

Arctic Data Interoperability Workshop

Welcome!

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Why Arctic SDI?

Data is often difficult and costly to find, access and combine

- due to lack of standardized distribution of data and insufficient compliance to international standards
- The Arctic SDI was established to address the need for readily available spatial data in the northern areas of the globe
 - Let polar data holders get together and make more use of data

National Mapping Agencies from 8 countries Canada, Kingdom of Denmark, Finland, Iceland, Norway, Russia, Sweden, USA Memorandum of Understanding





A Cooperative Model in the Arctic SDI



The Arctic SDI is focused on:

- Working with organizations to make their data available,
- Understanding the needs and requirements stakeholders
- Information Management best practices (lifecycle of geospatial data),
- Open data standards and provision of authoritative data,
- Helping users and data contributors understand how to participate.





Distributed sources – close to real time data





Data Provider Platforms - Arctic SDI



Data & Service Stewardship





GBIF – Arctic SDI





Global Data Publishers



arctic-sdi.org

Arctic Council & Norwegian Polar Institute



Norwegian Polar Data Centre







Global Data Publishers

Atlantic Devan

Data & Service Architecture



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Workshop Goals

1. Identify appropriate tools to ease data sharing and management

2. Create a common Architecture











Organizational model











Challenges & possibilities to reach efficient data sharing!

based on the diversity of organizations and technical infrastructures that is our reality



System & Application model





The Web Service Model





Figure 1. Main Components in the OPeNDAP WCS Service Implementation



Arctic SDI Topographic Basemap Service





Sort

114,619.8

7,942.4

5.829.4

570.7

5.685.5

775,375.1 6,569.3

675.810.3

XY

Combining Spatial and Statistical data





Tools and Services needed to find, access and combine data

Facilitate the creation of important information needed to meet the challenges in the polar regions



Arctic Web Services Harvesting An Evergreen Catalogue Approach



Discrete Global Grid System (DGGS) Standard

- A form of Earth reference that represents the Earth with a tessellations/mosaic of nested cells
- DGGS partition the globe in closely packed hierarchical tessellations
- Each cell represent a homogenous value, with a unique identifier or index

Allows for:

- linear ordering
- parent-child operations
- nearest neighbour algebraic operations

Source: OGC







Data Collection & Creation Semantics

How do we meet the difficulties for Arctic data users to find already existing data that fits their purpose and use?