Practical data sharing with tangible rewards through publication in ESSD

EGU2020-4169
(Session ESSI 3.2)

2020-05-05: D Carlson, K Elger, J Klump, G Peng, J Wagner
2020-04-30: 525 data papers in ESSD

Data centres across Europe

ESSD:
- Founded 2008
- Entirely free & open
- Clarivate IF: 10.95
- Clarivate 5-yr: 9.90
Many ways to find ESSD-published data products

Text search ‘carbon budget’ returns:

- https://doi.org/10.5194/essd-11-1783-2019

PANGAEA geographic search returns:

- https://doi.org/10.5194/essd-12-345-2020

Google ‘global carbon project’ search returns:

- https://doi.org/10.5194/essd-11-1783-2019
- https://doi.org/10.5194/essd-11-1501-2019

Formal keyword search returns:

- Author ‘von Schuckmann’
  - https://doi.org/10.5194/essd-2019-255

Date ‘2019’ search returns:

- The Global Long-term Microwave Vegetation Optical Depth Climate Archive VODCA
  - https://doi.org/10.5194/essd-12-177-2020
ESSD-published databases establish & promote community metadata standards

Standardised soil profile data to support global mapping and modelling (WoSIS snapshot 2019)

https://doi.org/10.5194/essd-12-299-2020

A long-term (1965–2015) ecological marine database from the LTER-Italy Northern Adriatic Sea site: plankton and oceanographic observations

https://doi.org/10.5194/essd-12-215-2020
Rapid changes in data access & support!

‘Teasers’ support large data sets

Global precipitation for one month of one year (40 MB) - freely available - as example for hourly data over 50 years (220 GB). ESSD-2020-28.

https://doi.org/10.21957/935p-cj60.

Validation for VR simulations

Simulated Neckar (Germany) catchment: 1.1 km resolution at 15 minute time step over 275 km x 350 km array for 4 days (full data = 8 years).


New editorial tools

Manuscript comparison tools at https://o2r.info/pilots/, in use at https://doi.org/10.5194/essd-2020-22.
<table>
<thead>
<tr>
<th>DATA STANDARDS</th>
<th>ESSD ACCOMPLISHMENTS</th>
<th>RATING</th>
<th>NOTES</th>
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<tbody>
<tr>
<td><strong>Findable</strong></td>
<td>Through ESSD &amp; Data Centres</td>
<td>★★★★★</td>
<td>Very good text, geographic &amp; topical search options</td>
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<tr>
<td><strong>Accessible</strong></td>
<td>Easy &amp; Reliable</td>
<td>★★★★</td>
<td>Data centers maintain registration barriers</td>
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<tr>
<td><strong>Interoperable</strong></td>
<td>Many new metadata standards</td>
<td>★★★★</td>
<td>Very challenging across disciplines &amp; with many disparate formats</td>
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<tr>
<td><strong>Reusable</strong></td>
<td>Checked &amp; confirmed</td>
<td>★★★★★</td>
<td>Real-time &amp; retrospective tracking via DOI</td>
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<td><strong>ESSD adds:</strong></td>
<td>Quality certifications through rigorous review!</td>
<td>★★★★★</td>
<td>Authors gain full citable credit for preparation &amp; sharing!</td>
</tr>
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https://www.earth-system-science-data.net/