

## ARCTIC SDI BOARD MEETING MINUTES

MS Teams, 3 June 2021

### Board members:

**Canada**, Eric Loubier, Director General, Canada Centre for Mapping and Earth Observation, Natural Resources Canada

**Denmark**, Kristian Møller, Director General, Danish Agency for Data Supply and Efficiency

**Finland**, Arvo Kokkonen, Director General, National Land Survey of Finland

**Iceland**, Eydís Líndal Finnbogadóttir, Director General, National Land Survey of Iceland

**Norway**, Johnny Welle, Director General, Norwegian Mapping Authority

**Russia**, Elena Martynova, Deputy Head, Federal Service for State Registration, Cadastre and Cartography

**Sweden**, Susanne Ås Sivborg, Swedish Mapping, Cadastre and Land Registration Authority

**USA**, Kevin Gallagher, Associate Director, US Geological Survey

### Secretariat, National Contact Points and Working Group Leads:

Cameron Wilson, Simon Riopel, Gunnar H. Kristinsson, Heli Ursin, Kåre Kyrkjeide, Andrey Mukhin.

#### 1. *Welcome*

Eydís Finnbogadóttir announces the round of introductions.

Elena Martynova, Rosreestr, welcomes the Arctic SDI Board members, emphasizing the importance and strategic value of the Arctic SDI to Russia. She notes that the project offers increased opportunities for multilateral engagement, peace and sustainable development.

#### 2. *Approval of the Agenda*

Agenda approved.

#### 3. *Update from Executive Board Meeting*

Eydís Finnbogadóttir

- provides the summary of the previous Board meeting (9 February 2021),
- comments on the structure and role of Executive Board,
- presents Executive Board meeting decisions.

Arctic SDI and Arctic Data Committee Joint Statement of Intent is waiting for approval from the Arctic Data Committee.

Governance document renewal to begin at the next face-to-face and/or virtual NCPs and WG Leads meeting and to be presented to the Board in 2022.

#### **4. Arctic SDI Chairship Report and Change of Chair**

##### **4.1. Biennial Report**

Eydís Finnbogadóttir summarized the achievements of Iceland's Chairship. The Arctic SDI cooperation will focus on partnership with stakeholders and getting better access to data, especially related to the Arctic Marine Environment and climate change. The main achievements of Chairship are the approval of a new Strategic Plan, participating in drafting a data policy for the Arctic Council, collaborative partnerships with key stakeholders have been reinforced, and necessary steps to create the Pan-Arctic Wetland Inventory Map were taken.

##### **4.2. Arctic SDI Strategy 2020-2025**

The Arctic SDI Strategic Plan 2020-2025 and also Arctic SDI Roadmap and Implementation Plan published with an emphasis on collaborative partnerships. As indicated in the Strategic Plan, the intent is to create a multidimensional Digital Arctic that will link the land, atmosphere and marine Pan-Arctic domains within an integrated platform.

The main objectives of the strategy are:

- Promote data and service availability,
- Ensure data interoperability,
- Strengthen engagement,
- Amplify communication channels,
- Further governance and business processes.

##### **4.3. Arctic Council SAO Meetings and Arctic Council Ministerial Declaration – towards an Arctic Council Data Policy through Arctic SDI involvement**

Arctic SDI continued cooperation with the Arctic Council to ensure increased data availability, standards based interoperability and best practices on information management. Point 52 of the Arctic Council Ministerial Declaration, adopted on May 20, states that the Arctic Council welcomes progress on implementing guiding principles on management of and access to data and ensures that data generated by the Council is findable, accessible, interoperable, reusable, and widely shared. The Arctic SDI Operational Policies Working Group is coordinating the development of the Arctic Council data policy in cooperation with the Arctic Data Committee, Sustaining Arctic Observing Networks (SAON) and Arctic Council Secretariat.

##### **4.4. Transfer of Chairship**

Eydís Finnbogadóttir reflects on the Chairship of Iceland, thanks WG leads and NCPs for their work calling it unique and important cooperation that thrived despite the pandemic. The importance of accurate data and the need for it will be on the rise globally. The next 10 years will be most decisive out of the next 1000 years in terms of climate change.

Board members thank Iceland for substantial efforts during their two-year tenure as the Arctic SDI Chair.

Eydis Finnbogadóttir gives the floor to the new Chair, Elena Martynova from Rosreestr.

#### **4.5. Russian Chairship Priorities**

Elena Martynova thanks Iceland for the results of its Chairship stressing the importance of the Arctic with regard to the new Russian National Arctic Strategy until 2035.

The priorities of the Russian Arctic Council Chairship 2021-2023 are presented:

- 1) Arctic people, including Indigenous nations,
- 2) Environmental protection, including climate change,
- 3) Socio-Economic development,
- 4) Strengthening the Arctic Council.

The architecture of the Russian Chairship that falls into 10 sections is outlined and briefly commented on:

- 1) Economic cooperation,
- 2) Human resources,
- 3) Environmental protection and climate change,
- 4) Indigenous Peoples of the Arctic,
- 5) Sustainable navigation and infrastructure,
- 6) Emergency prevention,
- 7) International scientific cooperation in the Arctic,
- 8) Arctic youth,
- 9) Arctic tourism,
- 10) Arctic culture and sports.

The objectives of Rosreestr in the Arctic SDI are stated (representing Russia, engagement with AC and other stakeholders, tailoring the services to meet user needs, working toward institutionalizing the Arctic SDI within the AC as an official data sharing platform).

The digital projects of Rosreestr in the field of SDI are presented (Arctic Hectare, Unregistered Property Identification, Land Condition and Use Analysis, Land Simply, Federal Information System).

Board members thank Elena Martynova for the presentation.

#### **4.6. Working Group leads and Membership 2021/2022**

Andrey Mukhin takes the floor to comment on the WG leads and membership [update](#).

**DECISION:** Working group structure and members approved.

### **5. Prioritized Activities**

#### **5.1. Executive Summary**

The summary covers key accomplishments since the Board meeting in June 2020, as outlined in the Prioritized Activities List 2020-2021. The prioritized activities fall into five high-level categories: Communication and Outreach, External Data, Geoportal, NMA

Services, and Business Processes.

## 5.2. Activities Closed 2020-2021 (WG leads) - [spreadsheet](#)

### 5.3. Business Processes

- Arctic SDI Strategy, Roadmap and Implementation plan finalized and published on the website,
- Arctic SDI Operational Policies Working Group is co-ordinating the development of Arctic Council data policy in cooperation with Arctic Data Committee (ADC), Sustaining Arctic Observing Networks (SAON) and Arctic Council Secretariat. Alignment with the polar data policy recommendations developed by ADC and SAON with contributions of Arctic SDI,
- Arctic SDI Evaluation: Evaluation Framework 2016 reviewed, preliminary self-evaluation completed, external review to be done,
- Licensing policy: clarify the need for it with regard to Topographic Basemap and Gazetteer Service,
- Guidelines for Data Providers and Operational Setup to be reviewed,
- SDI Manual for the Arctic to be updated,
- Technical WG: further develop governance and business processes to increase data and services availability and interoperability.

### 5.4. Geoportal Activities

- Based on Oskari software (developed & maintained by Finland), functioning and timely updated,
- Operational setup is running successfully,
- Geoportal WG to develop new features and further engagement with data custodians.

### 5.5. National Mapping Agencies' Services

- IT infrastructure for the Arctic SDI functions in line with the specifications of the operational setup,
- National Basemap services successfully running and integrated in the Arctic SDI Basemap production line,
- Norwegian Government cloud hosts 5 services developed by the Arctic SDI, including Embedded Maps,
- Data Stewardship: find external organizations to perform functions,
- Gazetteer: develop a download function for offline use,
- Arctic SDI DEM: develop the 2d generation of Arctic DEM and implementing recommendations by national DEM experts, as approved by the Board,
- Vector Tiles: following the successful completion of the VT Pilot in 2020, Technical WG is working to expand the pilot to all participating NMAs. Identify interested NMAs, review current cartographic standards, decide on a common data model, engage NMAs into developing a set of VT Basemap services.

### 5.6. Strategy, Communication and Value Creation

- Web service availability expanded,
- Outreach activities increased (10<sup>th</sup> International Forum «Arctic: Today and the future», 50<sup>th</sup> International Arctic Workshop, «Hack the Arctic», etc.),

- Coordination and partnerships with relevant agencies intensified (Arctic Council, its Secretariat, Working Groups and Committees as well as external agencies, such as Open Geospatial Consortium (OGC), ARMSDIWG (International Hydrographic Organization/Arctic Regional Hydrographic Commission), Arctic Data Committee (IASC/ SAON), etc.),
- Updating of the Arctic SDI website in progress.

### 5.7. External Data

- Goal: create a multidimensional Digital Arctic that will link the land, atmosphere and marine domains within an integrated platform.
- Methodologies:
  - Intensify stakeholder outreach and coordination,
  - Work with key data providers to increase the number of services in the Metadata Catalogue and Geoportal,
  - Further analyze and assess user needs.
- Services and projects in development:
  - AC Embedded Maps: create and publish interactive maps on AC websites using the tools and resources available via the Arctic SDI,
  - AC Data Stewardship: provide secure and sustainable digital access to Arctic spatial data services,
  - Arctic SDI – ARMSDIWG cooperation to develop Marine SDI pilot. Joint Statement of Intent is being prepared for publication,
  - Arctic SDI – Arctic Data Committee cooperation to document Arctic data pools, link architectures (Arctic SDI, Polar Data System), Joint Statement of Intent is being reviewed,
  - Arctic SDI – Natural Resources Canada: 2d version of Evergreen Catalogue of Arctic spatial web-services and data holdings. Evergreen catalogue being integrated with the Arctic SDI Metadata catalogue,
  - Arctic SDI – CAFF: sustainable management of the Arctic Wetlands, Pan-Arctic Wetlands Inventory Map. Natural Resources Canada to follow,
  - Increase satellite imagery and derived products in Arctic SDI:
    - Arctic SDI DEM: gather and integrate national elevation data,
    - Identify glacier monitoring methodology.

### KPIs:

[Arctic SDI Website](#), [Geoportal](#), [Central Services](#), Metadata Catalogue (to be continued in September during the next NCPs' meeting).

**CONSIDERATION:** Iceland would like to see continued activity on identification of a glacier monitoring methodology to be applied across the entire Arctic.

**RECOMMENDATION:** Gain recognition and support, including financial, from the governments. Possible ways to achieve it:

- establish a clear set of indicators, link the activities to verifiable policy drivers and deliver on them,
- find socio-economic and environmental consultants to provide the research,
- cooperate with other players and parties in the digital ecosystem.

#### 5.8. Technical Working Group Status Report

**DECISION:** The Board approved the use of the participating NMA's resources to develop and publish Vector Tile services using authoritative data.

#### **6. Arctic SDI Translation Policy**

**DECISION:** The translation of documents will be the responsibility of respective countries. The original cover page will be updated to include a reference "Unofficial Translation Provided by the [name the National Mapping Agency]".

**DECISION:** Inform the Board on translation and publication of the documents.

#### **7. For Board Decision**

##### 7.1. Naming of Arctic SDI Digital Elevation Model

**DECISION:** The Board approved the decision on naming "Arctic SDI Digital Elevation Model (Arctic SDI DEM)".

##### 7.2. Calendar of Events

**DECISION:** Approved.

##### 7.3. Prioritized Activities List

**DECISION:** Approved.

##### 7.4. Arctic SDI Evaluation for endorsement of the Board on External Review

The Board members agreed to limit the number of indicators and simplify the evaluation framework.

**DECISION:** The Board approved the preliminary results of the Arctic SDI self-evaluation and endorsed an external review.

**RECOMMENDATION:** Simplify the evaluation framework.

#### **8. Confirmation of the next Board Meeting**

Elena Martynova invites the Board members to meet in June 2022 in Saint-Petersburg. In person.

**DECISION:** the next Board meeting to be held in person in June 2022 (Saint-Petersburg).

#### **9. Any Other Business**

Board members come forward with suggestions and ideas for further cooperation.

##### - Kevin Gallagher

- suggests a presentation for the Arctic SDI NCPs on USGS data management approach, policies and available tools,
- suggests presenting the current US Earth observation capabilities and how they could be made available,
- suggests that the US Fish and Wildlife Service is updating Alaska Wetlands maps and we will facilitate their engagement with Arctic SDI on the approach being led by Canada on Wetland Inventory Mapping for the Arctic.

**DECISION:** Supported.

- Elena Martynova
  - suggests looking into creating social media communication channels for the Arctic SDI,  
**DECISION:** NCPs/WG leads to elaborate and report to the Board with suggestions via email.
  - suggests conducting a webinar on Artificial Intelligence knowledge sharing with regard to the Arctic SDI.  
**DECISION:** Supported.

### **10. Summary of the Board Meeting decisions**

- 1) Agenda approved,
- 2) Arctic SDI Chairship Report and Biannual report noted,
- 3) Arctic SDI Chairship transferred from Iceland to Russia for the period of 2021-2023,
- 4) Working Group leads, NCPs and membership confirmed,
- 5) 2020-2021 Prioritized activities reviewed and approved,
- 6) Decision to use the participating NMA's resources to develop and publish Vector Tile services agreed upon,
- 7) Decision to inform the Board on translations and respective publications approved,
- 8) Name "Arctic SDI Digital Elevation Model (Arctic SDI DEM)" approved,
- 9) Calendar of Events approved,
- 10) 2021-2022 Prioritized Activities List approved,
- 11) Preliminary result of Arctic SDI self-evaluation approved and the external review endorsed. Recommendation to simplify the evaluation framework (indicators),
- 12) Decision to meet in person in June 2022 in Saint-Petersburg confirmed,
- 13) Involving the Arctic SDI into the Earth Science Information Partnership activities supported,
- 14) Board supported conducting a webinar on Artificial Intelligence knowledge sharing with regard to the Arctic SDI,
- 15) NCPs/WG leads to look into creating social media communication channels for the Arctic SDI and report to the Board with suggestions via email.