ARCTIC SDI
Arctic Spatial Data Infrastructure

Presented at the FIG Working Week 2017, May 29 - June 2, 2017 in Helsinki, Finland

Arctic Spatial Data Infrastructure

Enabling Access to Arctic Location Based Information

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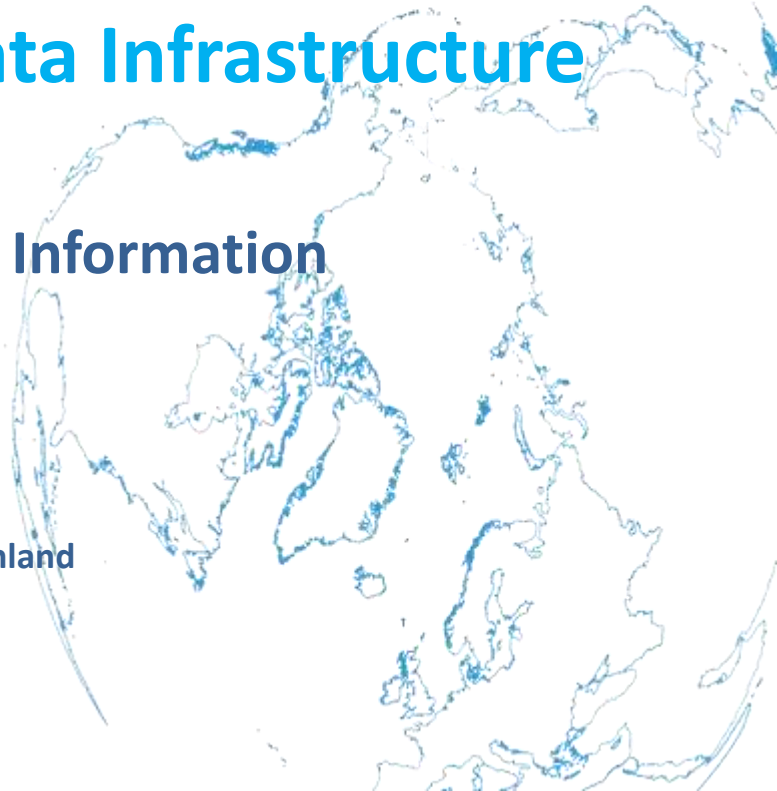
FIG Working Week 2017, Helsinki, Finland



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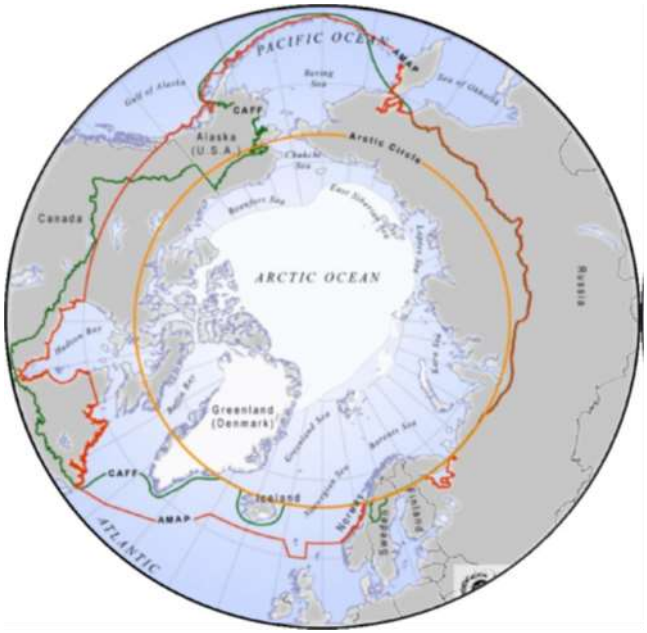


Arctic SDI is based on voluntary commitments by the National Mapping Agencies from 8 countries that border the Arctic Circle

There is a signed MoU towards cooperative development of an Arctic SDI.

Participating Countries

Canada
Norway
Finland
Russia

Denmark
Sweden
USA
Iceland

USGS, Chair 2015-2017

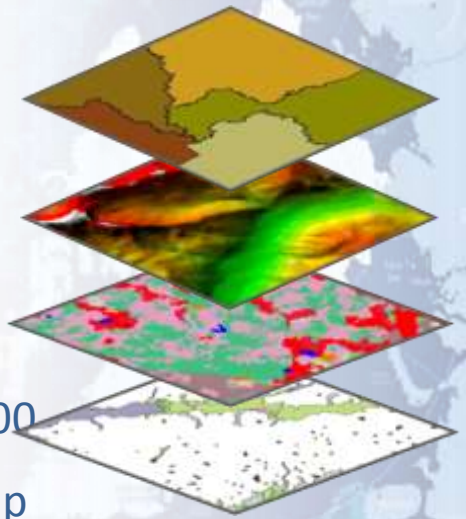
NLS FI, Chair 2017-2019

- Earth Sciences Sector of the Department of Natural Resources Canada
- Danish Agency for Data Supply and Efficiency
- National Land Survey of Finland
- National Land Survey of Iceland
- Norwegian Mapping Authority
- Federal Service for State Registration, Cadastre and Mapping of the Russian Federation
- Swedish Mapping, Cadastral and Land Registration Authority
- U.S. Geological Survey

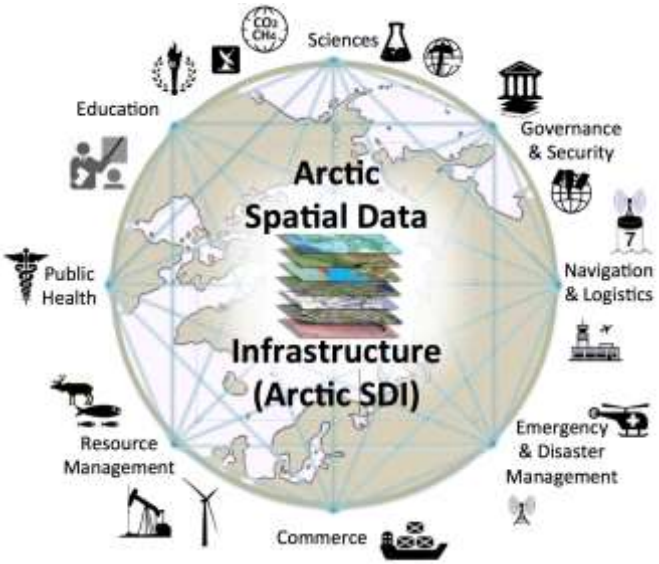
Main Content of the Arctic SDI

The Arctic SDI is an infrastructure that provides a web portal with easy access to:

- A geoportal for geospatial data viewing and discovery
- A searchable metadata catalogue
- Authoritative reference data as a Web Map Service (WMS) 1:250.000
- Thematic data (birds, icecover, ship routes, land cover change, flora etc.)



A Collaborative Model in the Arctic SDI



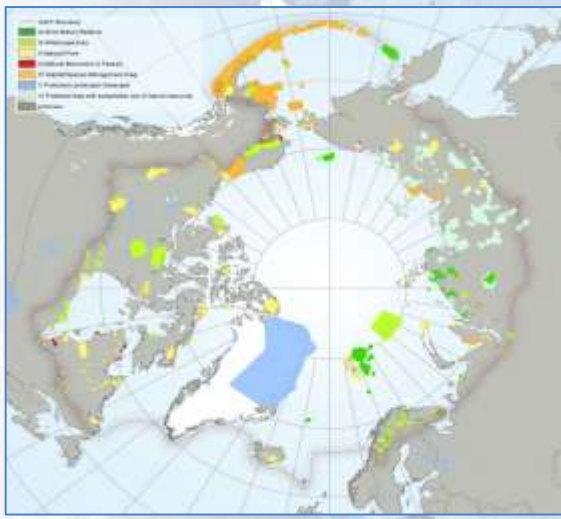
Graphic Source: OGC

- Working with stakeholder organizations to make their key 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 standards and interoperability
- Helping data contributors and users understand how to participate

Capacity Building

SDI Manual for the Arctic with guidelines & practices for

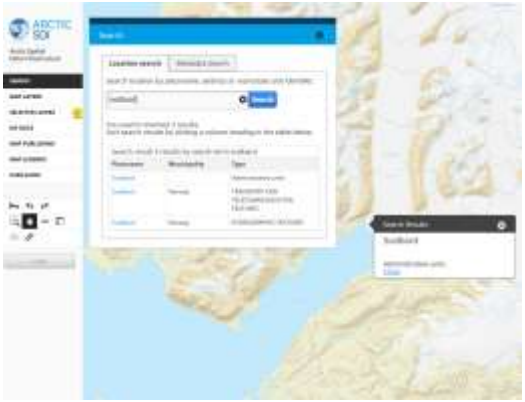
- Data management and sharing
- SDI development
- Standardization guidelines
- Efficient monitoring and decision making
- Key Performance Indicators
- Evaluation once in two years



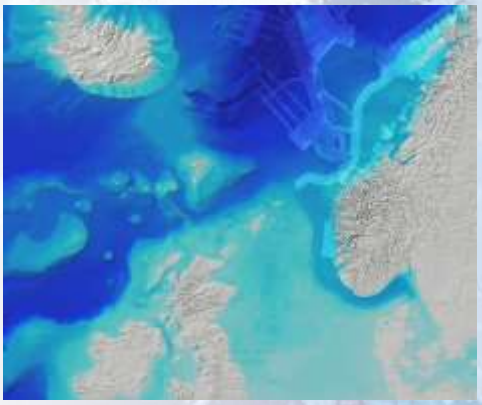
Data Resources

- Pan-Arctic Digital Elevation Map
- Gazetteer Database and Search
- Arctic Reference Basemap
- Marine Data

Pan-Arctic DEM



Gazetteer search



Shaded relief for depths

Authoritative Reference Basemap

Provided Directly from the **8 Arctic National Mapping Agencies**

- **Common Cartographic Specification**
- **A Trusted Source of Detailed Information**

Arctic SDI Geoportal

ARCTIC SDI Arctic Spatial Data Infrastructure

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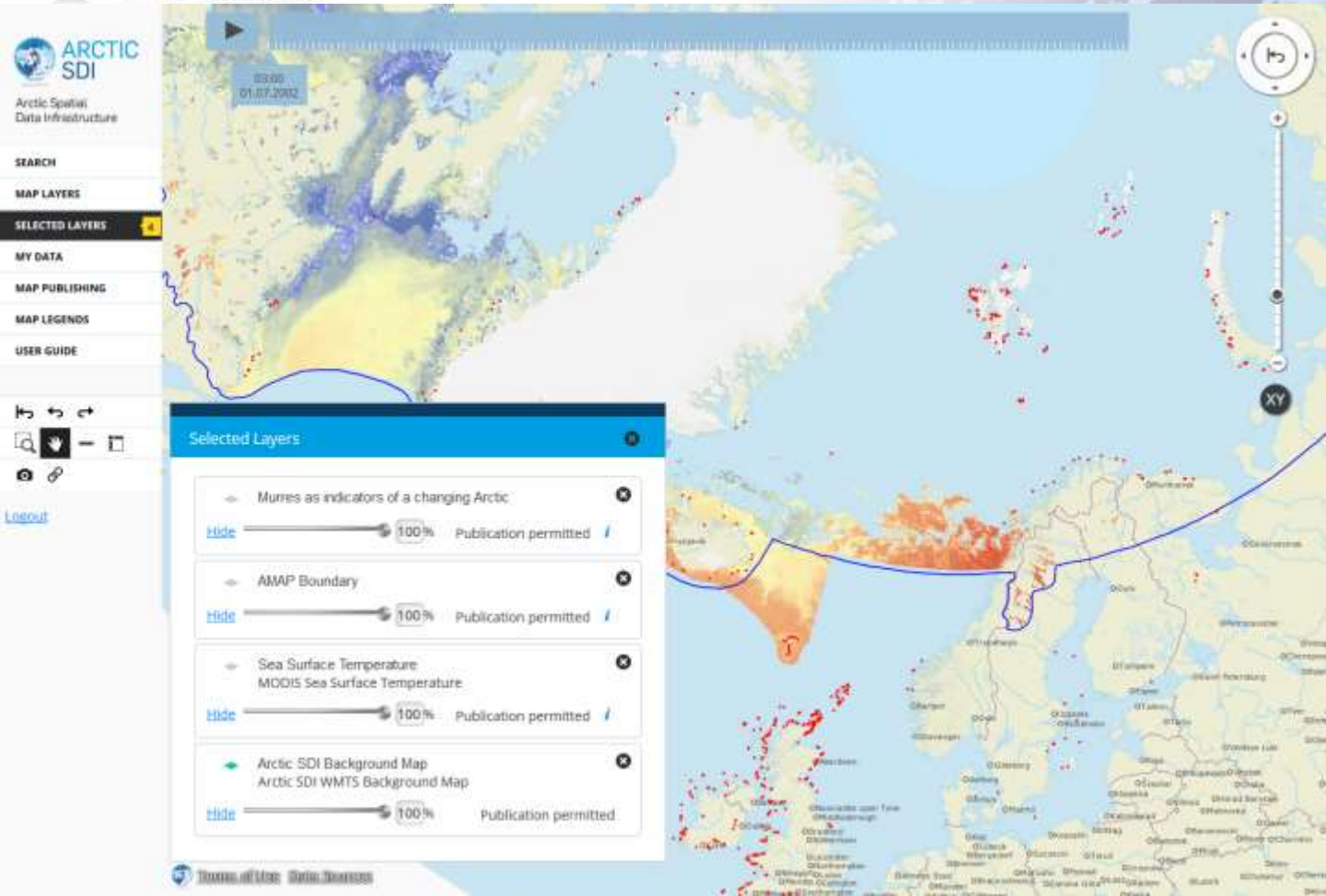
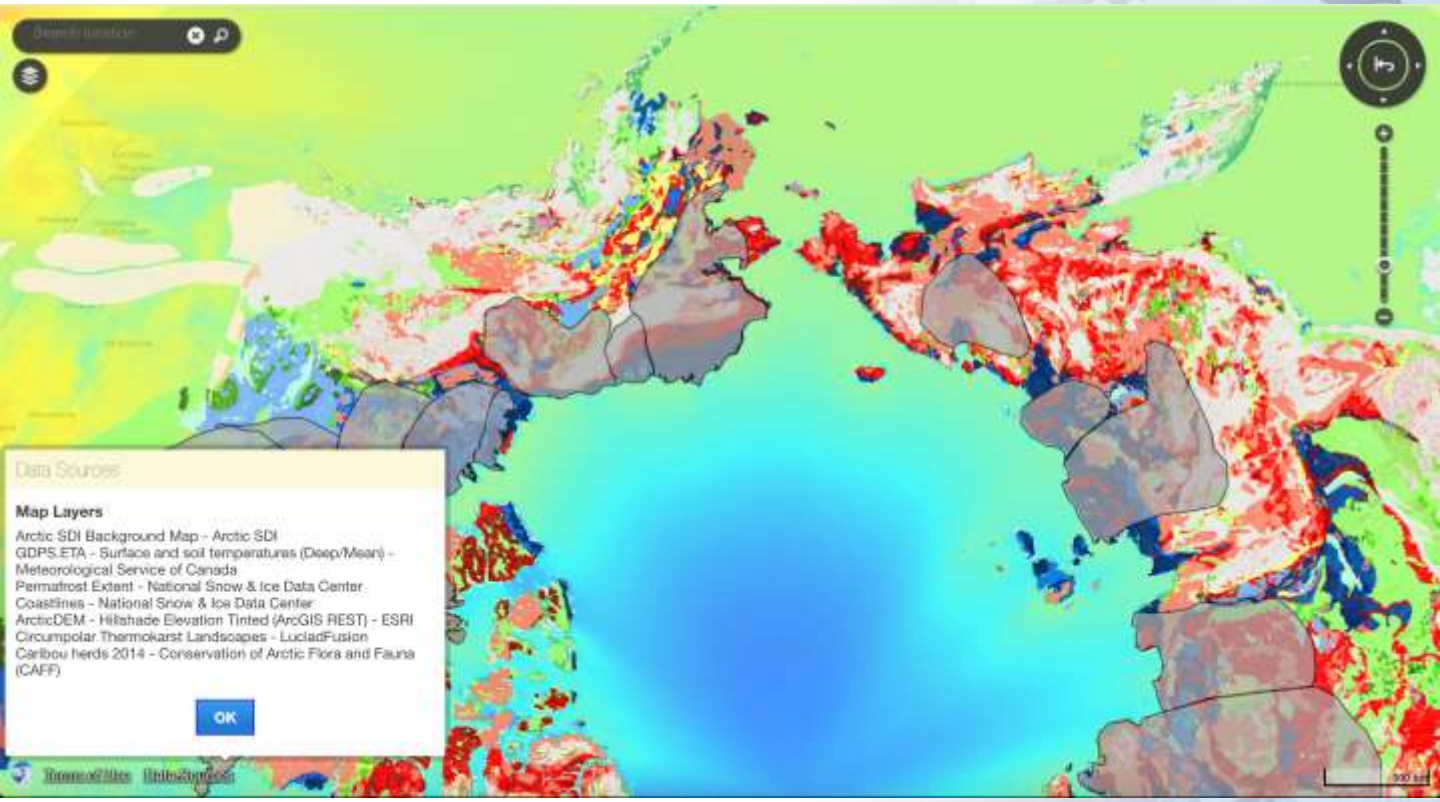


Oskari – Geoportal for ASDI

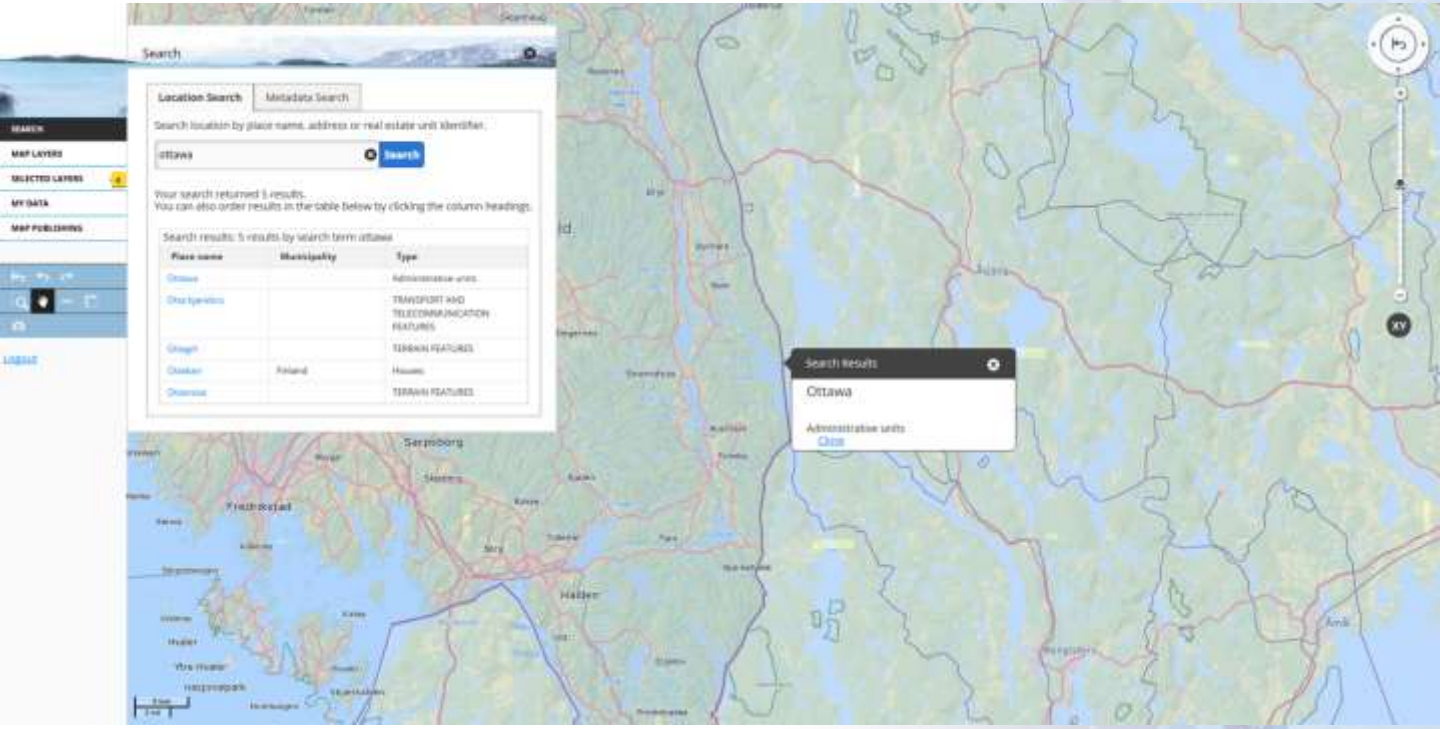
- Open Source Framework for Geoportals
- Easy-to-use tools for using Distributed SDI's like Arctic SDI, INSPIRE and European Location Framework (ELF)
- Access to OGC standard API's
- Embedded Maps Tool and Integration API - like Google maps with rich SDI content
- Time Series Data Visualization
- Thematic Mapping with Statistical Information

Example of an Embedded Map



From Arctic Spatial Data Pilot

Gazetteer Search



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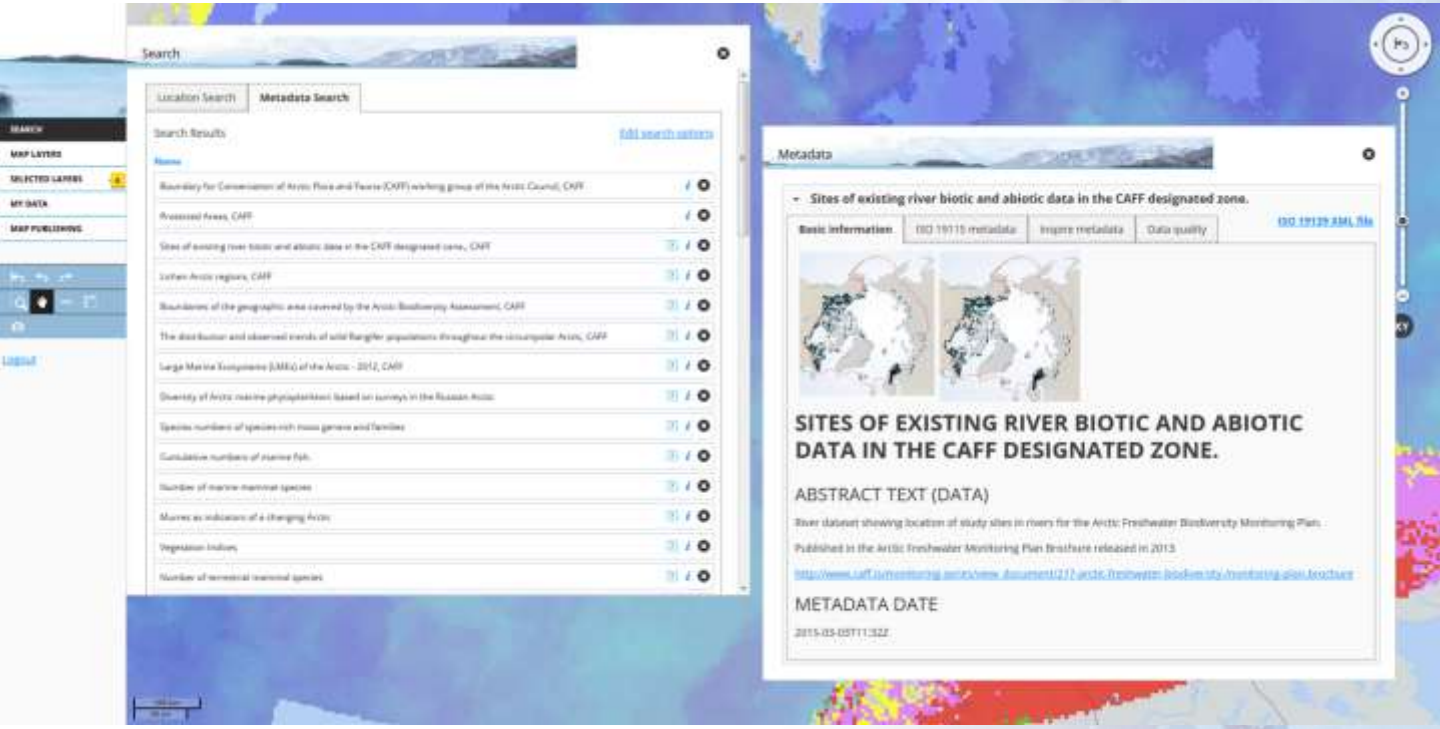
Metadata Search



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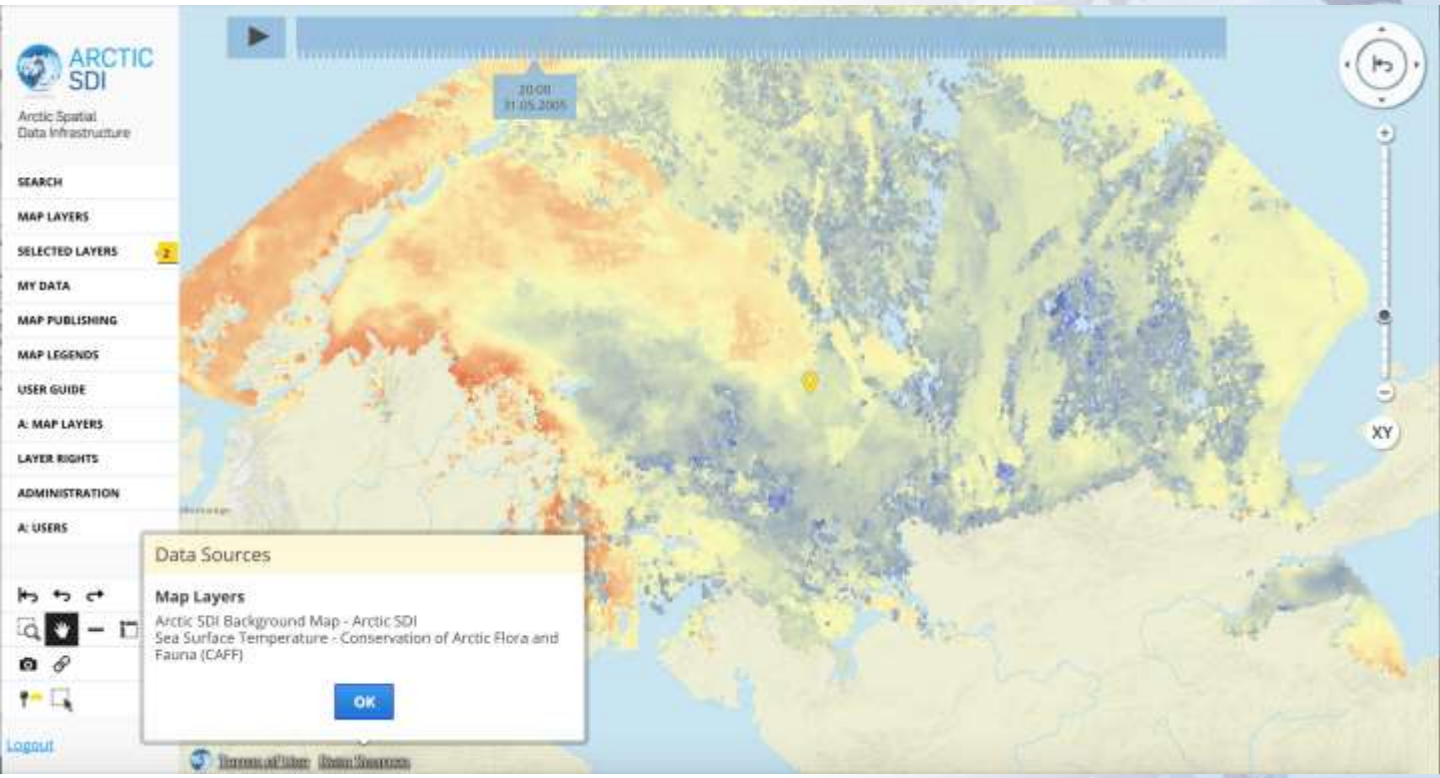
Time Series (WMS-T)



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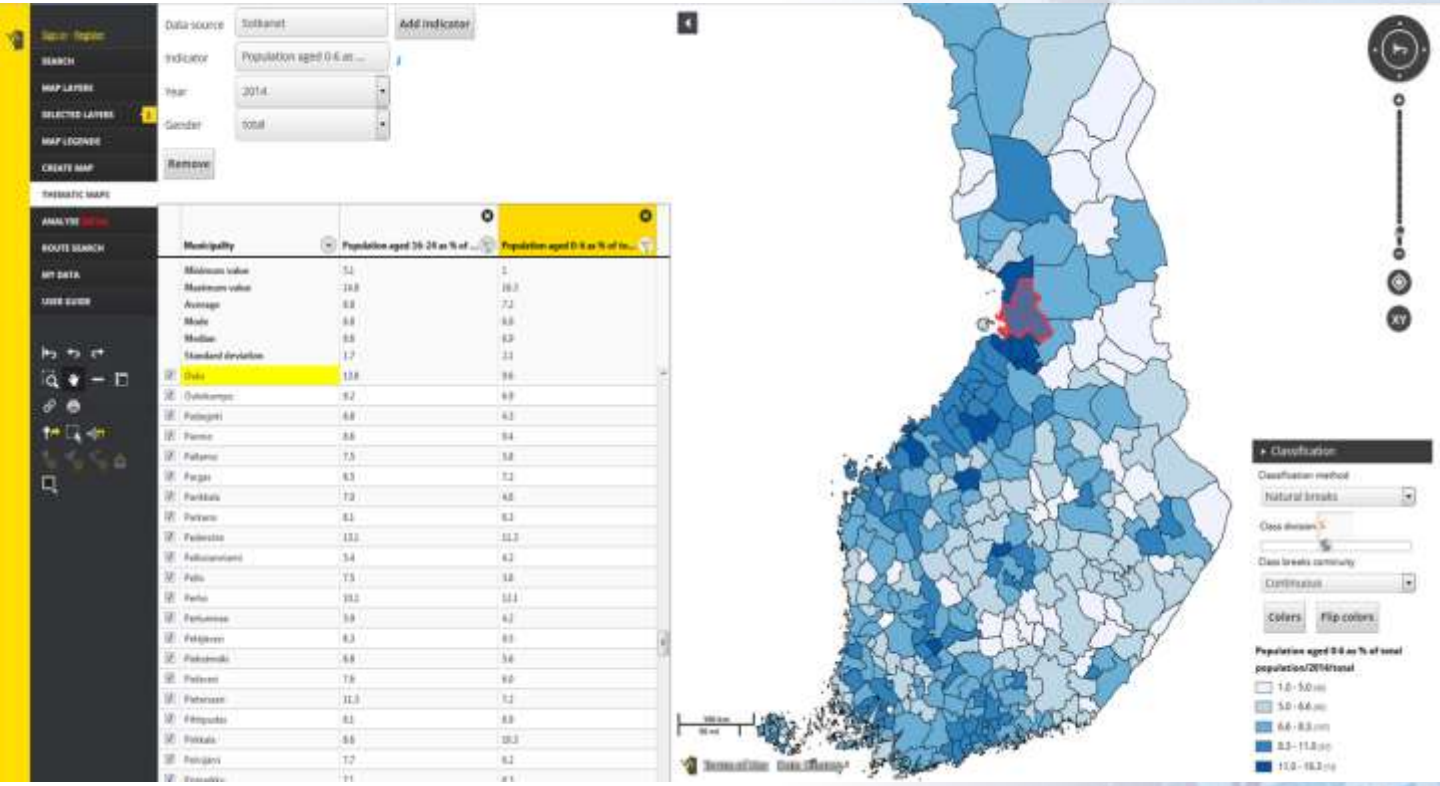
Future development: Spatial and Statistical Data combined over Arctic



Arctic SDI Video on YouTube

Arctic SDI Fact Sheet