. Kraut, A. Lupia, P. Mabry, T. Madon, N. Malhotra, E. Mayo-Wilson, M. McNutt, E. Miguel, E. Levy Paluck, U. Simonsohn, C. Soderberg, B. A. Spellman, J. Turitto, G. VandenBos, S. Vazire, E. J. Wagenmakers, R. Wilson, T. Yarkoni**

Science 26 Jun 2015:
Vol. 348, Issue 6242, pp. 1422-1425
DOI: 10.1126/science.aab2374

TOP GUIDELINES

Center for Open Science

Transparency & OPENNESS Promotion Guidelines

Low barrier to entry
Modular
Agnostic to discipline

Transparency & OPENNESS Promotion Guidelines

Eight Standards

1. Data citation
2. Design transparency
3. Research materials transparency
4. Data transparency
5. Analytic methods (code) transparency
6. Preregistration of studies
7. Preregistration of analysis plans
8. Replication

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Three Tiers

1. **Disclose**
2. **Require**
3. **Verify**

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Signatories

539 Journals
59 Organization

Learn more at
http://cos.io/top

NEXT STEPS

- **Reach more Earth & space science data repositories**
  - Grow COPDESS directory entries
  - Certification of Repositories
- **Journals to add repository recommendations**
- **Engagement of editors**
  - Workshops at AGU FM 2016
  - Council of Science Editors 2016
- **Education of authors**
  - Outreach via sections of professional societies (AGU, EGU, GSA, etc.)

THANK YOU!

- Kerstin Lehnert, IEDA
- Brooks Hanson, American Geophysical Union
- Fiona Murphy, University of Reading