

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

### BACKGROUND

Arctic SDI provides a methodology, basic geospatial data and tools to achieve data sharing at all levels: local, national, regional and global. It documents and applies information management best practices, based on open international standards, to build communities of practice to share data. Adoption of Spatial Data Infrastructure (SDI) best practices builds interoperability that break down data silos in support of multi-disciplinary ecosystem-based research.

The Arctic SDI is a voluntary, multilateral cooperation between the National Mapping Agencies of the Arctic. The purpose of the Arctic SDI is to support the Arctic Council and other stakeholders in their goals and objectives by promoting the development of a geospatial data infrastructure based on international standards and by providing reliable and interoperable basic geospatial data of the Arctic.

### STATUS

The Arctic SDI harmonized basemap has been updated with more data in Russia and cartographic improvements. The work to seed a new cache with the new improvements and also to support more Arctic projections is now in progress.

The Arctic SDI Geoportal has now an improved tool for visualizing time series data. Users can easily see how sea surface temperatures or land cover features have changed over time. Time series tool is available for a number of CAFF datasets provided by the Arctic Biodiversity Data Service (ABDS).

Further, the Circumpolar Gazetteer Search tool has an autocomplete function for easier discovery of place names. Gazetteer database is anticipated to cover the whole Arctic region during 2018.

A new Data Working Group has been established. Aim is to focus on analyzing the requirements for spatial data in the Arctic and finding a structural way to meet the identified needs.

In order to ensure the quality of the delivery of data through Arctic SDI central services, but also generally with regard to Arctic SDI's commitment, much effort has been made in 2017 to formalize the operational work. This work will continue in 2018.

The Arctic SDI is preparing the second evaluation of the Arctic SDI in 2018.

Arctic SDI works in close connection to the Arctic Marine Spatial Data Infrastructure Data Working Group (ARMSDIWG) of International Hydrographic Organization, and second joint meeting will take place in April 2018 in Helsinki, Finland.

Arctic SDI was presented to Arctic Council Working Group Chairs and Executive Secretaries in the SAO Executive & Plenary meeting in October 2017 in Oulu, Finland. Aim is to continue the cooperation closely.

Arctic SDI has continued working in close contact with the biodiversity working group of the Arctic Council, the Conservation of Arctic Flora and Fauna (CAFF). The aim is to assist with the dissemination of CAFF's data through the Arctic SDI Geoportal as well as getting access to data through the Arctic SDI, such as for Wetland estimations.

The Norwegian Mapping Authority has received funds from the Arctic 2030 program to carry out a pilot project to investigate for better access to geospatial data covering the Arctic marine and ocean areas, and how geospatial data can serve user communities in the Arctic area in the best possible way. Name of the project is "Better Access to Geodata for Arctic Marine Areas".

The Arctic SDI User Needs Assessment initiative led by the Canada Centre for Mapping and Earth Observation, Natural Resources Canada, aims to conceptualize, document, frame and develop a detailed user needs assessments that will gather the requirements of the international Arctic community in terms of data and services, standards, technologies, operational policies, collaboration and leadership & governance.

#### **NEXT STEPS**

- The Arctic SDI seeks continued support for outreach activities across Arctic Council Working Groups intended to improve adoption of standards and common data management practices across the Arctic.
- The Data WG will collaborate with CAFF on the following activities:
  - Pan-Arctic Investigation of Wetlands Data
  - Identify suitable statistical Data to test in the Geoportal tool
  - Assist CAFF in the implementation of the Earth Observation Plan Phase 2
- Arctic SDI has been given opportunity to organize a side event during the United Nations Global Geospatial Information Management at UN Headquarters in New York early August 2018.
- Arctic SDI will also participate in the 2<sup>nd</sup> Arctic Biodiversity Conference, Rovaniemi, Finland in October 2018, aiming to contribute with presentations and information about data management and data sharing.
- The final version of the digital Arctic elevation model - the ArcticDEM - produced by the Polar Geospatial Center, University of Minneapolis, is expected to be released by September 2018.

#### **FURTHER INFORMATION :**

Arctic SDI Website – [arctic-sdi.org](http://arctic-sdi.org).

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