



Australian Government

Department of Climate Change, Energy, the Environment and Water

Australian Antarctic Division



**AUSTRALIAN
ANTARCTIC
PROGRAM**

The Australian Antarctic Program Data Policy (2022)

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1 DEFINITIONS

Data: A set of values, symbols, or signs (recorded on any type of medium) that describe one or more properties of an entity. For example, the numbers generated by a sensor, values derived from a model or analysis, text entered into a survey, or the raw text of a document. Generally speaking, data are used to quantitatively or qualitatively describe one or more persons or objects. Research data provide the evidence base for supporting or refuting ideas in a scientific manner.

Data Management Plan: A document describing how an individual collection of data will be managed, described, and stored, the standards the data conform to, and how data will be handled and protected during and after the completion of the project.

Derivative Data Product: A data product that has been created by making changes to an existing product or through combining existing information into an integrated product.

Information: Products derived from data that lead to a greater understanding of an entity. For example, the interpretation of a range of data from an array of conductivity sensors that inform us about the ocean's salinity range, or the narrative text of a report on algal blooms that informs the reader regarding their timing.

Metadata: Metadata is information that describes the data source, and the time, place, and conditions under which the data were created. Metadata allows the data to be traced to a known origin and known quality.

Curation: maintaining, preserving and systematising digital research data throughout its lifecycle, particularly over the long-term.

Business unit: A sub-unit within an organisation with functional independence from other sub-units at the same level, implementing its own programs, projects, and objectives. Within the AAD this would correspond to a branch, and in academic units, this would correspond to a research program.

2 PURPOSE

- 2.1 Data collections are critical assets of the Australian Antarctic Program (AAP), they must be properly curated to ensure their long-term integrity, and to ensure their accessibility, and to maximise their value for a broad range of uses.
- 2.2 The purpose of this document is to identify roles and requirements relating to the management of data and information collected as part of the AAP.

3 SCOPE

- 3.1 Collections considered under this policy will have the following characteristics:

- i. *They must be data*

The collection must fit the definition of data as provided above. Internal corporate records, such as policy documents, wikis, scratch notes, budgets, and presentations, should be preserved in accordance with their status as Commonwealth records under the Archives Act (1983). Data and information relating to the corporate management of physical samples and specimens is also the responsibility of business units, however metadata must be provided in accordance with Section 4.5. Actively maintained computer code for applications is more appropriately maintained in a repository managed by business units. Code that is static (i.e. not subject to change) that can be stored as offline files may be suitable for curation under this policy.

- ii. *They must primarily be a product of, or fundamentally owned by, the Commonwealth of Australia through the AAP*

Data or information products that are not relevant to Antarctica and the Southern Ocean or were primarily created or maintained by other countries will not be considered for curation under this policy. Examples include: images collected from U.S. or European space programs, global elevation products, and foreign maps and charts. Data generated as part of a collaboration where Australia is

a significant contributor, and the data are not held elsewhere, will be considered suitable for curation under this policy.

iii. They must have enduring archival value

Data generated as temporary products, redundant information, or data elements whose value degrades significantly from the time of collection will not be targets for curation under this policy. Potential examples of this include: intermediate calculations, compilations or subsets of externally-curated collections, alternative formats, unexceptional status logs, or data which have a significant likelihood of being revised.

iv. They must not be more appropriately hosted elsewhere

If a more authoritative, comprehensive, and enduring repository exists for specific data collections, then the data should be stored there. Relevant examples include storing large-scale weather observations with the World Meteorological Organization, or genetic sequences with GenBank.

4 POLICY STATEMENT

Data Ownership

- 4.1 Data collected or generated under the auspices of the AAP are the property of the Commonwealth of Australia. This includes data collected from the Antarctic, subantarctic, and Southern Ocean as well as data generated elsewhere, such as at a researcher's home institution.
- 4.2 Derivative data products are considered to be owned by their creator unless the development of the product was a principal outcome of a research program or activity supported through the AAP.

Maintenance requirements

- 4.3 All data collected under the auspices of the AAP must be maintained in accordance with their status as Commonwealth Records under the Archives Act. Data must be maintained in a condition conducive to long-term preservation. Maintenance requirements relating to specific record types are specified in the Australian Antarctic Division's Record Management Authority document and the Archives Act 1983.
- 4.4 Raw data must be preserved to the greatest extent practicable.
- 4.5 All data collected as part of the AAP must be accompanied by complete metadata, compliant with DIF, ISO-19115, or DCAT standards. Complete metadata must contain sufficient information to understand, access, and replicate the data set to a level of quality, accuracy, and precision specified in the metadata. The metadata must also contain information to support appropriate attribution.
- 4.6 The AADC serves as Australia's National Polar Data Centre, and as the default national repository for long-term curation of data collected as part of the AAP.
- 4.7 Data collected under the AAP may be lodged in an alternative data repository if appropriate. Written approval from the AADC will be required prior to the repository's use if it is external to the Australian Commonwealth government.
- 4.8 Data that can be regenerated from code (for example, model runs) will not be hosted by the AADC without a business case endorsed by the Australian Antarctic Division's Executive Board.
- 4.9 The AADC will not develop, host, or deploy software applications for non-AADC programs or purposes. Requests may be made to the AADC to take ownership of and responsibility for a software application if the activity supports ongoing operational delivery of Australian Antarctic data having enduring value. Accepting custody of an application will be at the discretion of the AADC.
- 4.10 Data may be transformed into alternative formats for efficient storage if the original form of the data can be regenerated with no effective loss of information.

Access to data

- 4.11 Data collected as part of the AAP will be made accessible in a full, free, and open manner for all users, excepting cases where data must be limited for ethical, cultural, or legal reasons, or where data are collected to support internal business operations.
- 4.12 Scientific data collected as part of the AAP must be made openly and freely available in accordance with section III.1.c of the Antarctic Treaty.
- 4.13 Data will be published as soon as practicable, unless access is limited on the basis of §4.11, or a request is made to embargo the data to support reasonable ethical, cultural, legal, operational, or scholarly requirements.
- 4.14 Requests for restricting or temporarily embargoing data must be endorsed by the AADC prior to submission. Maximum embargo periods are provided in Appendix A. A written business case justifying the embargo period must be presented to the AADC for review and endorsement. Requests to alter embargo decisions made by the the AADC may be submitted to the Australian Antarctic Division's Executive Board.
- 4.15 All data submitted to the AADC will be licensed using the Creative Commons Attribution International Public License unless a more permissive license is specified by the owners of the data, and the license aligns with the obligations and requirements of the Commonwealth government and the Archives Act.
- 4.16 The AADC will ensure that its data and metadata collections are accessible through its website and as web services as appropriate. Data will be made findable, accessible, interoperable and re-usable to the greatest degree practicable in keeping with FAIR data principles.
- 4.17 Data provided to the AADC will be assigned a persistent identifier (PID) to facilitate attribution and usage tracking, unless the data have been designated as confidential per §4.11.

Purchasing Data and Data Agreements

- 4.18 To the greatest extent possible, purchases of data, including raster imagery, should be made through the AADC to facilitate the greatest potential re-use within the AAP.
- 4.19 Data subject to data agreements or licensing conditions that are incompatible with the Creative Commons Attribution International Public License will only be accepted by the AADC with written approval from the Australian Antarctic Division's Executive Board.

AADC submission requirements

- 4.20 If data collection, generation, or production forms a significant part of a proposed Australian Antarctic Science Program (AASP) research project, these requirements must be reviewed by the AADC as part of the application process. Resources required to support enduring storage and maintenance of research data will be considered when evaluating proposed research projects.
- 4.21 All approved AASP Projects will be required to develop a Data Management Plan. Data Management Plans must be endorsed by the AADC.
- 4.22 All data collected aboard RSV *Nuyina*, including research data collected by or on behalf of external or international collaborators, will be deposited with the AADC, including the development of requisite metadata. Collection of data from the ship will be undertaken by AADC Data Officers.
- 4.23 Incomplete data submissions may be rejected by the AADC Manager. It will be the responsibility of the data provider to ensure that the data are appropriately maintained in accordance with §4.3 until the data are suitable for archiving.

5 RESPONSIBILITIES

Compliance, monitoring and review

- 5.1 Active data management plans and associated activities will be reviewed on an annual basis by the Australian Antarctic Data Centre's Metadata Officer.

- 5.2 Data and associated metadata will be reviewed for compliance on submission by the Australian Antarctic Data Centre's Metadata Officer.
- 5.3 Failure to comply with Data Policy requirements and Data Management Plan obligations will be reported to the relevant program leader and/or research initiative head. For research projects, this may affect assessments of future work proposed by related researchers or programs.
- 5.4 The AADC will maintain certification through the World Data System's Core Trust Seal Program to provide an independent assessment of quality assurance and quality control.
- 5.5 Quality control and quality assurance of data, processing to a community standard, or otherwise ensuring that data are fit-for-purpose are the responsibility of data providers or users of the data, unless formally assigned through an approved AAD program or project.
- 5.6 Data providers are responsible for ensuring that all data submitted to the AADC are suitable for publication in accordance with their specified license.

Roles

- 5.7 The **Australian Antarctic Data Centre Manager** is responsible for managing overall operations of the AADC, including drafting AADC-related policies. The Manager has ultimate responsibility for ensuring the enduring integrity and accessibility of Australia's Antarctic data collections.
- 5.8 The **Australian Antarctic Data Centre Information Services Manager** is responsible for oversight of general data management operations and records management responsibilities, and supervising the activities of the Metadata Officer and Data Officers. The Information Services Manager will ensure data management practices align with international best practice standards.
- 5.9 The **Australian Antarctic Data Centre Mapping and Spatial Data Manager** is specifically responsible for maintaining map collections and data with an explicit spatial context. Examples of spatial data include elevation and bathymetry information, positions of critical infrastructure, remotely sensed data from satellites and drones, and controlled zones of operation.
- 5.10 The **Australian Antarctic Data Centre Applications Development Manager** is responsible for developing, operating and maintaining computer infrastructure and systems to ensure effective storage and delivery of data held by the AADC.
- 5.11 The **Australian Antarctic Data Centre Scientific Data Coordinator** is responsible for acting as the first point of contact for data submissions, reviewing data and metadata submissions, and reviewing data management plans. The Metadata Officer will support certification through the Core Trust Seal program.
- 5.12 **Australian Antarctic Data Centre Data Officers** are responsible for management and maintenance of data collected aboard AAD-owned or operated vessels, including transfer of data from vessel computer systems to shore-based computer systems. These responsibilities exclude operating and maintaining sensor equipment, operating and maintaining computer and network infrastructure aboard RSV *Nuyina*, and having primary responsibility for operating and maintaining the ship's Science Data Management System.

Reporting

- 5.13 The AADC will generate an annual report providing a summary of its data collections, including number of items, frequency of use, storage requirements, and short-term (up to 5 years) projections.
- 5.14 The AADC will provide an annual report to the Science Branch regarding progress relating to AASP Data Management Plans as part of the milestone report assessment process.

6 RELATED LEGISLATION AND DOCUMENTS

[Archives Act 1983](#)

[The Antarctic Treaty 1959](#)

[Creative Commons Attribution 4.0 International Public License](#)

[Alignment of Polar Data Policies – Recommended Principles](#)

7 FEEDBACK

7.1 Questions and feedback relating to this document can be sent to data@antarctica.gov.au.

8 APPROVAL AND REVIEW DETAILS

Approval and Review	Details
Approval Authority	Australian Antarctic Division Executive Board
Administrator	Australian Antarctic Data Centre Manager

Approval and Amendment History	Details
Original Approval Authority and Date	Australian Antarctic Division Executive Board 06/12/2022

9 APPENDIX A

Data Source	Maximum Embargo Period	Examples
Ship-sourced underway data (routine, ongoing operations)	None / as available	Ocean and atmospheric variables recorded by ship sensors.
Ship-sourced observations and measurements (project data)	By a project's end date	Copies of all sensor and instrument data are to be deposited with the AADC at the end of every voyage
Data captured by students aligned to the AAP	One year after the student has submitted their thesis or is no longer associated with the corresponding project.	Data associated with a PhD. thesis.
Data from monitoring projects (medium and long-term)	For the life of the project, for those projects approved for <5 years. Up to a maximum of 5 years for projects that are approved for > 5 years, commencing from time of data collection	e.g. Antarctic continent-based seabird observational study