

Earth and Space Sciences: The Importance of Community Enabling FAIR and Open Data

Shelley Stall

American Geophysical Union, orcid.org/0000-0003-2926-8353

Our research ecosystem is diverse and dependent on many interacting stakeholders that influence and support the process of science. Introducing change to this complex system can improve outcomes for some, and add burden to others. Any change of significance needs support from more than one of the many stakeholders. For example, mandates for open data extend across this ecosystem. Solutions require these stakeholders to come together and agree upon improvements. Recently, the value of FAIR and Open Data has encouraged funders to sponsor discussions with tangible agreements that include the steps needed to move the ecosystem towards results. Work by many of these stakeholders over the past years have developed pilot efforts that are ready to be scaled with broader engagement.

A partnership of the AGU, Earth Science Information Partners (ESIP), Research Data Alliance (RDA), Center for Open Science, AuScope, Australian National Data Service, and key publishers including Science, Nature, and the Proceedings of the National Academy of Science (PNAS) have agreed to work together to develop integrated processes, leveraging these pilots, to make FAIR and Open data the default for Earth and space science publications.

This effort will build on the work of COPDESS.org, ESIP, RDA, the scientific journals, and domain repositories to ensure that well-documented data, preserved in a repository with community agreed-upon metadata, and supporting persistent identifiers becomes part of the expected research products submitted in support of each publication.