



ARCTIC
SDI Arctic Spatial
Data Infrastructure



Enabling Access to Arctic Location Based Information

Prashant Shukle

Arctic SDI Board Member, Natural Resources Canada

Kevin Gallagher

Arctic SDI Board Chair, United States Geological Survey

Arctic Council Senior Arctic Officials Meeting

06 October 2016

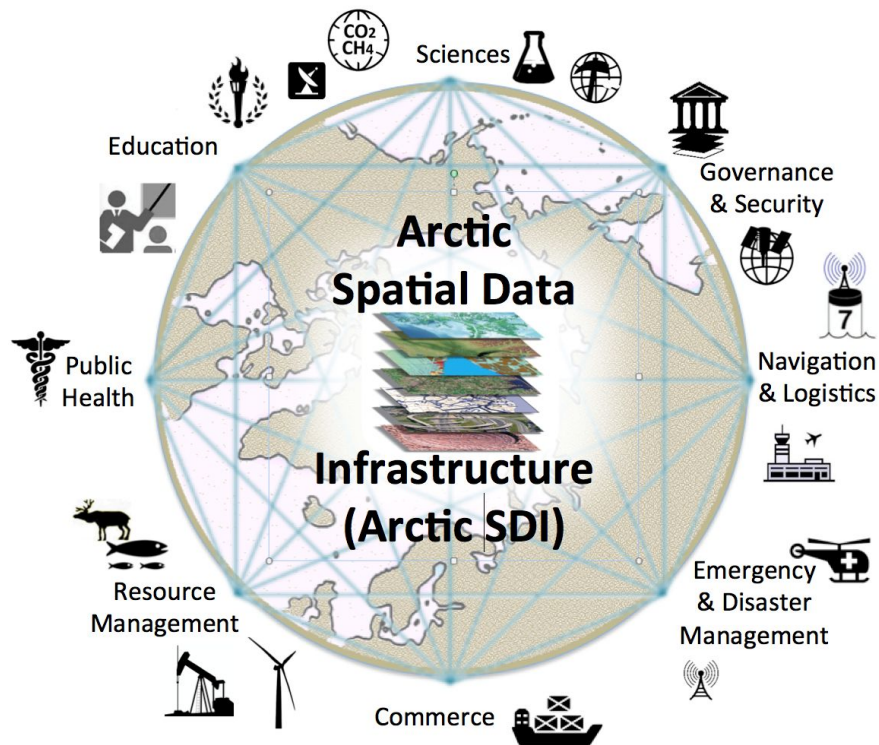
What is Arctic SDI?

Video:

- Arctic SDI 101
- AC endorsed 2009
- MoU in Place
- Strategic Plan
- Technical Implementations
- Publications



A Cooperative Model in the Arctic



The Arctic SDI is focused on

- Working with organizations to make their data available, with a focus on the Arctic Council,
- Understanding the needs and requirements of 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.



Southern Svalbard: Arctic SDI Basemap vs. Google Maps

Arctic SDI provides access to all forms of authoritative data

Arctic SDI is Partnering to Enhance Data Management Best Practices

Collaborating with Arctic Council Working Groups to develop common data sharing methodologies and best practices:

- MODIS satellite data derived products (2002-2012) and migratory birds index published ABDS based SDI web standards (ISO, OGC),
- Contributing to the data management plan of the Biodiversity Monitoring Stations (Iceland, Canada, Greenland) project lead by CAFF,
- Collaborating with CAFF and PAME to enable time series embedded maps of the new protected areas database (1900-2016),
- Assisting with CAFF's Earth Observation Plan to acquire and distribute derived products for Landsat EO data (1970 to present),
- Arctic Council Working Group Meeting, September 2015, Tromsø; Standardized Geospatial Data Management and Sharing.



The SDI Manual for the Arctic provides data management practices and guidelines for efficient monitoring and decision making in the Arctic.

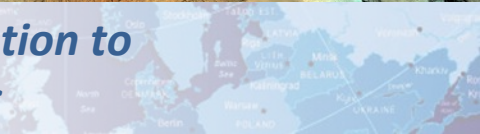
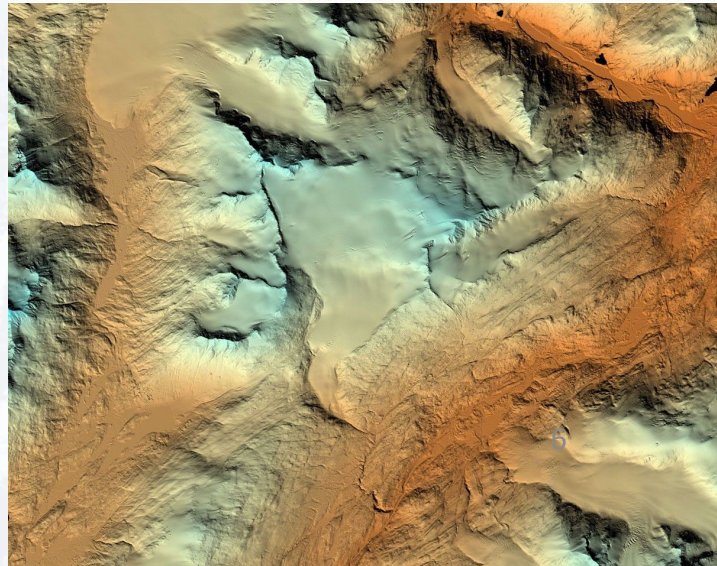
11,4 % protected
4,7 % marine
20,2 % terrestrial

Pan-Arctic Digital Elevation Map

US Arctic Council Chairmanship Initiative Gets World Visibility: President Obama Announces Investments to Combat Climate Change

- Funded by the USA National Science Foundation,
- Arctic SDI Board provided elevation experts to review and increase product accuracy,
- Arctic SDI published a position statement providing enthusiastic support,
- National Mapping Authorities provide sustainable support of elevation models and continuous improvement as part of their operations.

Major step forward: A significantly important contribution to national and international mapping of the Arctic





Arctic Spatial Data Pilot - Climate Change Scenarios

- Sponsored by NRCan and USGS, in collaboration with the Arctic SDI participants, this Open Geospatial Consortium Arctic Spatial Data Pilot will:
 - Define land and sea climate change scenarios to break down information management silos with technical piloting activities:
 - Improve access to reliable data for monitoring, management, emergency preparedness and decision making in the Arctic,
 - Produce a video to showcase how standards and common approaches to data management are deployed.
 - Address technology issues to meet the realities of Arctic frontier economies, such as in zero/low bandwidth Internet.

<http://www.opengeospatial.org/projects/initiatives/arcticsdp>



Natural Resources
Canada



ARCTIC
SDI Arctic Spatial
Data Infrastructure

We Are All Stakeholders

- Ecosystem-based analysis requires seamless sharing of data across jurisdictions and organizations.



Source: blogs.vmware.com

- Arctic SDI is providing shared tools and information management practices to Arctic Council WGs to break down silos.
- Arctic SDI brings together the National Mapping Agencies, trusted map data and geospatial data expertise.



arctic-sdi.org