

Memorandum to Senior Arctic Officials 08/9/16

Status of the Arctic Spatial Data Infrastructure (Arctic SDI)

BACKGROUND

It's important that scientists, resource managers, decision-makers and citizens can discover, access and use trusted data to conduct research, make informed decisions, and respond to emergencies in a changing Arctic. The Arctic SDI initiative is a voluntary cooperation bringing together the eight Arctic National Mapping Agencies and their geospatial experts and scientists in direct support of the priorities of the Arctic Council and other important stakeholders. A robust Arctic SDI will provide access to reliable, authoritative reference data and facilitate stakeholders' development and delivery of standardized, interoperable geospatial data that can be made accessible via the Arctic SDI Geoportal or other tools.

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](#) provides insights on the importance of geospatial data and highlights the participating Mapping Agencies, the Geoportal and the Arctic SDI 5-year Strategic Plan.

STATUS

[The Arctic SDI Board met June 15 - 17](#) in Anchorage, Alaska to discuss topics and projects related to "Delivering on the Strategic Plan" (approved by [the Arctic SDI Board](#) in June 2015). The Arctic SDI has made demonstrative progress towards establishment of a regional spatial data infrastructure for the Arctic with broad international support. The Arctic SDI Board deliberated on updates and actions associated with:

- *Strategic Implementation:*
 - The Board approved a list of **prioritized strategic activities** that align with the [Arctic SDI Strategic Plan 2015 - 2020](#) to be conducted across multiple Working Groups this coming year.
- *Geoportal and Data:*
 - An **updated release of the Arctic SDI Geoportal** in June provides users with improved guidance, improved metadata search, **animation of data** containing a time dimension and the ability for users to create dynamic **embedded maps** that can be interacted with on Arctic stakeholders' web pages, and much more new functionality. Arctic SDI participant Mapping Agencies are also working to **increase the number of national authoritative datasets** and to continually update and improve the harmonized pan-Arctic Basemap available through the Geoportal
 - The Arctic SDI Board released a statement of enthusiastic support for the US-led development of a **first generation Pan-Arctic DEM**. This support is based on initial review and evaluations by elevation experts from Arctic SDI national mapping agencies and national data provided bilaterally to PGC to support improvement of the initial product. See the *Arctic SDI Pan-Arctic DEM Update* for additional requirements for development of an authoritative DEM for the Arctic.
 - An [Arctic Spatial Data Pilot](#) is underway in support of the Arctic SDI strategic objectives to **test interoperability of standards, increase the inventory of available Arctic data, and advance understanding of best practices** for the distribution and sharing of data. The pilot will use Arctic Council relevant scenarios, developed with input from the CAFF, to showcase the value

of a standards based, data rich environment and how it can provide insightful answers to unanticipated questions. The pilot is being conducted by the Open Geospatial Consortium (OGC), sponsored by the NRCan and the USGS.

- *Outreach and Communications:*
 - The Board agreed on the **importance of outreach activities** to engage Arctic Council Working Groups in support of **adoption of common data management practices** that will enhance use of tools ensuring that geospatial data is easier to access, validate and combine with other data.
 - The Arctic SDI has developed a **professional video** geared towards increasing understanding of the value of the Arctic SDI to stakeholders, especially the Arctic Council.
 - **Arctic SDI and CAFF engagement has produced tangible results** which include:
 - Publication of selected data sets, containing a time dimension using internationally adopted standards (imagery data products 2001 to 2012, e.g. sea surface change, land cover change etc.) and migratory bird index.
 - Harvesting CAFF Metadata Catalogue Services for the Web to populate the Arctic SDI Geoportal
 - Agreement by CAFF Secretariat to maximize the use of Arctic SDI to benefit CAFF and provide guidance to other Arctic Council Working Groups.
- *Internal Processes:*
 - The Arctic SDI is building a solid foundation to support a robust spatial data infrastructure. Work includes:
 - A Draft **Arctic SDI Manual** is under review with an expectation to use the Manual as an engagement vehicle to guide Arctic Council's Information Management (IM) practices through the adoption of commonly accepted SDI operational policies and technical standards.
 - An initial **Arctic SDI Evaluation**, completed with engagement of the CAFF, was performed to begin capturing metrics that will serve as a baseline to measure progress as the Arctic SDI matures.
 - A **Glossary of Terms** to ensure consistent understanding across all Arctic SDI stakeholders

INITIATIVES

- 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**.
- 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 Council.

FURTHER INFORMATION

Arctic SDI Website – arctic-sdi.org.

Lorna Schmid, U.S. Department of the Interior/USGS, +1 703-648-6834, [lorna@usgs.gov]