

Guidelines for data management, Polar Data Center

1st February 2007

Polar Data Center

National Institute of Polar Research

Following the establishment of the Polar Data Center (PDC) by the National Institute of Polar Research (NIPR) and the Research Organization of Information and Systems (ROIS) on Sept. 28th, 2006, guidelines have been prepared for the handling of data.

1. Role of the Polar Data Center (PDC)

NIPR is responsible for the proper use and management of data collected as a result of NIPR-related activities. The PDC is in charge of data management.

Following Article III.1.c of the 1998 Antarctic Treaty, affiliate countries are obliged to ensure that scientific data collected from Antarctic observation programs can be freely exchanged and utilized. At the 22nd ATCM meeting of cooperative countries of 1998 Antarctic Treaty, it was established that each country would be required to establish a National Antarctic Data Centre (NADC) and to properly disclose data collected from scientists. The PDC at NIPR performs the function of a NADC for Japan.

In this document, guidelines for data management are outlined that fulfill the function of the PDC.

2. Classification of Data

The PDC handles the following data:

2.1. Scientific Data

(i) text documents, numeric databases, and general information databases (metadata) of all scientific data obtained by the Japanese Antarctic Research Expedition (JARE) and other Antarctic research activities, and (ii) data in research publications managed by the NIPR library, excluding data that cannot be digitized and outreach resources managed by the Polar Research Resources Center and the Publicity Section.

2.2. General Data

(i) text documents, numeric databases, and general information databases (metadata) of a non-scientific nature, compiled during JARE and other Antarctic programs; and (ii) documents for the management of NIPR, excluding data that cannot be digitized and outreach resources managed by the Polar Research Resources Center and the Publicity Section. General data must follow requirements for disclosure, which are to be reviewed separately.

3. Category of data

The PDC accepts data or databases, which correspond to any of the following items, and are considered suitable for disclosure and dissemination:

- 3.1. Primary / raw data. e.g. annual snow accumulation data, Antarctic rock sample catalogues, lake chemical analyses.
- 3.2. Processed data. e.g. corrected monitoring data, digital data corresponding to “JARE DATA REPORTS”, Antarctic meteorite compiled databases.
- 3.3. Results of analysis from original datasets. e.g. a report of accident examples and statistics over the past 50 years.
- 3.4. Collateral and supplementary data. e.g. photographs and map blueprints of localities.

4. Role of the PDC and custodians

- 4.1. A person who intends to deposit data or databases (hereafter named the “custodian”) can receive advice from the PDC how to apply, format and deposit the data¹.
- 4.2. The PDC calls for Antarctic researchers and members of JARE and other Antarctic programs to provide data or databases.
- 4.3. The PDC operates a portal site for a meta-database.
- 4.4. The meta-database of the PDC provides a link to the Antarctic Master Directory (AMD).

- 4.5. The meta-database of the PDC provides links to URLs designated by custodians.
- 4.6. Custodians are responsible for the creation of datasets worthy of disclosure and dissemination.
- 4.7. Custodians need not be the original acquirers of data, but will be held responsible for the data.
- 4.8. The PDC discusses and cooperates with custodians as needed.

5. How to deposit data

- 5.1. Custodians of data or databases must create a metadata sheet (Directory interchange Format: DIF) for datasets to be deposited, then request the PDC to provide a link to the URL. The application will be accepted as needed.
- 5.2. When they utilize the 'Polar science data library system (POLARIS)' operated by the PDC, custodians must follow the guidelines for POLARIS, which is set up independently.
- 5.3. Data and datasets must be written principally in English, and include Japanese wherever possible.
- 5.4. The metadata sheet must include both English and Japanese.
- 5.5. The PDC adds new metadata to the portal site annually.

6. Maintenance

- 6.1. Custodians have responsibility for data corrections and updates.
- 6.2. The PDC appoints metadata managers² in each Research Group. The managers encourage custodians to revise the uploaded data once or twice a year.

¹ Address for application: Office of the PDC, NIPR.

² PDC appoints the following contact persons as metadata manager for each science branch:

Space and Upper Atmosphere: Akira Kadokura; kadokura@nipr.ac.jp

Meteorology and Glaciology: Naohiko Hirasawa; hira.n@nipr.ac.jp

Geoscience: Masaki Kanao; kanao@nipr.ac.jp

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