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Persistent Identifiers, Discoverability and Open Science (Communication)

Fiona Murphy (1), Kerstin Lehnert (2), and Brooks Hanson (3)

(1) Institute for Environmental Analytics, University of Reading, Reading, UK, (2) Lamont-Doherty Earth Observatory, Columbia University, NY, USA, (3) American Geophysical Union, Washington DC, USA

Early in 2016, the American Geophysical Union announced it was incorporating ORCIDs into its submission workflows. This was accompanied by a strong statement supporting the use of other persistent identifiers – such as IGSNs, and the CrossRef open registry 'funding data'. This was partly in response to funders' desire to track and manage their outputs. However the more compelling argument, and the reason why the AGU has also signed up to the Center for Open Science's Transparency and Openness Promotion (TOP) Guidelines (http://cos.io/top), is that ultimately science and scientists will be the richer for these initiatives due to increased opportunities for interoperability, reproduceability and accreditation.

The AGU has appealed to the wider community to engage with these initiatives, recognising that – unlike the introduction of Digital Object Identifiers (DOIs) for articles by CrossRef – full, enriched use of persistent identifiers throughout the scientific process requires buy-in from a range of scholarly communications stakeholders. At the same time, across the general research landscape, initiatives such as Project CRediT (contributor roles taxonomy), Publons (reviewer acknowledgements) and the forthcoming CrossRef DOI Event Tracker are contributing to our understanding and accreditation of contributions and impact.

More specifically for earth science and scientists, the cross-functional Coalition for Publishing Data in the Earth and Space Sciences (COPDESS) was formed in October 2014 and is working to 'provide an organizational framework for Earth and space science publishers and data facilities to jointly implement and promote common policies and procedures for the publication and citation of data across Earth Science journals'.

Clearly, the judicious integration of standards, registries and persistent identifiers such as ORCIDs and International Geo Sample Numbers (IGSNs) to the research and research output processes is key to the success of this venture. However these also give rise to a number of logistical, technological and cultural challenges. This poster seeks to identify and progress our understanding of these. The authors are keen to build knowledge from the gathering of case studies (successful or otherwise) and hear from potential collaborators in order to develop a robust structure that will empower both earth science and earth scientists and enable more nuanced, trustworthy, interoperable research in the near future.