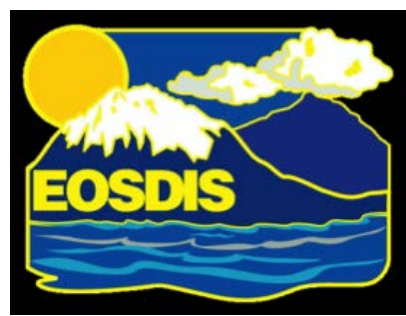
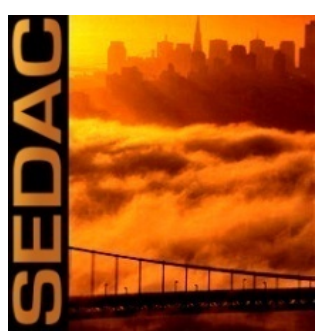


Mapping the FAIR-DQI Guidelines to the GEO Data Management Principles

Robert R. Downs



NASA Socioeconomic Data and Applications Center (SEDAC)
Center for International Earth Science Information Network (CIESIN), Columbia University,
¹ rdowns@ciesin.columbia.edu



Prepared for Presentation to the 2022 EDSWG Meeting
April 19-21, 2022, Virtual Event
Poster Session: April 20, 2022 2:00 p.m. - 3:00 p.m.

An international group representing the scientific community has developed the FAIR-DQI Guidelines (Peng et al. 2022) to provide guidance for improving the collection and representation of data quality information to be consistent with the FAIR Principles (Wilkinson et al. 2016). The FAIR-DQI Guidelines are mapped to the Group on Earth Observations (GEO) Data Management Principles to provide insight into how efforts to comply with the FAIR-DQI Guidelines contribute to the management of data.

FAIR-DQI and GEO Data Management Principles: Matched Guidelines

FAIR-DQI Guidelines*

FAIR DQI Guideline 1:
Describe Dataset

FAIR DQI Guideline 2:
Utilize Assessment Metric

FAIR DQI Guideline 3:
Capture Quality Attributes

FAIR DQI Guideline 4:
Describe Assessment Method

FAIR DQI Guideline 5:
Report & Disseminate

GEO Data Management Principles*

Discoverability

DMP-1: Metadata for Discovery
Describe data in metadata

Accessibility

DMP-2: Online Access
Place data and associated information online

Usability

DMP-3: Data Encoding
Encode data and documentation

DMP-4: Data Documentation
Describe data in documentation

DMP-5: Data Traceability
Capture data provenance information early

DMP-6: Data Quality-Control
Evaluate and describe data quality

Preservation

DMP-7: Data Preservation
Preserve data and related information

DMP-8: Data and Metadata Verification
Verify data and metadata

Curation

DMP-9: Data Review and Reprocessing
Review and reassess data

DMP-10: Persistent & Resolvable Identifiers
Provide persistent access to data

*References

Peng G, Lacagnina C, Downs RR, Ganske A, Ramapriyan H,Ivánová I, Wyborn L, Jones D, Bastin L, Shie CL, Moroni DF. 2022. Global Community Guidelines for Documenting, Sharing, and Reusing Quality Information of Individual Digital Datasets. Data Science Journal, 21: 8, pp. 1–20. <http://doi.org/10.5334/dsj-2022-008>

Group on Earth Observations 2016 Global Earth Observations System of Systems (GEOSS) Data Management Principles. Available at http://earthobservations.org/open_eo_data.php#

Wilkinson, M., Dumontier, M., Aalbersberg, I. et al. The FAIR Guiding Principles for scientific data management and stewardship. Sci Data 3, 160018 (2016). <https://doi.org/10.1038/sdata.2016.18>