Open Access to Data and Publications Policy[1]

Introduction

The Inter-American Institute for Global Change Research (IAI) has demonstrated a sustained commitment to full data sharing in pursuit of a culture where scientific knowledge is available for all people to freely access, reuse and develop collectively. Its first open data policy dates back to 1995[2] and establishes the *purpose of facilitating the full and open exchange of data among the Parties to the Institute, in accordance with Article II of the Agreement Establishing the Inter-American Institute for Global Change Research.*[3] Following the global evolution of the Open Science movement, the IAI Conference of the Parties (CoP), at its 25th meeting (Bogota, 2017) instructed the Directorate to define and establish an open data policy and principles, considering the Open Data Policy approved by IAI CoP-2 in 1995. Along these lines, the 26th Conference of the Parties (Guatemala, 2018) adopted Open Data Policies and Principles for the IAI (Decision XXVI/45), whose purpose is to *facilitate the full and free exchange of data and information between Parties, Principal Investigators (PIs) and other stakeholders of the Institute*.[4] To achieve that purpose, it is noted that the IAI requires the sustained commitment of researchers to create, maintain, validate, describe, provide accessibility, and distribute high-quality data generated by their IAI-funded projects.

In recent years, the global Open Science movement has advanced and strengthened in multiple directions.[5] Conceptually, a global consensus has been reached on the principles and qualities that research data must meet to be considered open (Findable, Accessible, Interoperable, and Reusable- FAIR[6]). Likewise, principles have been established that should govern the production and use of open data involving indigenous peoples (CARE principles), which focus on Collective benefit, Authority to control, Accountability and Ethics.[7,8]

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[1] Version approved by CoP33 in May 2025

[2] https://www.iai.int/admin/site/sites/default/files/Cop1-DATA-POLICY-STATEMENTS.pdf

[3] https://www.iai.int/pdf/es/agreement_establishing_the_IAI_sp.pdf

[4] https://www.iai.int/admin/site/sites/default/files/uploads/iai-cop-26-20a-s.pdf

[5] https://www.unesco.org/en/open-science

[6] Wilkinson, M. D., Dumontier, M., Aalbersberg, I. J., Appleton, G., Axton, M., Baak, A., ... & Mons, B. (2016). The FAIR Guiding Principles for scientific data management and stewardship. Scientific data, 3(1), 1-9.

[7] Carroll, S., Garba, I., Figueroa-Rodríguez, O., Holbrook, J., Lovett, R., Materechera, S., ... & Hudson, M. (2020). The CARE principles for indigenous data governance. Data science journal, 19.

[8] Brainard, J. (2021). Open access takes flight. Science, 371(6524), 16-20.

In this context, this document updates the Open Data Policy and Principles for the IAI approved by CoP-26 in 2018 in two main aspects: 1) to strengthen the IAI's commitment to compliance with the FAIR and CARE principles regarding the production, sharing and use of open data, and 2) to expand the IAI's commitment to open access publication, not only of data, but also of IAI-generated publications and IAI-funded research papers.

Scope of the Policy

This **Open Access to Data and Publications Policy** sets out the specific objectives, activities and resources by which the Institute will promote the open production, sharing and use of data and publications generated by the IAI or derived from IAI-funded research projects. Therefore, all data and publications produced through IAI-funded activities and projects are covered by this policy.

Definitions

Open data: Data that can be freely used, reused and redistributed by anyone, subject, at most, to the requirement of attribution and sharing in the same manner in which it appears. Data may be considered open if:

1. it is available in its entirety and at a reasonable cost of reproduction, preferably through downloading from the Internet, in a practical and modifiable format;
2. provided in terms that allow for reuse, redistribution and even integration with other datasets;
3. all people can use, reuse and redistribute the data without any discrimination in terms of effort, individuals or groups.

Open access: Free access to information and unrestricted use of digital resources by everyone. A publication can be considered open access if:

1. its content is freely and universally accessible, at no cost to readers, through the Internet or any other means;
2. the author or copyright holder grants to all potential users, irrevocably and for an unlimited time, the right to use, copy or distribute the content, at least for non-commercial purposes, on the sole condition that due credit is given to the author;
3. the full version of the content has been deposited, in an appropriate electronic format, in at least one open access repository internationally recognized as such and committed to open access.

FAIR Principles:[9] They provide a set of precise and measurable qualities that a dataset must follow to be Findable, Accessible, Interoperable and Reusable, as detailed below:

1. Findable through catalogs and search engines. Data should be accompanied by appropriate contextual information through rich metadata and assigned a persistent, unique and resolvable identifier (e.g., DOI). Both data and metadata should be machine-readable to facilitate localization.

[9] https://www.go-fair.org/fair-principles/

2. Accessible by default and available through sustainable and reliable repositories with minimal delay, except where national and international policies or legislation prevent sharing as Open Data (e.g., HIPAA or other similar privacy restrictions). Licenses should clearly state the terms of access and use of the data.
3. Interoperable, with clear documentation using widely accessible language and understandable vocabulary across disciplines. Preference should be given to non-proprietary data and metadata file formats and international and community standards that facilitate data access, exchange, use and interpretation.
4. Reusable by other researchers, including those outside the discipline of origin. The data should be described in the metadata in sufficient detail, i.e., provenance, structure and other necessary information in accordance with domain-specific community standards. The license and conditions, including reuse, should be clearly indicated.

CARE Principles:[10] The CARE Principles for Indigenous Data Governance address the principles of Collective Benefit, Authority to Control, Accountability, and Ethics, and their respective sub-principles. The CARE Principles detail that the use of Indigenous data should generate tangible benefits for Indigenous collectives through inclusive development and innovation, improved governance and citizen participation, and lead to equitable outcomes.

1. **Collective benefits** are more likely to be realized when data ecosystems are designed to support Indigenous nations and when the use/reuse of data for resource allocation coincides with community values.
2. The United Nations Declaration on the Rights of Indigenous Peoples[11] affirms indigenous peoples' rights and interests in data and their authority to control their data. **Access** to "data for governance" is vital to support self-determination, and Indigenous nations must actively participate in "data governance" to ensure the ethical reuse of data.
3. Given that most Indigenous data is controlled by non-Indigenous institutions, there is a **responsibility** to respectfully engage with those communities to ensure that Indigenous data use supports the development of their capacity to use community data and the strengthening of Indigenous languages and cultures.
4. Similarly, the **ethics** of indigenous peoples should inform the use of data over time to minimize harms, maximize benefits, promote justice, and enable future use, consistent with the free, prior, and informed consent of the communities where the research will be conducted.

Objectives of the Policy

Objective 1: Make data produced by IAI-funded research projects discoverable, accessible, interoperable, and reusable.

Objective 2: Facilitate compliance with CARE principles for IAI-funded research involving Indigenous Peoples and local communities.

[10] https://www.gida-global.org/care

[11] https://www.un.org/development/desa/indigenouspeoples/declaration-on-%20the-rights-of-indigenous-peoples.html

Objective 3: Promote open access publication of the products of IAI activities.

Objective 4: Increase capacities to share, use and reuse open data at the regional level.

Budgetary Implications

The financial support needed to implement this policy (see Annex 1: Implementation Plan) depends on the availability of external financial resources. To implement the objectives of this policy, the IAI Executive Directorate will seek external financial resources provided by donor parties, development banks, foundations and other possible sources.

Annex 1:Implementation Plan (2025-2030) for the Executive Directorate of the IAI Open Data and Open Publications Policy

Open Access to Data and Publications Policy

Objective 1: To make data produced by IAI-funded research projects discoverable, accessible, interoperable and reusable.

Activity 1.1: The IAI will consider existing good practices for managing and publishing topic-specific data, such as those of the Global Biodiversity Information Facility (GBIF).

Activity 1.2: The IAI will train IAI-funded research teams to prepare a data management plan prior to the start of the project and apply good data management practices during the project and after its completion (see Annex 2: Instructions and resources).

Activity 1.3: The IAI will develop and maintain an open data catalog where research teams should share data produced under IAI-funded research projects.

Activity 1.4: The IAI will support networks of open data catalogs in Latin America and the Caribbean by, for example, aggregating its open data catalog to national or regional nodes.

Objective 2: Facilitate compliance with CARE principles for IAI-funded research involving indigenous peoples and local communities.

Activity 2.1: The IAI will train research teams, including researchers from indigenous peoples and local communities, whose IAI-funded projects involve the generation of data by or with indigenous peoples and local communities, to consider and apply the CARE principles and the need to obtain the free, prior and informed consent of the communities where the research will be conducted.

Activity 2.2: The IAI will assess and monitor compliance with CARE principles, with representation of indigenous peoples and local communities, from the development of Data Management Plans to final project reports.

Objective 3: Promote open access publication of the products of IAI activities.

Activity 3.1: The IAI will develop and maintain an open access repository to facilitate the deposit and use of publications containing the results of IAI-funded research.

Activity 3.2: The IAI will publish on its website all products of the activities of the different areas of the IAI in open access format, including reports, abstracts for decision makers and courseware.

Activity 3.3: The IAI will encourage IAI-funded research teams to publish their data and research results in open access journals and/or open access repositories.

Objective 4: Increase capacities to share, use and reuse open data at the regional level.

Activity 4.1: The IAI will train end users (government technicians, policy makers, academic institutions, civil society organizations, etc.) in the use and reuse of data and information produced by the IAI.

Activity 4.2: The IAI will assess the level of sharing, use and reuse by academic and non-academic actors of data shared by IAI-funded research teams, and encourage continuous improvement of activities aimed at making data discoverable, accessible, interoperable and reusable.

Annex 2: Instructions and Resources for Implementing the Policy

To meet the expectations of this policy, IAI suggests that IAI grantees follow the following steps:

1. **Data planning**: Research data should be planned in advance and managed during the project and after its completion. If the various aspects of data management are taken into account from the beginning, time and effort can be saved in later phases of the project. For this purpose, one of the tools available to researchers is a data management plan (DMP).
    1. The IAI requires certain programs to have a Data Management Plan (see program instructions for details).
    2. The IAI provides a Data Management Plan Guide and Template which helps IAI grantees answer questions related to samples, data processing, privacy, and archiving, among other things.
    3. The Annex to the Belmont Forum's Digital Data and Product Management Plan poses questions to help researchers consider various aspects when preparing and managing the products of their projects. It could also be used as a guide by IAI-funded researchers.
    4. If the future project involves working with indigenous peoples and local communities, the PMD should include information on how grantees will collect, manage and share data in accordance with the CARE Principles.

2. **Data Management**: Good data planning and management will help improve project efficiency, facilitate grant reporting and simplify data sharing under this Policy. The Belmont Forum offers several resources that could help IAI grantees manage data:
    1. Data Management Training Inventory. Search for training resources by geographic region, type of resource and professional role.
    2. Best practices and data management standards. This resource includes a data policy comparison tool to help grantees understand the requirements of different Belmont Forum members and a data competency curriculum framework; resources can also be searched by organization, category or geographic region.
    3. Grantees can explore the IAI's Harvard Dataverse Repository to see examples of shared datasets and get ideas on how to manage and prepare data for sharing.
    4. For working with biodiversity data, we recommend the GBIF platform (gbif.org): network of Latin American and Caribbean countries which includes at least twelve participating countries using the same data standard (DarwinCore) and metadata and an interoperable repository.

3. **Data sharing**:
    1. Deposit research-derived data and associated metadata in a trusted, curated, publicly accessible repository with minimal delay.
        1. Timeliness increases the value of the data. The IAI requires that funded research teams share their datasets at specific times during the project (e.g., at the end of the first year for multi-year projects). However, principal investigators may request initial periods of exclusive use of the data. In each case, the Institute will explicitly define the duration of the exclusive use period. As a best practice, the IAI recommends that data from a specific study be shared at the time of and with the publication of the article describing the data.

2. The IAI grantee should deposit its data set, whether quantitative or qualitative in nature, fully documented, in the IAI's Harvard Dataverse repository of the IAI.. The Institute will train the principal investigators and provide them with instructions on how to deposit the data in the repository. In the case of topic-specific data(e.g., biodiversity), IAI grantees should deposit the data in specific data repositories (e.g., GBIF) and report their location to the Open Data Specialist. Along with the data, rich metadata describing the dataset, its provenance, structure, meaning of abbreviations or terms, etc., should be shared, i.e., all information necessary for others to understand and reuse the data.
3. Some disciplines have specific metadata standards, such as the list of the Digital Curation Centrethe Directory of Metadata Standards or Darwin Core for biodiversity data. Grant recipients can also consult this guide on metadata and its examples of how to respect the FAIR principles.

2. Assign a permissive open license to data and metadata for reuse.
    1. The IAI fully recognizes that data and information from IAI-funded programs and projects belong to the Parties. Therefore, the Parties and/or principal investigator recipients (PIs) can decide how to license the data and what to allow with respect to its reuse.
    2. To facilitate reuse, the IAI recommends sharing the data under a public domain dedication, such as Creative Commons CC0. Other options are the following licenses: Creative Commons Attribution (CC BY), Creative Commons Attribution-NonCommercial (CC BY-NC) or ShareAlike (CC BY-SA). The IAI's Harvard Dataverse Repository and the GBIF repository for biodiversity data allow researchers to select their preferred license.
3. Ensure that data and metadata are archived with persistent identifiers (DOIs).
    1. The IAI's Harvard Dataverse repository and the GBIF repository automatically assign a DOI when a dataset is deposited.
4. Financial support may be available to defer reasonable costs involved in exchanging data, including those associated with data management, curation, hosting, and preservation. Grantees should consult with the IAI to confirm allowable costs. The IAI will evaluate these requests on a case-by-case basis, ensuring that financial resources are allocated efficiently and equitably. The best way to budget for these costs is to do so during the preparation of the Data Management Plan, when outlining anticipated expenditures.
5. To ensure compliance with the open data policy, the IAI will implement a process for periodic review of DMPs and data making submitted by researchers. This review will include regular checks to ensure that data are made available according to the agreed schedule and standards. The IAI may issue recommendations or corrective actions to ensure proper data dissemination.

4. **Article sharing**:
    1. Retain the necessary rights to share a copy of the research paper, regardless of the journal in which it is published.
        1. These conditions should cover free and immediate reading rights, as well as the rights necessary for wide reuse.
        2. This can be achieved by inserting text in the body of the manuscript at the time of submission that states: "For open access purposes, the author has applied a Creative Commons Attribution (CC BY or CC BY-NC) license to any author-accepted version of the manuscript derived from this submission.

3. More information on rights retention can be found at. Preservation of rights: A UKRN Handbook
4. Make electronic copies of research papers, accepted for publication in a peer-reviewed journal and supported in whole or in part by the IAI, available immediately and free of charge upon publication in the journal. This can be achieved either in an open access journal or by making a copy of the author-accepted manuscript available through a trusted open repository. In either case, IAI grantees must deposit an electronic copy of the research article or report in the IAI Open Access Repository (https://www.iai.int/en/article). The author-accepted manuscript is the version of a paper that has been peer-reviewed and accepted by a journal for publication. This version should include all changes made during the peer review process, although it generally does not include style correction or formatting changes.