

## ***NDMC DATA POLICY***

The NDMC data policy applies to data acquired, assembled or created through research, survey and monitoring activities that are either fully or partially part of NDMC.

The purpose of the NDMC data policy is to support the research and policy objectives of the NDMC. Since NDMC is a distributed programme, implemented through a number of self-managed research projects, the principles enshrined in the data policy must be applied to data in each project.

This data policy replaces the NDMC data policy in force since May 2009.

### *1. NDMC Data Policy for NDMC Members*

In accordance with

- the Twelfth WMO Congress, Resolution 40 (Cg-XII, 1995)
- the Thirteenth WMO Congress, Resolution 25 (Cg XIII, 1999)
- the ICSU 1996 General Assembly Resolution
- the ICSU Assessment on Scientific Data and Information (ICSU 2004)
- Article III-1c from the Antarctic Treaty
- the Intergovernmental Oceanographic Commission Data Exchange Policy

and in order to maximize the benefit of data gathered under the auspices of the NDMC, it is required that NDMC data, including operational data delivered in real time, are made on an initial approach **within NDMC** available fully, freely, openly, and on the shortest feasible timescale. ICSU (2004b) defines “full and open access” as equitable, non-discriminatory access to all data preferably free of cost, but some reasonable cost-recovery is acceptable. WMO Resolution 40 uses the terms “free and unrestricted” and defines them as non-discriminatory and without charge. “Without charge” in the context of this resolution means at no more than the cost of reproduction and delivery without charge for the data and products themselves.

All NDMC data should be centrally archived or made available via link at WDC-RSAT in their simplest useful form following existing NDMC data format guidelines and be accompanied by a complete metadata description. However, it remains the responsibility of individual NDMC scientist to make arrangements with the WDC-RSAT (long-term archive) to ensure the preservation of their data. It must be recognized that data preservation and access should not be afterthoughts and need to be considered while data collection plans are developed.

All inquiries should be directed to the NDMC data manager (tbd), contact details are listed on the NDMC website (<http://wdc.dlr.de/ndmc>).

### Metadata

All NDMC data must be accompanied by a full set of metadata that completely document and describe the data. In accordance with the ISO standard Reference Model for an Open Archival Information System (OAIS) (e.g. CCSDS 2002), metadata may be defined as all the information necessary for data to be independently understood by users and to ensure proper quality assessment, referencing and stewardship of the data.

Regardless of any data access restrictions or delays in delivery of the data itself, all NDMC scientists could promptly provide basic descriptive metadata of collected data in an internationally recognized, standard format to WDC-RSAT registry.

A metadata template is provided via the NDMC website (<http://wdc.dlr.de/ndmc> -> documents) or can be requested from the NDMC data manager.

### Attribution and fair use

Users of NDMC data must provide information (abstract) about their proposed research to the NDMC manager who will communicate this to the appropriate data provider. The final decision of data provision will be with the data provider.

Users of NDMC data must formally offer co-authorship to the data provider. In case the data provider does not wish to become a co-author, he must be acknowledged appropriately.

Data usage for commercial use needs a written permit by the data provider.

Data transfer to third parties is not allowed without permission of the data provider.

Citing only the data base is insufficient. Where possible, this acknowledgment should take the form of a formal citation such as Digital Objective Identifier (DOI) (see § DOI registration) or when citing a book or journal article. Journals should require the formal citation of data used in articles they publish.

It is also important to acknowledge and reference the data origin as being the "Network for Detection of Mesosphere Change."

### NDMC membership

In order to be considered as official member of NDMC, each data provider must follow the NDMC data policy by taking the following actions:

- A) Submit names of participating researchers, their full contact information and a full set of metadata to the NDMC data manager (see § Metadata). This information will be communicated to the NDMC management board for approval.
- B) Sign and return the network data sharing policy document. Upon returning the document, new NDMC data provider will formally receive access to the password-protected archive and to the internal area of the NDMC web page. In case of new measurement stations, corresponding pages on the NDMC web page will be generated.
- C) Submit data to the NDMC archive according to an agreed timetable.
- D) Follow <http://wdc.dlr.de> for instructions on how to get access to the NDMC Archive at WDC-RSAT.

### Embargo period

A key reason to restrict access is to protect the research process by allowing researchers a reasonable amount of time to work up their data sets and publish their findings, allowing an embargo period. It is considered that, in most cases, a reasonable embargo period is a maximum of three years from the end of data collection. It may be possible to negotiate an earlier release.

### Data Submission

The data are submitted to the NDMC archive via FTP. Please contact the NDMC data manager to get the FTP access information (link, account user name and password) and more information on the usage of FTP if needed.

You have to be an officially NDMC member to submit data (see § NDMC membership). All NDMC data must be accompanied by a full set of metadata that completely document and describe the data (see § Metadata).

### DOI Registration

The WDC-RSAT is mandated by the German National Library of Science and Technology (TIB), and thus is allowed to assign persistent identifiers, so-called DOI's to research datasets, so that they can be handled as independent, citable and unique scientific objects. DOI's allow proper referencing of data.

In order to get a DOI (Digital Object Identifier) for specific datasets, these datasets have to be submitted and archived at WDC-RSAT (NDMC Archive) with complete ISO Metadata (see § Data submission). The data provider requests a DOI for data sets via submission of general information about the datasets for the DOI allocation. Contact NDMC data manager to get the DOI request form.

The data provider will receive finally the identifier assigned to the datasets with a URL, which can be used for citation in scientific publication as official reference to the datasets.