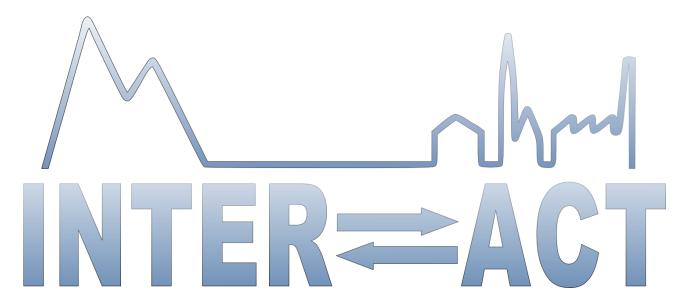# Integrating Activities for Advanced Communities

D4.4- INTERACT Data Policy

Project No.730938– INTERACT

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Dissemination Level		
PU	Public	X
PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the Consortium (including the Commission Services)	
CO	Confidential, only for members of the Consortium (including the Commission Services)	

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Publishable Executive Summary

The INTERACT Data Policy is based on the SIOS Data Policy which in turn is based on OECD, GEOSS, IASC and EU regulations. It promotes free and ethical open data and it is specifically addressing the Virtual Access component of the overall INTERACT objective. This document describes the 4 INTERACT data sharing principles, the definitions and concepts as well as policy. The implementation of this data policy is described in the INTERACT Data Management Plan.

1   Preamble

The International Network for Terrestrial Research and Monitoring in the Arctic (INTERACT) is an infrastructure project under the auspices of SCANNET, a circum-arctic network of currently 85 terrestrial field bases in northern Europe, Russia, US, Canada, Greenland, Iceland, the Faroe Islands and Scotland as well as stations in northern alpine areas. INTERACT specifically seeks to build capacity for research and monitoring in the Arctic and beyond, and is offering access to numerous research stations through the Transnational Access program.

The project, which is funded by the EU, has as main objective to build capacity for identifying, understanding, predicting and responding to diverse environmental changes throughout the wide environmental and land-use envelopes of the Arctic. This is necessary because the Arctic is so vast and so sparsely populated that environmental observing capacity is limited compared to most other latitudes.

INTERACT is multidisciplinary: together, the stations in INTERACT host thousands of scientists from around the world who work on projects within the fields of e.g. glaciology, permafrost, climate, ecology, biodiversity and biogeochemical cycling. The INTERACT stations also host and facilitate many international single-discipline networks and aid training by hosting summer schools.

The INTERACT Data Policy is based on the Svalbard Integrated Arctic Earth Observing System (SIOS) Data Policy which in turn relates to EU regulations and the IASC Data Policy. All scientific results of INTERACT-related activities shall be verifiable and reproducible through ethically open access to all data necessary to produce those results. Data shall be preserved, accessible, and used in accordance with scientific norms of fair attribution and use.

1.1 Political Framework

The global perspectives of open data were enhanced when in 2013 the G8 signed the G8 Open Data Charter. The European Union, being one of the G8 members, has followed up with among others further developing its Open Science System[1].

In addressing the global challenges, European and global leaders acknowledge the role of the Arctic and the importance of developing more knowledge about the region as a strategy for better understanding of our planet. G8, the EU, nations and international organizations are actively developing policies to support monitoring capacity, research and innovation in the Arctic. In April 2016, the European Union adopted *A new integrated EU policy for the Arctic.*

These policies are translated into global monitoring initiatives with a specified scientific field or focus on a specific type of resource. In light of the described political landscape and within its mandate, INTERACT aims to support such global initiatives as the Global Biodiversity Information Facility (GBIF), the Committee on Earth Observation Satellites (CEOS), the ICSU World Data System (WDS), the WMO Information System (WIS), and the Sustaining Arctic Observing Networks, (SAON). The Global Earth Observation System of Systems (GEOSS) aims to prepare a global, multidisciplinary, distributed system for earth information to support decision makers by providing networked environmental information.

1.2 Legal Framework

The INTERACT data policy is based on the Global Earth Observations System of Systems (GEOSS) Data Sharing Principles and in compliance with the EU INSPIRE Directive 2007/2/EC

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[1]   http://data.consilium.europa.eu/doc/document/ST-9526-2016-INIT/en/pdf

and The EU Public Sector Information – PSI Directive 2003/98/EC, the Aarhus Convention on environmental data, EU Directive 2003/4EC, the ICSU Declaration on Science and the Use of Scientific Knowledge, the International Arctic Social Science Association's Guiding Principles on the Conduct of Research, and the OECD Principles and Guidelines for Access to Research Data from Public Funding, April 2007.

1.3 Intellectual Property Rights

INTERACT intellectual property rights are described in the Consortium Agreement. Ownership to data and other results are not affected by the INTERACT Data Policy.

2   Aims

INTERACT aims to provide a mechanism for transnational and virtual access to the participating research stations. The INTERACT Data Policy is specifically addressing the Virtual Access component of the overall INTERACT objective ensuring access to scientific data produced at the participating research stations in support of the main objective which is to *build capacity for identifying, understanding, predicting and responding to diverse environmental changes throughout the wide environmental and land-use envelopes of the Arctic.* In order to achieve this, data from multiple sources and time periods has to be documented and accessible for the scientific community. The INTERACT Data Policy outlines the principles of sharing scientific data in the context of INTERACT and between INTERACT and external user communities. Furthermore it provides a key performance indicator mechanism which supports the benefit of continued transnational and virtual access to the INTERACT network of research stations.

3   Principles

The INTERACT data sharing principles are as follows:

    I.   There will be full and open exchange of data[2], metadata and products[3] shared within INTERACT, recognizing relevant international instruments and national policies and legislation;

    II.   All shared data and metadata will be made available[4] through the INTERACT Data Management System[5] with minimum time delay[6];

    III.   All shared data and metadata should be distributed free of charge or no more than the cost of reproduction;

    IV.   Data access may be restricted when data release could compromise the confidentiality of human subjects or cause harm to endangered species or other vulnerable subjects.

    V.   Users of data shall acknowledge in any publication or any other derived work, the contribution made by those who have created and worked up the data.

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[2]   In line with the H2020 Open Research Data Pilot principle of "as open as possible, as closed as necessary"

[3]   By data is understood observations from sensors (e.g. temperature), human observations of e.g. cloud etc, metadata are discovery and use metadata necessary to find and understand the data. Products are derived from data and accompanied by metadata like data.

[4]   Meaning discoverable and preferably (but not mandatory) accessible online in standardised way.

[5]   A searchable catalogue covering datasets covered by INTERACT Virtual Access and enabling integration with WMO, SAON, IASC , GEOSS etc. data management.

[6]   The time needed for preparing data for publication, including quality assurance.

4   Scope

This data policy applies to INTERACT members and third parties contributing to INTERACT or using data supplied through INTERACT. In the present form it is restricted to the Virtual Access component of INTERACT. Depending on the outcome of ongoing processes related to open data in the context of EU projects it may be extended to Transnational Access in the future.

Normally[7], any natural or legal person or any association of legal or natural persons, including research users, shall have a right of access to the INTERACT data, subject to the principles, conditions and exceptions defined in this data policy.

5   Definitions and concepts

Data set: An INTERACT data set is a discrete collection of scientific data, museum objects or samples which can be described by metadata, compliant to the INTERACT data policy, and related to scientific efforts within the INTERACT framework.

Contributing data centre: INTERACT Virtual Access is designed as a distributed system making extensive use of existing data centres and their infrastructures. Which data centres that are used is decided by the INTERACT Data Forum. A contributing data centre can be the data centre operated by the INTERACT station itself or a third party data centre which is used by the INTERACT station.

INTERACT Data Forum: The INTERACT Data Forum has representatives from contributing stations through the Station Managers Forum and the General Assembly.

Metadata: A description of the data that allows their inventory, discovery, evaluation or use.

Timely manner: INTERACT data delivered in a timely manner means delivery of data without un-due delay. Any delay, due[8] or un-due, shall not be longer than one year. Discovery metadata shall be delivered immediately.

Life cycle management: The procedures and activities necessary to document, encode, publish, share, preserve and eventually delete a dataset when/if obsolete.

6   Policy

6.1 Open data principles

INTERACT promotes free and open access to data to any person or any organisation who requests them.

Requested data shall be made available in a timely manner, without undue delay, preferably online and free of charge. INTERACT does not demand that the request refers or cites legal grounds.

The only restrictions on access which INTERACT will apply to data are those supported by the exceptions on disclosure in the INSPIRE directive and the Directive 2003/4/EC, in particular where release of data would affect:

    I.   Confidentiality of the proceedings of public authorities

    II.   International relations, public security or national defence

    III. The course of justice

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[7] Exceptions must be justified.
[8]   Due delays are e.g. post processing data to a useable form through laboratory calibrations or quality assurance of the data produced.

IV. The confidentiality of commercial or industrial information

V. Intellectual property rights

VI. Confidentiality of personal data

VII. The interests or protection of any person who supplied the information requested on a voluntary basis

VIII.   The protection of the environment

IX. Materials in the course of completion

6.2 Discovery

INTERACT will provide public discovery services making it possible to search for INTERACT data sets on the basis of the corresponding discovery metadata.

An ISO19115[9] set of discovery metadata will be offered for any INTERACT data set including the required data citation information (see also chapter 6.7).

6.3 Access

Contributing data centres shall provide and grant access for INTERACT to appropriate web services exposing data and metadata.

6.4 Usability

Each data set catalogued in the INTERACT discovery service shall be described by an appropriate set of metadata in compliance with the INSPIRE directive.

Contributing data centres shall ensure that INTERACT has the rights to publish their discovery metadata and data.

6.5 Preservation

Contributing data centres shall ensure long term preservation and accessibility of data sets. The dataset stewardship of data remains with the contributing data centre through agreements with the stations. Non reproducible data, e.g. observations, are to be preserved for ever. Simulations and modified data for at least 10 years.

6.6 Curation

All data generated using the INTERACT stations shall be curated by a contributing data centre to INTERACT. Contributing data centres shall ensure proper life cycle management of datasets in collaboration with the stations.

Contributing data centres shall assign appropriate persistent, resolvable identifiers to enable documents to cite the data on which they are based.

6.7 Attribution

Users of data supplied through INTERACT Virtual Access shall acknowledge in any publication or any other derived work, the contribution made by those who have created and worked up the data.

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[9]   The ISO19115 profile (mandatory and recommended elements as well as glossaries to use) will be defined through guidance documentation.

If the data licence does not specify how best to do this, data should be formally cited using the citation text provided on the dataset's landing page or in its metadata.

Those who retrieve data through INTERACT shall acknowledge INTERACT as follows: "Contains data retrieved through the INTERACT collaboration (year[10])". In addition the data provider should be attributed as indicated in the discovery metadata using a reference or a DOI.

6.8 Compliance

Institutions or individuals generating data or metadata as a result of using INTERACT integrated infrastructure or retrieving and using data generated using INTERACT integrated infrastructure shall comply with the INTERACT data policy.

6.9 Warranty and liability

Where data are made available through INTERACT, except if agreed otherwise, INTERACT shall, to all possible extent and where permitted under applicable law, ensure that the following rules are made applicable:

I.   INTERACT data are provided "as is" without warranty of any kind, either express or implied, including, but not limited to, any implied warranty against infringement of third parties' property rights, or merchantability, integration, satisfactory quality and fitness for a particular purpose.

II. INTERACT has no obligation to provide technical support or remedies for the data other than agreed by the INTERACT members and described in the INTERACT Data Policy and Data Management Plan. INTERACT does not represent or warrant that the data will be error free or uninterrupted, or that all non-conformities can or will be corrected, or that any data are accurate or complete, or that they are of a satisfactory technical or scientific quality.

III. INTERACT shall not be held liable for any direct or indirect, incidental, consequential or other damages, including but not limited to the loss of data, loss of profits, or any other financial loss arising from the use of the INTERACT data, or inability to use them, even if INTERACT is notified of the possibility of such damages.

7   Implementation

The implementation of this data policy is described in the INTERACT Data Management Plan.

7.1 Data Management Plan

The INTERACT Data Management Plan (D4.1) shall describe the implementation of the INTERACT Data Policy.

7.2 Implementation Guidelines

Implementation guidelines and manuals shall be provided by the INTERACT Data Forum (D4.3).

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[10]   When the data was accessed.

7.3 Monitoring of implementation

The INTERACT Data Forum will monitor the implementation of this data policy through annual reports.

8 Approval and Review

This Data Policy was approved by the INTERACT Station Managers in November 2018 via email exchanges. This data policy shall be reviewed biennially by the INTERACT General Assembly.