



norden

Top-level Research Initiative



**Nordic Centre of Excellence
programme**

**Declaration of Intent
between
the Nordic Centres of Excellence (NCoE)
within the sub-programme
'Interaction between Climate Change and the Cryosphere (ICCC)'
regarding
an Open Data Policy**

*The NCoE SVALI, the NCoE CRAICC, and the NCoE DEFROST
of the Top-level Research Initiative (TRI),
hereafter referred to as NCoE ICCC,
have concluded the following Declaration of Intent within NCoE ICCC*

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Introduction

The TRI NCoE ICCC Data Policy is based on the existing "International Polar Year Data Policy". As explained in the introduction of the IPY data policy, the International Polar Year 2007–2009 (IPY, "<http://ipy.arcticportal.org/>") was "an intense, interdisciplinary, and internationally coordinated campaign of research and observations. IPY knowledge and the observations upon which it is built must be effectively managed to ensure the greatest benefit in the future. IPY-generated data should be carefully and thoughtfully collected, used collaboratively, and adequately preserved". The aim of the TRI NCoE ICCC data policy as for the IPY policy is to provide a framework for data to be handled in a consistent manner, and to strike a balance between the rights of investigators and the need for widespread access through the free and unrestricted sharing and exchange of both data and metadata. The policy is compatible with the data principles of the Top-level Research Initiative (TRI, "<http://www.toppforskningsinitiativet.org/en/>") and other relevant international agencies such as ICSU and WMO.

Within each of the three NCoEs, the Scientific Council and the Steering Group or equivalent bodies are responsible for this Data Policy. Questions about the policy and its implementation should be directed to the Scientific Council or equivalent body (<http://www.toppforskningsinitiativet.org/en/programmer-1/program-2/prosjekter>).

Objectives

The purpose of the NCoE ICCC data policy is to support the objectives of NCoE ICCC. The TRI NCoE ICCC aims at a joint Nordic contribution in cryospheric studies to solve one of the most important global climate change research challenges. The programme integrates studies on stability of glaciers, atmospheric chemistry and biogeochemistry. The collaboration is based on three pillars:

1. common analysis, interpretation and reporting of changes in the cryosphere in the North Atlantic area,
2. a common platform for graduate studies and postgraduate research work between the main research institutions and universities involved in cryospheric studies based on an exchange of students and researchers, a common pool of observational data and a joint programme for organisation and for obtaining support for future cryospheric research, and
3. the NCoE ICCC is a vehicle for wider international collaboration within cryosphere research in the Nordic countries;

The objective of NCoE ICCC data management is to ensure the security, accessibility and free exchange of relevant data that both support current research and future use of the data. The NCoE ICCC Data Policy provides initial guidance for meeting this data management objective.

Data Definition

NCoE ICCC data are those data generated during the duration of the three individual NCoEs within NCoE ICCC (October 2010 – September 2015) through work packages that are organised as part of the individual NCoEs. This policy applies specifically to those data. It should be recognised, however, that researchers within NCoE ICCC will use NCoE ICCC-related data from outside sources, such as from existing operational data streams and historical sources. Where appropriate, this data policy should apply to those NCoE ICCC-related data as well.

A subset of data both generated and used by NCoE ICCC need a specialised policy and access considerations, because they are legitimately restricted in some way. Access to these data may for example be restricted because there may be intellectual property issues. It is the overall aim of NCoE ICCC that data are as freely available as possible within the constraints provided by such legitimate restrictions.

Data Availability and Exchange

In order to maximise the benefit of data gathered under NCoE ICCC, it is required that NCoE ICCC data are made available fully, freely, openly, and on the shortest feasible timescale. The only exceptions to this policy of full, free, and open access are where legitimate obligations, for example related to contracts of earlier projects or national laws and regulations restrict data access.

ICSU (2004) 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.

Metadata

Metadata are essential to the discovery, access, and effective use of data. All NCoE ICCC data must be accompanied by metadata that document and describe the data. Metadata may be defined as all the information necessary for data to be independently understood by users and to ensure proper stewardship of the data. Regardless of any data access restrictions or delays in delivery of the data itself, NCoE ICCC projects should promptly provide basic descriptive metadata of collected data in an internationally recognised, standard format to an appropriate catalogue or registry.

Data Preservation

Recognising that the true value of scientific data is often realised long after they have been collected, it is essential to ensure long-term preservation and sustained access to data. All NCoE ICCC data must be archived in their simplest, useful form and be accompanied by a complete metadata description. An IPY Data and Information Service (IPYDIS—<http://ipydis.org>) should help projects identify appropriate long-term archives and data centres, but it is the responsibility of individual researchers within NCoE ICCC to make arrangements with long-term archives to ensure the preservation of their data.

Some particularly important data archives for NCoE ICCC are the *National Snow and Ice Data Center* (NSIDC, “<http://nsidc.org>”) and archives related to WCRP CliC and the newly established WMO programme *Global Cryosphere Watch* (GCW). It must be recognized that data preservation and access should not be afterthoughts and need to be considered while data collection plans are developed.

Data Acknowledgment

To recognise the valuable role of data providers (and scientists who collect or prepare data) and to facilitate repeatability of experiments in keeping with the scientific method, users of SVALI data must formally acknowledge data authors (contributors) and sources. Where possible, this acknowledgment should take the form of a formal citation, such as when citing a book or journal article.

References

ICSU (International Council for Science). 2004b. *ICSU Report of the CSPR Assessment Panel on Scientific Data and Information*. Available at http://www.icsu.org/1_icsuinscience/DATA_Paa_1.html

IPY. 2008. International Polar Year 2007-2008 Data Policy. Available at “http://classic.ipy.org/Subcommittees/final_ipy_data_policy.pdf”.