Adopting the TRUST Principles for Digital Repositories with the GEOSS Data Management Principles and the GEOSS Data Sharing Principles Robert R. Downs¹



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The international community offers principles for data repositories to improve opportunities for discovering, accessing, and using research data. The TRUST Principles for Digital Repositories recommend transparency, responsibility, user focus, sustainability, and technology to support data reuse (Lin, et al., 2020). The Global Earth Observation System of Systems (GEOSS) Data Management Principles (DMP) include ten principles to improve data discoverability, accessibility, usability, preservation, and curation and the GEOSS Data Sharing Principles (DSP) advocate the adoption of three principles to ensure that data are shared openly without restrictions or delays. The availability of such principles, along with others guidance documents, does not have to be a trade-off, where adoption of some principles preclude the deployment of others. Synergistic approaches can be applied to implement practices that are consistent with more than one set of recommendations. Commonalities among such principles are represented to offer insight into ways of establishing practices that address multiple principles simultaneously. Further delineation of such commonalities should be considered to provide guidance for implementing these and other principles in a synergistic manner.

TRUST Principles for Digital Repositories*

Transparency

GEOSS Data Management Principles*

Discoverability

To be transparent about specific repository services and data holdings that are verifiable by publicly accessible evidence.

Responsibility

To be responsible for ensuring the authenticity and integrity of data holdings and for the reliability and persistence of its service.

User Focus

To ensure that the data management norms and expectations of target user communities are met.

Sustainability

To sustain services and preserve data holdings for the long-term.

Technology

To provide infrastructure and capabilities to support secure, persistent, and reliable services.

*Reproduced from Lin, et al., 2020. The TRUST Principles for **Digital Repositories.**

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

GEOSS Data Sharing Principles*

GEOSS Data Sharing Principle 1.

"Data, metadata and products will be shared as Open Data by default, ...;"

GEOSS Data Sharing Principle 2.

"... data should be made available with minimal restrictions on use and at no more than the cost of reproduction and distribution;"

GEOSS Data Sharing Principle 3.

"All shared data, products and metadata will be made available with minimum time delay."

*Reproduced from the GEOSS Data Sharing Principles, 2016.

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

*Reproduced from the GEOSS Data Management Principles, 2016. DMP - DSP tie based on Downs & Chen, 2019.

References

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