

Status Report on The Arctic Spatial Data Infrastructure (Arctic SDI)

Background

The Arctic SDI is the collaborative initiative of the National Mapping Agencies of the eight Arctic nations (Canada, Denmark, Finland, Iceland, Norway, Sweden, Russia and the USA) with a goal to promote partner-based development of an Arctic spatial data infrastructure. The Arctic SDI has been endorsed by the Arctic Council Senior Arctic Officials since November 2009 and is part of the general scientific and technical collaboration among the Arctic nations.

Collaborative partnerships are in place with key stakeholders like the Arctic Data Committee (SAON/IASC) and the Arctic Regional Hydrographic Commission to provide terrestrial, marine and atmospheric spatial data and services in regional SDIs. Together, Arctic SDI and Arctic Data Committee facilitate an infrastructure to connect users across domains to valuable spatial data to support research, monitoring, business development, public management, emergency preparedness and decision making in the Arctic.

Accepting its role in the development of a regional spatial data infrastructure, the Arctic SDI is building on international standards and existing spatial data infrastructures. The Arctic SDI is aligning its activities with the work of international organizations such as the UN-GGIM, ISO, OGC, IHO, ADC, GBIF, GEOSS et al., the European Union's Infrastructure for Spatial Information, the Canadian Geospatial Data Infrastructure, the US National Spatial Data Infrastructure and the Russian National Spatial Data Infrastructure.

Arctic SDI Products and Services:

The Arctic SDI has produced a harmonized basemap that provides a unified topographic view over the entire Arctic with details such as elevation, rivers and lakes and other geographic features. It is produced using the existing data from the Arctic Mapping Agencies. Arctic SDI aims to make more datasets available to allow mashups and development of applications that are limited only by the imagination of the stakeholders and scientists using the data.

The Arctic SDI **Geoportal** allows users to browse, visualize, analyse, and share maps and geospatial information in all six Arctic projections. Users can combine map layers to visualize the phenomena of their choice and it is available free of charge to anyone. It contains a harmonized base map that provides a unified topographic view and a Circumpolar Gazetteer both of which use data from the Mapping Agencies. The Gazetteer allows users to search place names to find and discover locations throughout the Arctic and a Time Series Tool allows viewing data across time. Recently, a new service to display statistical data has been added and users can also create dynamic interactive

maps, known as embedded maps, for delivery via any website without any coding and just a few quick steps. The Geoportal is already sharing 45 datasets from CAFF

Data Stewardship is a key to ensuring digital access to an increasing volume of data in reports published by the Arctic Council Working Groups. It is challenging for the Arctic Council to provide necessary capacity in this field, but Arctic SDI can provide stable and reliable best practices and access to data and services.

Arctic SDI is cooperating with CAFF on mapping the extent and changes in distributions of wetlands across the Arctic and thereby directly helping and contributing to monitoring and assessment work by Arctic Council working groups.

A new strategy from the Arctic SDI targets the challenges of the Arctic to develop policies based on reliable Arctic data. The new strategy shifts the focus towards building the basic Arctic spatial data services and developing user friendly tools to focus on outreach, establishing partnerships and facilitating data management best practices and data stewardship in support of the development of the Digital Arctic. Focus is still - but not only - on the activities of the Arctic Council and its working groups.

Next steps

The Arctic SDI seeks:

- Continued support for outreach activities across Arctic Council Working Groups including cooperation to facilitate adoption of open standards and common data management practices across the Arctic

Further information:

Arctic SDI Website – www.arctic-sdi.org

[Arctic SDI Strategic Plan 2020-2025](#) and [Roadmap and Implementation Plan](#)

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