

[Interagency Data Stewardship Principles](#) [1]

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Technical Reports:

The Federation of Earth Science Information Partners (ESIP Federation) is a consortium of more than 130 organizations that collect, interpret and develop applications for Earth observation information. It contains NASA, NOAA and USGS data centers, research universities, government research laboratories, supercomputing facilities, education resource providers, information technology innovators, nonprofit organizations and commercial enterprises. Despite the variety of organizations constituting the ESIP Federation, they are bound by the following common strategic goals [ESIP Federation Strategic Plan (2009-2013), January 30, 2009]:

1. Increase the use and value of Earth science data and information.
2. Act as a facilitating, coordinating and advisory community-led organization to promote the use of Earth science data and information products for the members and the communities they support.
3. Continue to evolve the ESIP Federation (e.g., governance, structure, staffing) to strengthen the ties between Observations, Research and Applications.
4. Promote techniques to articulate and measure the socioeconomic value and benefit of Earth science data, information and applications.

A sub-goal of Goal 1 above is to “Reduce barriers between data providers and data users through IT, training, and standards education.” A sub-goal of Goal 2 above is to “Promote use of technical standards and best practices for data management, stewardship and application development.” The purpose of this document is to articulate data stewardship principles and recommend practices to support these two sub-goals of the ESIP Federation. Where conflict exists, these data stewardship principles are superseded by the legal and policy requirements of participating organizations. The principles documented here are based on existing data sharing principles and data and information policies of various U.S. and international organizations. This document is intended to be a “living” document introducing a few basic principles and inviting readers to contribute recommended practices for adoption by members of the ESIP Federation. The principles and practices apply to data creators, data intermediaries and data users, and are discussed in three separate sections below.

1. Data Creators (field experiment projects, research or operational missions, aircraft campaigns, etc.)

- Data creators will have data management plans appropriate to their activities
- Data creators will identify long-term archival organizations where data worthy of preservation will be placed. It must be recognized that data preservation and access should not be afterthoughts and need to be considered while data collection plans are developed.
- Data creators will negotiate archive submission agreements with their identified long-term archive.
- Data creators will work with their identified long-term archival organizations to define the designated community of users appropriate to the data.
- To help ensure correct usage of the data by the designated user communities, data creators will provide easily accessible information about the data and related mission parameters, including user guides, quality assessments, and other supporting information.
- Data creators will provide sufficient metadata (defined as all the information necessary for data to be independently understood by users and to ensure proper stewardship of the data) to the data repositories responsible for long-term archival.

2. Data Intermediaries (repositories, value-added providers, etc.)

- There will be full and open exchange of data, metadata, and products among the members of the ESIP Federation and users served by its members, while recognizing relevant international instruments, national agency policies and legislation, and commercial/proprietary interests when necessary.
- Explanation of any necessary restrictions to full and open exchange of data will be made available to users along with the duration for which such restrictions apply.
- The data, metadata and products will be made available to all users on a nondiscriminatory basis.
- All shared data, metadata and products will be made available with minimum time delay.
 - For operational systems, quality control procedures should not introduce unnecessary time delays.
 - For research data, time delays may need to include a limited period of quality control and validation by the data creator. These time delays should nevertheless be minimized.
- Metadata will be made available openly at no cost, to enable users to discover sources of data and information without restriction.
- All data, metadata and products from government and publicly funded non-government intermediaries will be free of charge or available at no more than cost of reproduction for all users.
- Private sector intermediaries will be encouraged to provide at least a useful subset of their data, metadata and products free of charge or at no more than cost of reproduction for uses in research and education.
- Where costs are involved, cost recovery mechanisms that allow different types of users to understand their access costs prior to ordering will be used.
- Data intermediaries will use community-accepted standard formats for data and metadata, and support format transformations as required by the designated communities.
- Where applicable, data intermediaries will clearly indicate terms of distribution to users, including a description of attribution requirements and any restrictions on redistribution.
- Restrictions on redistribution will be held to a minimum consistent with ensuring appropriate credits and citations, and ensuring provision of appropriate metadata and documentation along with the data to prevent misunderstanding, misrepresentation, or misuse.
- Data intermediaries will work with data creators to develop clear citations.
- Data intermediaries will encourage users to supply feedback on the utility and quality of the data, metadata and products they receive.
- Data intermediaries will share with data creators any feedback received from users regarding the quality of their data and products.

3. Data Users

- Users will credit and cite all significant data sources and authors, including creators and repositories of the data and products used in their work; users will offer co-authorship as appropriate to data providers, depending on the significance of the providers' contribution.
- Users will follow any restrictions on redistribution of data that were indicated by the data intermediaries.
- Users will use the data in a manner compatible with the documentation and quality caveats available from the data intermediaries.
- Users are encouraged to supply impact metrics to data intermediaries indicating the utility of data, metadata and products they received.
- Users are encouraged supply feedback to providers regarding products and services received in order to improve data intermediaries' capabilities over time.
- Users will be open to collaboration with other users by participating in cooperative projects, publishing results promptly, sharing value-added products with other users, and providing value-added products to data repositories.
- Users will participate in community groups to promote data and metadata standards and their evolution over time.

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