



Australian Government

Department of Climate Change, Energy, the Environment and Water

Australian Antarctic Division



**AUSTRALIAN
ANTARCTIC
PROGRAM**

The Australian Antarctic Data Centre Preservation Strategy (2024)

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1 PURPOSE

- 1.1 This document establishes principles and procedures relating to long-term retention and preservation of the data hosted by the Australian Antarctic Data Centre (AADC), with the goal of supporting better access and re-use of data, and ensuring that systems and services are available to support effective management and delivery.
- 1.2 Additional information relating to data archival and preservation within the broader Australian Antarctic Program (AAP) is available in the AAP Data Policy - <https://data.aad.gov.au/about/data-policy>.

2 MANDATE

- 2.1 Data and dataset collections hosted by the AADC are considered to be Commonwealth records subject to Australia's Archives Act (1983), and are to be retained as national archives as directed through the Australian Antarctic Division's Scientific Research Records Authority (https://www.naa.gov.au/sites/default/files/2023-09/agency-ra-2022-00410636_0.pdf). National archives status requires that this information be retained in perpetuity, following sections 3C and 24.2.b of the Archives Act.
- 2.2 The AADC is the responsible section for records management within the Australian Antarctic Division.
- 2.3 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.

3 APPLICATION

- 3.1 Unless otherwise stated, the preservation strategy applies to the dataset collections and derivatives hosted by the AADC, all data contributors including AAP staff and researchers, whether internal to the Australian Antarctic Division (AAD), or external.

4 ROLES AND RESPONSIBILITIES

- 4.1 The AADC acting for, and on behalf of, contributors of data hosted by the AADC has accepted responsibility for preserving the digital assets including data and derived products. All AADC staff contribute to data preservation, however the Senior Scientific Data Coordinator has primary responsibility.
- 4.2 AADC management review and endorse AAP and AADC data policy documentation. The data related responsibilities of AAP researchers and AADC staff are outlined in the AAP Data Policy.

5 DATA MANAGEMENT

Metadata and documentation

- 5.1 Metadata is fundamental to preserving data hosted by the AADC and data made available via the AADC data catalogue. The AADC uses an in-house developed metadata discovery tool, and an in-house developed metadata creation and editing tool, coupled with an in-house developed data submission and delivery system. The metadata system has been designed to use the DIF 9 metadata standard, but is compatible with DIF 10 and ISO 19115 metadata standards.
- 5.2 Metadata will point to all data available via the AADC and will aid discovery and re-use by including descriptions, details of provenance, licence, structure and location.

Digital Object Identifier

- 5.3 A persistent Digital Object Identifier (DOI) is applied to the bulk of AADC datasets available in the data catalogue to provide a persistent link to the location of the object on the internet. Essential criteria required for a resource to be allocated a DOI includes that the resource must be hosted in systems managed by the AADC and that the resource remains persistently available.

Data formats

- 5.4 The AADC preferentially uses open, long-lived formats such as CSV, text, and netCDF versus proprietary formats. Where proprietary formats are required, AADC staff ensure that files are updated to more recent formats (e.g. .xlsx instead of .xls). Periodic checks are made over the entire collection to ensure that file formats remain current. The AADC does not have a list of preferred formats, nor does it endorse particular formats. The AADC engages with researchers to ensure their data are suitably archived in an appropriate format.
- 5.5 In the event that data are only available in unsuitable, proprietary formats, then copies of the associated software are either referenced in the metadata, or made available as an associated download. Archival in such formats is strongly discouraged.

File naming conventions and quality checks

- 5.6 Dataset collections hosted by the AADC are named in a consistent and prescribed manner to facilitate storage and retrieval. Researchers are encouraged to organise their files within the collection in a tiered folder structure, and to ensure individual filenames are consistent and logical. Dataset collections typically share a filename with the corresponding metadata record.
- 5.7 AADC staff perform basic quality checks on all submitted datasets to ensure that files can be opened, that essential information (e.g. dates, units of measurement) are included, and that metadata records provide the required amount of contextual information.

Backup and Archive

- 5.8 The AADC uses an onsite S3 (object) Storage Grid solution to store its dataset collections for archival and delivery. These systems are managed by AADC and AAD IT staff. All dataset collections are also backed up locally and offsite through Amazon Web Services to ensure redundancy.
- 5.9 When required, multiple versions of datasets are stored to satisfy persistence requirements associated with the assignment of DOIs.

6 CONTINUITY PLAN

- 6.1 In the event that the AADC were to be dissolved without alternative arrangement, custodianship of its data collections would pass to the Department of Climate Change, Energy, Environment and Water's Environment Information Australia (EIA) Division (<https://www.dcceew.gov.au/environment/environmental-information-data>).

7 FEEDBACK

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

8 APPROVAL AND REVIEW DETAILS

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