

Data Sharing and Open Science: Practice, Expectation, Transparency, and Credit

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The data that underpins our research is a valuable part of the research process. Determining what data is needed in order to analyze the scientific question at hand is a critical part of our work. That data has incredible value to those interested in our research and building upon it.

Research data is best preserved in a trusted digital repository with robust descriptive information. Attribution and credit for data created, used, and reused is an important part of encouraging researchers to share their data and make it available to others. Including persistent, unique, global identifiers for the researchers that created the data as well as the links to associated publications where the data is cited allows us to discover, understand, and increase the possibility of that data being reused for new research in the future.

Within the Earth, space, and environmental sciences a large community of stakeholders has come together to require that data supporting a publication be placed in a trusted repository and properly cited in the publication. Many journals are now transitioning to this requirement and more are joining every day.

The infrastructure is being solidified to give creators of data the attribution and credit that recognizes the importance of the contribution to the scientific record for possible reuse in the future. Making data more findable, accessible, interoperable, and reusable (FAIR) is an important step towards more open science. We will describe what is expected by the Enabling FAIR Data project and the value of attribution and credit in encouraging researchers to share their data.

Keywords: FAIR Data, Trusted Repository, Data Sharing, Data Credit, ORCID, Persistent Identifier