



**ARCTIC
SDI** Arctic Spatial
Data Infrastructure

Arctic Spatial Data Infrastructure

Enabling Access to Arctic Location-Based Information

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Director General of National Land Survey of Finland

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

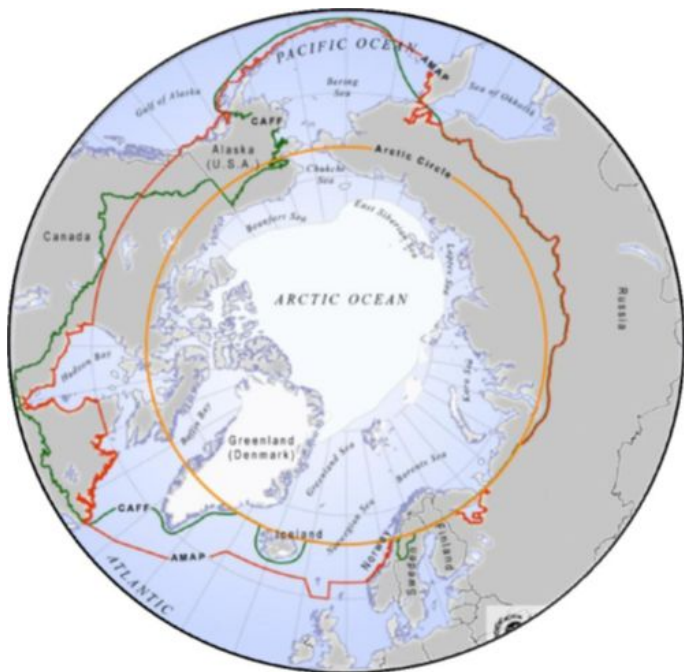
The Arctic SDI was established to **address the need for readily available spatial data** in the northern areas of the globe

- works with stakeholder organizations to make their key data accessible and interoperable

Arctic SDI Strategic Vision

facilitate access to geospatial information in support of social, economic, environmental monitoring, decision-making and other needs in the Arctic.

promote cooperation and development of a Spatial Data Infrastructure that enables discovery, visualization, access, integration and sharing of Arctic geospatial data



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

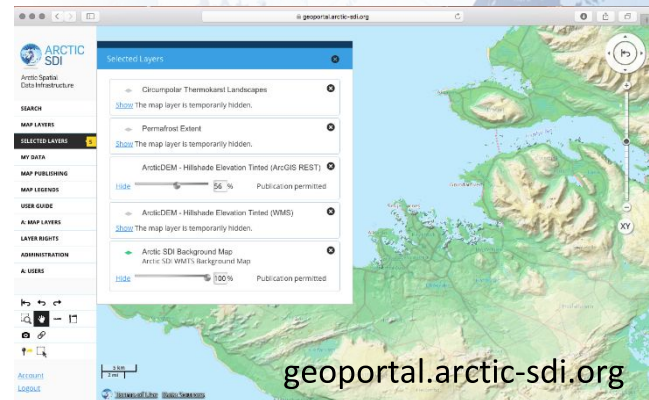
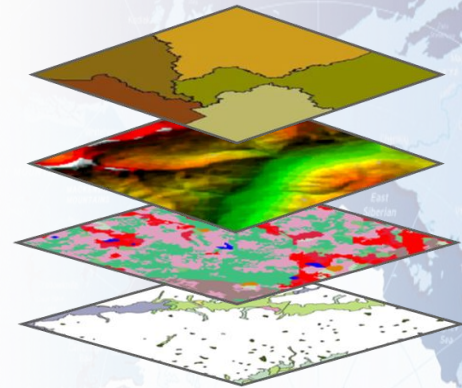
Canada, Denmark, Finland,
Iceland, Norway, Russia,
Sweden, USA

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

Arctic SDI Services

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

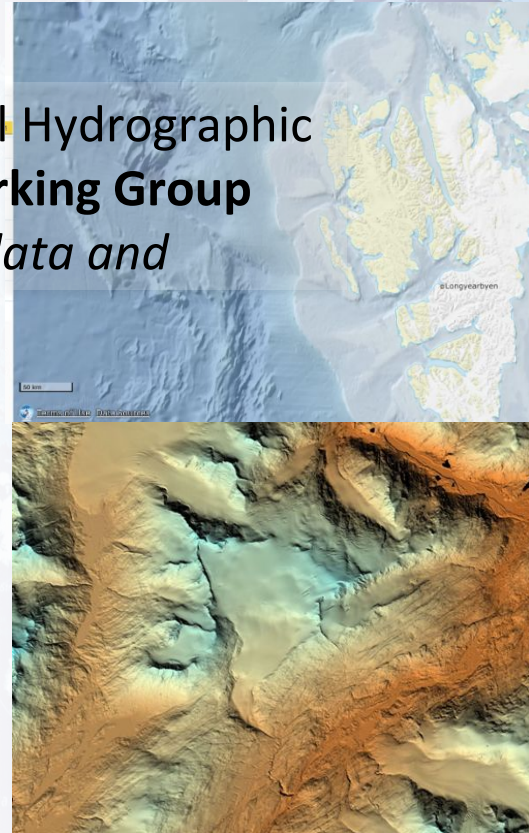
- A geoportal for geospatial data viewing and discovery
- A searchable metadata catalogue
- Authoritative reference data as a
 - Web Map Service (WMS) 1:250.000
 - Searchable Circumpolar Gazetteer
- Thematic data and partnerships – Distributed Sources (elevation data, marine data, ice cover, flora & fauna, etc.)



Cooperation with the Arctic Regional Hydrographic Commission's **Arctic Marine SDI Working Group**
*to facilitate access to Arctic marine data and
Integrate sea and land data*

Partnering on a Pan-Arctic Digital Elevation Model (DEM)

*An initiative of the Arctic Council US
Chairmanship to produce a 2m
resolution DEM of the entire Arctic*



Arctic SDI harmonized basemap

- produced using the existing data from the Arctic Mapping Agencies
- provides a unified topographic view over the entire Arctic
- with details such as elevation, rivers and lakes and other geographic features

SEARCH

MAP LAYERS

SELECTED LAYERS

4

MY DATA

MAP PUBLISHING

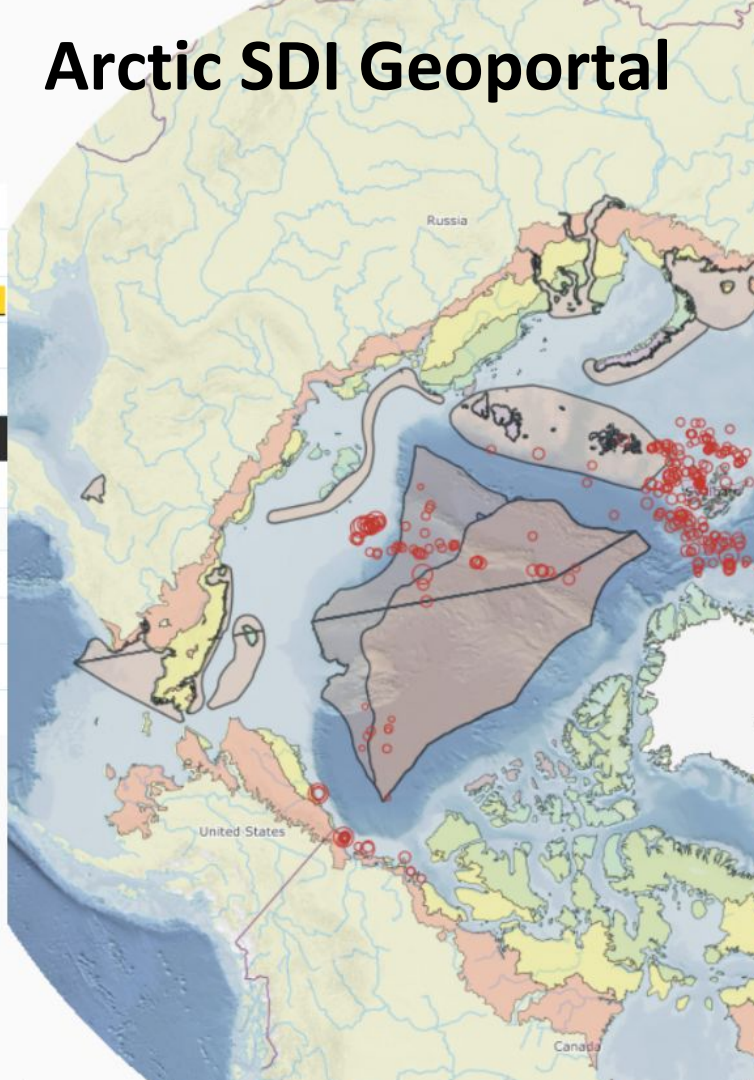
MAP LEGENDS

USER GUIDE

[Register](#)

Login

Arctic SDI Geoportal

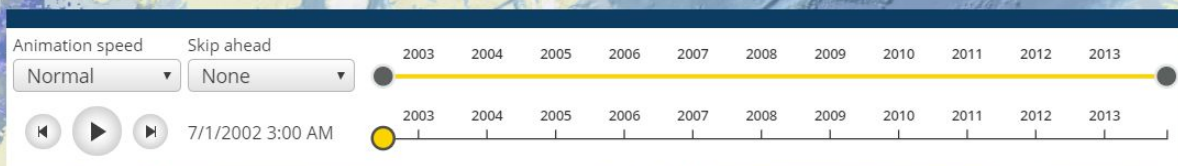


Built for browsing,
visualizing, analyzing
and sharing spatial
information

Geoportal users can
**combine data and
map layers** to
visualize the
phenomena of their
choice

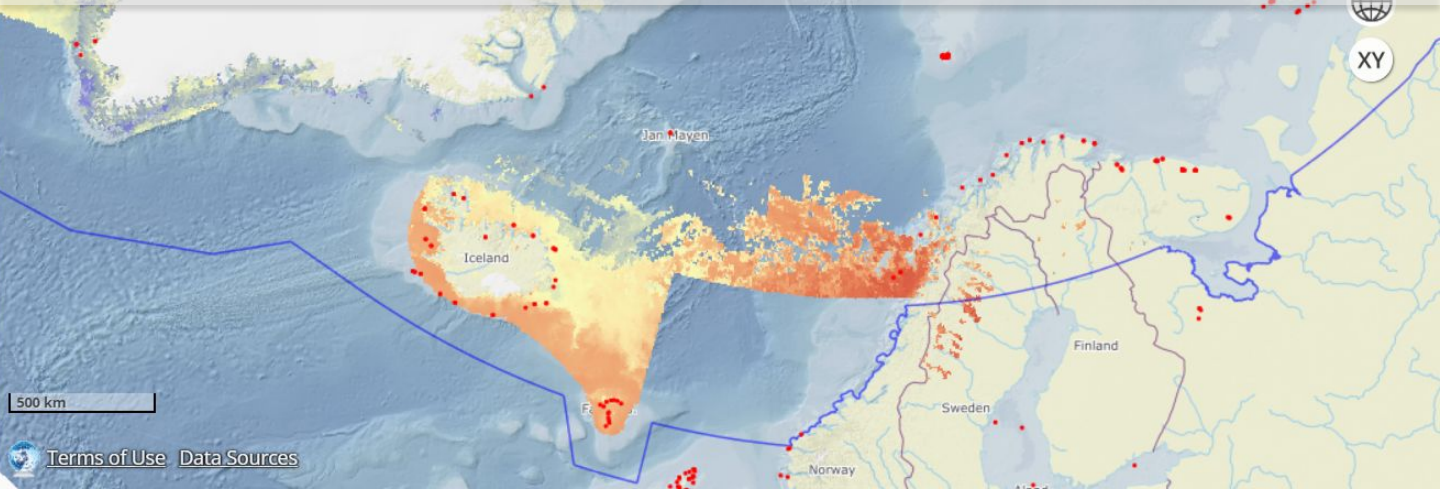
Can be used free of
charge by anyone

Time Series



The Geoportal features for example a **Time Series tool**, which can be used to visualize various phenomena

- for example sea surface temperature change over time in the Arctic



Create Embedded Map

▼ **Basic settings**

Website address (without http and www prefixes) i

Map name (required) i

Language i

▶ **Map Size**

▶ **Map Layers**

▼ **Tools**

☒ Scale bar i

☐ Index map

☒ Map layers menu
Select the background map layer. You can select the default background map layer in the map preview.

☒ Arctic SDI

☐ Protected Areas

☐ AMAP Boundary

☐ Caribou herds 2014

☐ CAFF CBird

☐ BioClimate Map Area

☒ Pan tool

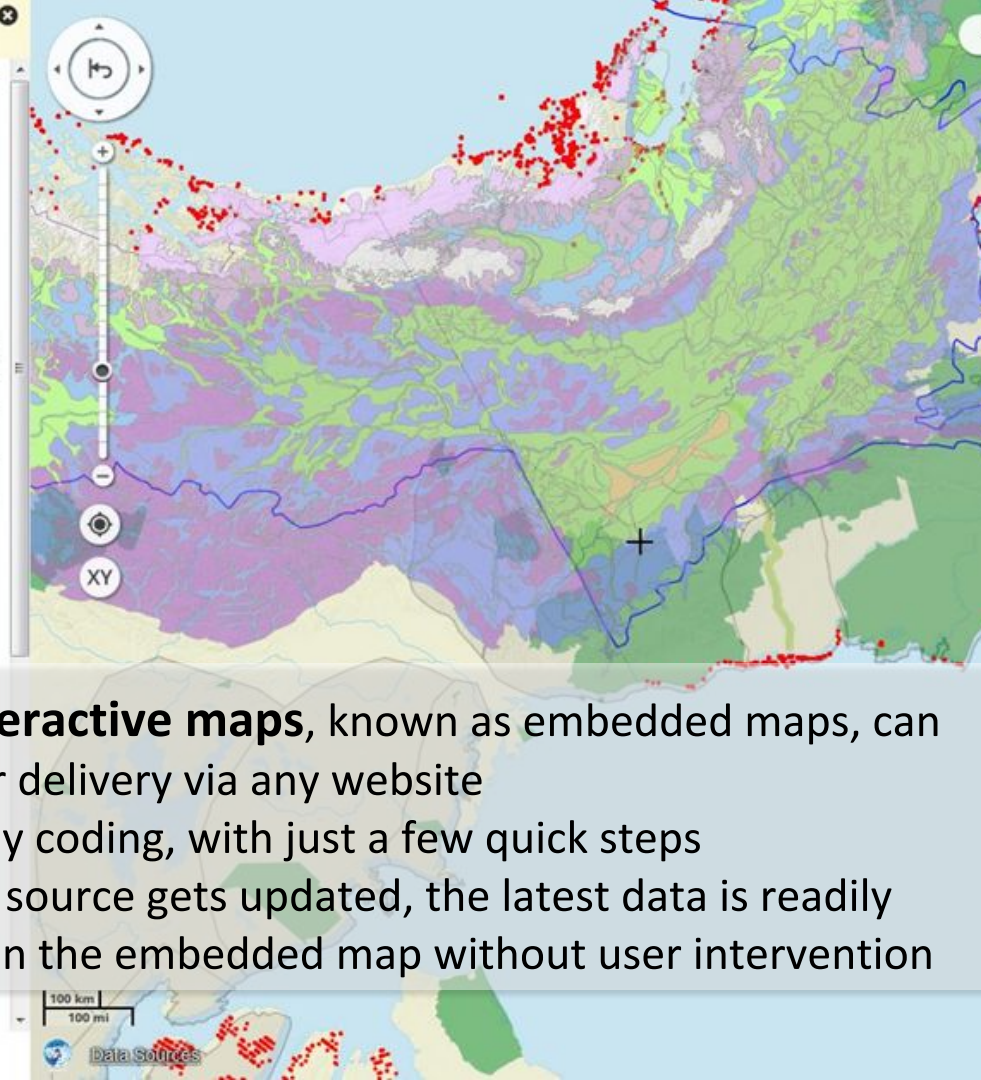
☐ Map tools

☒ Zoom bar

☒ Coordinate tool

☐ Hide user interface (Use RPC interface)

☒ Center to location



Dynamic interactive maps, known as embedded maps, can be created for delivery via any website

- without any coding, with just a few quick steps
- if any data source gets updated, the latest data is readily shown on in the embedded map without user intervention

Location Search

Search

Location search Metadata Search

Search locations by typing a name of a place

national park **Search**

You search returned 50 results.
Sort search results by clicking a column heading in the table below.

Search result 50 results by search term national park

Placename	Region	Type
Denali National Park	United States	Countries, administrative units and other areas
Katmai National Park	United States	Countries, administrative units and other areas
Glacier Bay National Park	United States	Countries, administrative units and other areas
Lake Clark National Park	United States	Countries, administrative units and other areas
National	Norway	Conservation areas
Nationalparken	Sweden	Terrain features
Noux nationalpark	Finland	Conservation areas

Glacier Bay Park

Seabee Island

Oberlin Ridge

Emerson Peaks

Glacier Bay

Mount Crillon

Mount Wright

Mount Wilbur

Mount Orville

Lituya Mountain

Mount Salisbury

Glacier Bay National Park and Wilderness

Glacier Bay National Park

Composite Island

Mount Barnard

Terms of Use Data Sources

Circumpolar place name search enables discovery of locations throughout the Arctic

Search Results

Glacier Bay National Park

United States
Countries, administrative units and other areas

[Close](#)

Future development: Spatial and Statistical Data combined over Arctic

Data source: Sotkanet Add indicator

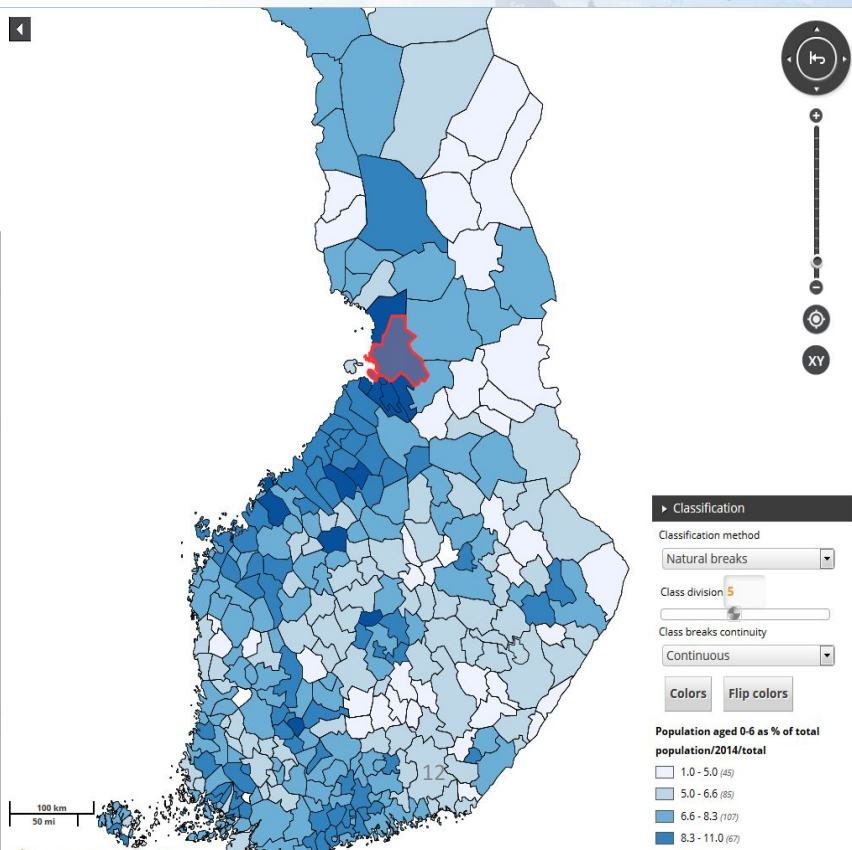
Indicator: Population aged 0-6 as % of total i

Year: 2014

Gender: total

Remove

Municipality	Population aged 16-24 as % of total	Population aged 0-6 as % of total
Minimum value	5.1	1
Maximum value	14.8	16.3
Average	8.8	7.2
Mode	8.8	6.9
Median	8.6	6.9
Standard deviation	1.7	2.1
<input checked="" type="checkbox"/> Oulu	13.8	9.6
<input checked="" type="checkbox"/> Outokumpu	9.2	6.9
<input checked="" type="checkbox"/> Pudasjoki	6.8	4.3
<input checked="" type="checkbox"/> Paimio	8.6	9.4
<input checked="" type="checkbox"/> Paltamo	7.5	5.8
<input checked="" type="checkbox"/> Pargas	8.5	7.2
<input checked="" type="checkbox"/> Parikkala	7.0	4.6
<input checked="" type="checkbox"/> Parkano	8.1	6.3
<input checked="" type="checkbox"/> Pedersöre	13.1	11.3
<input checked="" type="checkbox"/> Pelkosenniemi	5.4	4.2
<input checked="" type="checkbox"/> Pello	7.5	3.6
<input checked="" type="checkbox"/> Perho	10.1	12.1
<input checked="" type="checkbox"/> Pertunmaa	5.9	4.2
<input checked="" type="checkbox"/> Petäjävesi	8.3	9.5
<input checked="" type="checkbox"/> Pieksämäki	8.8	5.6
<input checked="" type="checkbox"/> Pielavesi	7.6	6.0
<input checked="" type="checkbox"/> Pietarsaari	11.3	7.2
<input checked="" type="checkbox"/> Pihtipudas	8.1	6.9
<input checked="" type="checkbox"/> Pirkkala	8.6	10.3



Improved access to geospatial data can help us better predict, understand and react to changes in the Arctic

Arctic SDI Geoportal

Allows discovery, visualization, access, integration and sharing of Arctic data

Aim is to offer the possibility to all interested to use the data and include own data



Arctic SDI Video on YouTube



arctic-sdi.org

Arctic SDI Fact Sheet



GEOSPATIAL DATA – A TOOL FOR BETTER INFORMED DECISIONS AND MORE EFFICIENT ADMINISTRATION IN THE ARCTIC

Improved access to geospatial data can help us better to predict, understand and react to changes in the Arctic. Responses to the impact of climate change and human activities in the Arctic requires accessible and reliable data to facilitate monitoring, management, emergency preparedness and decision making.

Important data sets are produced and distributed by many stakeholders – public and private sector – and most of it can be geographically referenced. A spatial data infrastructure provides tools for data distributors to ensure that their geospatial data is easier for users to access, validate and combine with other data.

The Arctic SDI provides such an infrastructure and its development is facilitated by the National Mapping Agencies of the eight Arctic countries.

The Arctic SDI Geoportal and the initial Arctic SDI Reference Map – the basic building blocks in the Arctic Spatial Data Infrastructure are available

- The Arctic SDI Geoportal providing a web map viewer for use by any interested user to access the Reference Map. More details are available at the Arctic SDI Geoportal.



Arctic SDI Geoportal in the