

Memorandum to CAFF Board 02/01/2017

Arctic Spatial Data Infrastructure (Arctic SDI)

BACKGROUND:

The aim of the Arctic SDI is to provide standardized geographically related Arctic data, digital maps and tools to facilitate monitoring and decision making. The Arctic SDI initiative is led by the eight Arctic national mapping agencies, and their respective relationships with governments' departments, academia, the private sector, and indigenous peoples, in direct support of the priorities of the Arctic Council and other important stakeholders. A robust Arctic SDI provides access to reliable, authoritative reference data and facilitates stakeholders' development and delivery of standardized, interoperable geospatial data that can be made accessible via the Arctic SDI Geoportal and other geomatics enabled tools and portals, including CAFF's Arctic Biodiversity Data Service (ABDS).

In 2009 the Senior Arctic Officials gave formal support to the Arctic SDI. The Iqaluit Declaration 2015 and the CAFF 2015-2017 Work Plan in the SAO Report to Ministers identified the Arctic SDI as a partner in the CAFF Arctic Biodiversity Data Service (ABDS) and highlighted the importance of a Pan-Arctic digital elevation map (Pan-Arctic DEM). The [Arctic SDI Fact Sheet](#) and [video](#) provide insights on the importance of geospatial data and highlights the participating mapping agencies, the Geoportal and the Arctic SDI 5-year Strategic Plan.

Arctic SDI provides a methodology 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. Arctic SDI provides a window for CAFF and Arctic Council engagement into national and international Spatial Data Infrastructure methods and data.

The Arctic SDI harmonized basemap is rendered using a common Arctic cartographic specification to provide unified topographic view over the entire Arctic with details such as the elevation contours, rivers and lakes, and other features.

STATUS: DECEMBER 2016

The Arctic SDI 2015-2020 Strategic Plan implementation continues with strategic activities focused on *Strategic Implementation, Geoportal and Data, Outreach and Communication, and Internal Processes*. In October the Arctic SDI presented at the SAO Meeting and highlighted our focus on working with organizations, especially the Arctic Council, to make their data available and developing an understanding of the needs and requirements of stakeholders.

Arctic SDI continues to enhance a new searchable circumpolar directory for its harmonized basemap based on the official place name data provided by each State.

The Arctic Spatial Data Pilot, being conducted through the Open Geospatial Consortium, focuses on the security of northern food supply in a changing climate over land and sea. The project included extensive consultation with input from CAFF, governments, academia and private sector. The Pilot will demonstrate the power in combining data from heterogeneous sources via SDI standards, policies and technologies. Results are to be communicated via tutorials, technical documentation, and a story-based video.

The Arctic SDI members link respective national SDI initiatives with the international and global; including INSPIRE, United Nations Committee of Experts on Global Geospatial Information Management (UN-GGIM),

International Organization for Standardization (ISO), Open Geospatial Consortium (OGC), International Hydrographic Organization (IHO) and Group on Earth Observations (GEO) and others.

NEXT STEPS

- The Arctic SDI will continue work on the Strategic Priorities described above, including continued improvements to the Arctic SDI Geoportal, basemap and metadata services, as well as pursuit of emerging technologies and best practices. To track progress an SDI Assessment has been completed and will be updated every two years.
- Arctic SDI continues to work with CAFF on time series data, station data and other interoperability initiatives.
- Primarily sponsored by the United States National Science Foundation, Arctic SDI continues to support delivery and improvement of a circumpolar Digital Elevation Map/Model.
- 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.

ACTIONS REQUESTED OF THE CAFF BOARD:

- **CAFF Board:** To support Arctic SDI collaborative relationship.
- **CAFF Board:** To support outreach activities across Arctic Council working groups

FURTHER INFORMATION:

Arctic SDI Website – arctic-sdi.org.

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