The Coalition for Publishing Data in the Earth and Space Sciences

Kerstin Lehnert (1), Brooks Hanson (2), and Joel Cutcher-Gershenfeld (3)
(1) Columbia University, Lamont-Doherty Earth Observatory, Palisades, USA, (2) American Geophysical Union, Washington, DC, USA, (3) School of Labor and Employment Relations and National Center for Supercomputing Applications, University of Illinois, Champaign, IL, USA

Scholarly publishing remains a key high-value point in making data available and will for the foreseeable future be tied to the availability of science data. Data need to be included in or released as part of publications to make the science presented in an article reproducible, and most publishers have statements related to the inclusion of data, recognizing that such release enhances the value and is part of the integrity of the research. Unfortunately, practices for reporting and documenting data in the scientific literature are inconsistent and inadequate, and the vast majority of data submitted along with publications is still in formats and forms of storage that make discovery and reuse difficult or impossible. Leading earth and space science repositories on the other hand are eager and set up to provide persistent homes for these data, and also ensure quality, enhancing their value, access, and reusability. Unfortunately only a small fraction of the data associated with scientific publications makes it to these data facilities.

Connecting scholarly publication more firmly with data facilities is essential in meeting the expectations of open, accessible and useful data as aspired by all stakeholders and expressed in position statements, policies, and guidelines. To strengthen these connections, a new initiative was launched in Fall 2014 at a conference that brought together major publishers, data facilities, and consortia in the Earth and space sciences, as well as governmental, association, and foundation funders. The aim of this initiative is to 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, and guide the development of practical resources based on those guidelines that will help authors and publishers support open data policies, facilitate proper data archiving, and support the linking of data to publications.

The most relevant outcome of the conference is the formation of a working group: Coalition for Publishing Data in the Earth and Space Sciences by publishers and data facilities and consortia that will establish a permanent international coordinating conference on Earth science data publication. Marking the launch of the partnership is a joint statement of commitment (to be released in January 2015), signed by the major Earth and space science publishers and many data facilities, to ensure that Earth science data will, to the greatest extent possible, be stored in community approved repositories that can provide additional data services. The development of a functional directory of Earth and space science repositories is underway that can be used by journals as part of their information to authors, and by authors to identify rapidly which repositories are the best homes for specific data types and how to structure such deposition.