ARCTIC SPATIAL DATA INFRASTRUCTURE GOVERNANCE DOCUMENT

Arctic SDI Secretariat
Version 1.1 December 2015

Document History & Version Control

Document Version Number	Date Approved	Brief Description of Change
1.0	June 2015	*Arctic Spatial Data Infrastructure Governance Document v1* Approved by the Board.
1.1	December 2015	Figure 1 updated to reflect the USA as Lead for the Communication Working Group and Appendix 2 updated to reflect current membership in Working Groups.

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1. Introduction

The *Arctic Spatial Data Infrastructure* (Arctic SDI) is the cooperation between the 8 National Mapping Agencies of Canada, Finland, Iceland, Norway, Russia, Sweden, USA and Denmark (including the administrations of the Faroe Islands Home Rule and the Greenland Self-Government).

The purpose of this document – ***the Arctic SDI Governance Document*** – is to describe the organization of the Arctic SDI and the agreed governance policies for the cooperation between the 8 participating National Mapping Agencies.

2. Memorandum of Understanding

The foundation for the Arctic SDI is the "Memorandum of Understanding" (MOU) in which the spirit of the cooperation is detailed. *(A copy of the MOU is included as Appendix 1 of this document.)* The MOU expresses the intention of the signatories to collaborate and describes the objectives, the areas of interest and the forms under which the cooperation will be performed. Through the MOU, the signing Participants will designate appropriate representatives to identify cooperative activities and details of implementations.

The MOU is a **legally non-binding** instrument covering a period of five years from the date of signature. It may be amended or extended by written agreement.

2.1. Implementing Arrangements

For collaborative activities, which require specific commitment between Participants or Participants and third parties, the Participants of the MOU may enter into an Implementing Arrangement (IA) that can act as a legally binding or non-legally binding instrument.

An IA provides the necessary framework for legally binding issues such as intellectual property, liability and copyright as well as long term commitment of resources and funding.

It is recommended that legally binding IAs be selected for any arrangement which involves financial transfers between Participants and/or third parties. If the contributions are going to be only "in-kind" and do not involve transfer of funds, then a legally non-binding IA is the recommended option. Depending on the areas of cooperation, it may also not be necessary for all the Participants to contribute to an IA, however all Participants should provide "tacit approval" (e.g. via email) for the IAs.

3. Arctic SDI Organization and Governance Policies

The Arctic SDI organization consists of the Board, the Executive Board, the National Contact Points, the Secretariat for the Chair of the Board (Secretariat) and several other Working Groups with responsible Lead Countries and Support Countries.
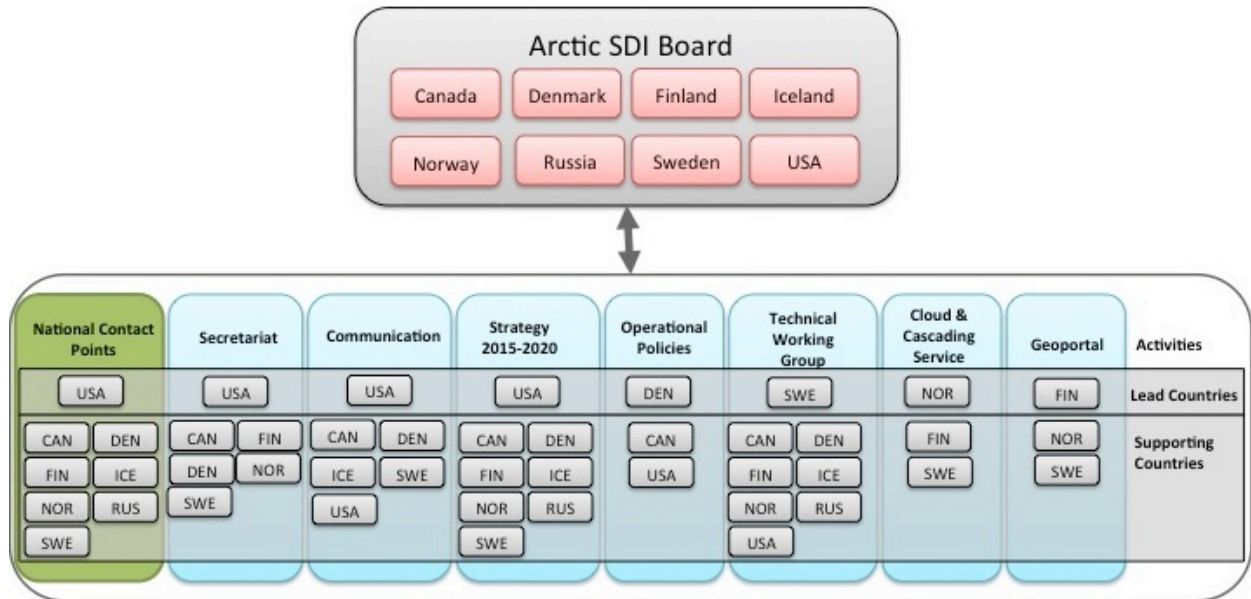

Figure 1. The Arctic SDI Organization as of December 2015.

3.1.   The Arctic SDI Board

The decision-making body of the Arctic SDI cooperation is the **Arctic SDI Board**.

The Board formulates the vision, goals and strategic direction for the development of the Arctic SDI and decides on the terms of any necessary Implementing Arrangements as defined by the Arctic SDI MOU. The Board approves objectives and work required to meet the strategic goals and vision, and provides guidance and the necessary resources, governance and competencies to support the implementation of decisions.

The Board consists of one Director General or equivalent level Executive from each of the 8 National Mapping Agencies representing the MOU signatories.

The **Chair of the Arctic SDI Board** rotates every second year following the cycle of the Arctic Council chairmanship. The Chair is the board member representing the National Mapping Agency from the same country that holds the Chair of the Arctic Council. The cycle of the Arctic SDI Board chair begins 1 February of the year where the chair of the Arctic Council changes in May.

1 Feb – 31 Jan		**Chair**	Previous Chair	Future Chair
2015	2017	**USA**	Canada	Finland
2017	2019	**Finland**	USA	Iceland

2019	2021	**Iceland**	Finland	Russia
2021	2023	**Russia**	Iceland	Norway
2023	2025	**Norway**	Russia	Denmark
2025	2027	**Denmark**	Norway	Sweden
2027	2029	**Sweden**	Denmark	Canada
2029	2031	**Canada**	Sweden	USA

a. Board Meetings

The Board meets at minimum once a year. The Board decides the frequency of additional meetings as appropriate.

Six of the Arctic SDI Board Members or appointed substitute shall constitute a quorum for purposes of holding a Board Meeting.

The Arctic SDI is an equal cooperation between the Participants and all Board decisions are made in consensus.

The Board decides the general procedures for conduct of Board meetings, as well as specific procedures for any specific board meeting.

An Implementing Arrangement can mandate the Board to implement special rules or procedures.

The Board can invite non-members to attend the Board meetings as observers, as presenters or as advisors to answer questions for specific agenda items.

The Secretariat of the Arctic SDI Board is responsible for the preparation process of the Board meetings.

At least 4 months before an ordinary Board meeting the Board Chair notifies the Board Members, the National Contact Points and the Working Group Leads of:

- the date, venue and provisional agenda of the Board Meeting;

- the deadline for submission of proposals or documents to be included in the agenda for the Board Meeting (in time for the Secretariat to send an annotated agenda and all referenced documents to the Board Members 14 days prior to the Board Meeting); and

- the date, venue and provisional agenda of the Secretariat, National Contact Point and Working Group Leads Meeting (at least 14 days prior to the deadline for sending the annotated agenda and documents to the Board)

At least 14 days prior to the Board Meeting the Secretariat forwards the documents to the Board.

- All Working Group documents subject to Board meetings and decisions are to be provided to the Secretariat and copied to the National Contact Points.

b. Recording and Approval of Board Minutes

The Secretariat records the Minutes of the Board Meeting focusing on recording of decisions and actions. The Secretariat manages the approval process for the Minutes in a direct dialog with the Board Members with cc to the National Contact Points.

In the event that a **Board Meeting** is held **without the attendance of all eight Arctic States**, the positions of all States present will be documented in the draft Minutes.

Approval of meeting Minutes will allow time for communication and result in final resolution of the motions to be completed within 45 days after Board Members receive the draft Board Minutes. Note: The 45-day timeframe is considered the maximum time. The process of finalizing meeting Minutes should occur as quickly as possible.

- Draft Minutes will be sent to all Board Members within 14 days.

- Within 21 days of receipt of the draft Minutes, all Board Members (those present and absent) have the opportunity to provide clarification, comments, questions, and/or approval for decisions and actions, in writing.

- In absence of comments from a Board Member within the 45-day timeframe, it will be assumed that that the Board Member agrees with Board decisions and actions documented in the Minutes.

c. Decisions & Document Approval between Board Meetings

Items that require decision between Board meetings, or documents that require timely approval by the Board, can be processed by email.

Documentation of required decisions or approvals are provided to the Secretariat and copied to the National Contact Points. The Secretariat forwards the documents to the Board.

When communicating with the Board via email the Subject Line "ACTION REQUIRED – Arctic SDI Board" will be used. The email should provide specific information about the expected timeline for response, usually within 10 days. If there is no response by a Board Member it will signify acceptance of the action or decision.

To ensure a clear understanding of proposed decisions the Board Chair may call a Board Meeting as required via telecom, or Internet-based service, in order for the Secretariat or Working Groups to provide a briefing.

3.2.   The Executive Board

The Executive Board consists of the current, previous and future Chairs of the Board.

The Board can use the Executive Board to:

- make decisions and launch actions concerning specific items in between the Board Meetings; and
- implement a written decision, procedure or convene an extraordinary Board Meeting including the necessary preparatory meetings.

The Executive Board may be used by the Chair of the Board as a consultation body on decisions that need to be taken between Board Meetings.

As necessary, Executive Board meetings will be held as Internet-based meetings.

3.3.   National Contact Points

To promote efficient cooperation, each Board Member appoints representative(s) from their institution to serve as an **Arctic SDI National Contact Point**.

The National Contact Point acts as a point of liaison between their respective Board Member, the Arctic SDI Working Groups, and the National Mapping Institutions involved in the cooperative efforts relative to the Arctic SDI.

The National Contact Point serves as point of contact for questions raised by Board Members or by Lead Countries of the Arctic SDI Working Groups. The National Contact Points communicate Board decisions as appropriate and influence successful delivery.

The National Contact Points, acting on behalf of the Board Members, help prepare Board Meetings by proposing items to the agenda and by clarifying issues and differences in opinion in relation to meeting documents and draft decisions presented either by a Lead Country or a National Contact Point.

The National Contact Points meet prior to the Board Meetings at least 14 days before the final deadline for submitting documents and proposals to the Board. The National Contact Point representing the Chair of the Board chairs the meeting.

The National Contact Point is responsible for briefing the Board Member they represent on matters of relevance including updates to the Arctic SDI website or briefing notes produced by a Lead Country.

4.   Arctic SDI Representation, Calendar and Communication Materials

To increase Arctic SDI visibility the Chair of the Board should, when possible, represent the Arctic SDI at higher-level meetings or conferences, such as the UN-GGIM meetings and Senior Arctic Officials meetings.

The Arctic SDI Calendar is kept up to date by the Secretariat. The Board approves Arctic SDI formal presentations at major meetings.

To obtain Board approval to represent the Arctic SDI or provide formal presentations, notification is sent to the Secretariat, with a copy to all National Contact Points. This notification includes:

- meeting name and location;
- who is attending and actively participating, and in what context; and
- whether a presentation is to be made, or if an invitation should be sought, and the topic or focus of that presentation.

The Secretariat cooperates closely with the Lead Country for the Working Group on Communication concerning decisions on Arctic SDI representation at international conferences and meetings. Once meeting attendance is approved, the Secretariat notifies the Working Group on Communication so that the Arctic SDI Calendar is updated.

To ensure consistent representation of the Arctic SDI, the Working Group on Communication produces:

- a general-purpose fact sheet; and
- standardized presentation slides for general as well as technical audiences.

The presentation slides provide a consistent foundation for audience specific presentations to be assembled. The presentation slides and the fact sheet are evaluated at least every 6 months and updated as deemed necessary.

5. Working Group Activities and Governance

Arctic SDI activities are organized in working groups or otherwise as decided by the Board. When establishing a working group the Board nominates a Lead Country and Support Countries.

Working groups set their internal detailed activity plans and these do not need to be reviewed or approved by the Board.

Arctic SDI Working Group activities will be conducted in an open and transparent manner, meetings, minutes and documentation are open to all representatives from the signatories of the Memorandum of Understanding.

Working group technical decisions will adhere to mandates from the Board and previously agreed standards and processes from the finalized Roadmap, the updated Strategic Plan and related Objective Implementation Plans.

Adjustments to Working Group activities which are outside of the scope of Board approved strategy and implementation plans that are required to facilitate development of an Arctic SDI that meets the needs of relevant Arctic SDI stakeholders will be documented and use the procedures for Decisions and Document Approval between Board Meetings, or wait until the next formal Board meeting if appropriate.

5.1.   Lead Countries and Support Countries

The present status of the Arctic SDI cooperation is a voluntary cooperation between the 8 participating National Mapping Agencies. As such, resources are composed of voluntary contributions from the participating agencies with recognition of different levels of engagement.

Working Group activities are performed by **Lead Countries** joined by **Support Countries** (See Figure 1) unless otherwise documented in Implementing Arrangements as defined in the MOU. This includes both administrative and technical activities, and operations, as well as development and strategic activities. A **Lead Country** has the responsibility for the operation and progress of the activity. The tasks within the activities can be divided between the Lead Country and the Support Countries and managed through meetings, Internet meetings and emails.

Lead Countries of Working Groups work together with National Contact Points to coordinate and communicate crosscutting activities and processes, or issues concerning operations and process planning. Lead Countries have the responsibility to submit reports, documents and draft decisions to the Board, using the process documented under Section 4.1. Lead Countries ensure material presented to the Board reflects opinions expressed by the National Contact Points.

Lead Country representatives who are not also serving as National Contact Points attend the National Contact Points meeting to facilitate the preparation of the Board meeting.

6. Document Management and Website Publishing

All documents, requested by the Board or developed by Working Groups, carry a DRAFT watermark prior to final approval at the appropriate level, prior to editorial review and prior to being added to the public Arctic SDI website. Approved documents are published on the public Arctic SDI Website in an electronic format (e.g. PDF) that cannot be edited.

To achieve Board approval – including acceptance for publishing on the public website – documents marked with a DRAFT watermark are sent to the Secretariat, with a copy to the National Contact Points, for distribution to the Board.

It is the responsibility of the Lead Country or other authors to handle the documents securely during the process.

7. Arctic SDI Working Groups

The Arctic SDI Board has established working groups in support of Arctic SDI strategy, policy requirements, communications, secretariat, geospatial and technical activities (See Figure 1 and Appendix 2).

7.1. Secretariat for the Chair of the Arctic SDI Board

The country holding the Chair of the Board is the Lead Country for the Secretariat. The countries holding Executive roles (past Chair, next Chair) are mandatory Support Countries.

The Secretariat for the Chair of the Artic SDI Board is assigned the following tasks:
- Logistics and practicalities in relation to Board meetings;
- Preparation of the provisional agenda, the annotated agenda and documents for Board meetings in cooperation with the National Contact Points and the Lead Countries;
- Convene and chair National Contact Points meetings;
- Record Minutes of Board meetings and follow-up;
- General assistance to the Chair of the Board;
- Governance policies documented in the Arctic SDI Governance Document;
- Additions to the Arctic SDI Calendar; and
- List of National Contact Points and Working Group membership.

7.2. Working Group on Geoportal

The Working Group on the Geoportal is assigned the following tasks:
- Oskari Software for the Arctic SDI Geoportal;
- Connecting compliant WMS services to the Geoportal; and
- Metadata Catalogue.

7.3. Working Group on Cloud and Cascading WMS Service

The Working Group on Cloud and Cascading WMS Service is assigned the following tasks:
- Cloud platform; and
- Cascading WMS service.

7.4. Technical Working Group

The Technical Working Group is assigned the following tasks:
- Infrastructure and technology;
- Design, architecture and standards;
- Data models and metadata; and
- Technical proposals for establishing Arctic SDI WMS, the Geoportal and other services.

7.5. Working Group on Strategy

The Working Group on Strategy is assigned the following tasks:
- Furtherance of the Arctic SDI Strategy 2015-2020; and
- Develop action items with the working groups to achieve the goals of the strategy.

7.6.   Working Group on Operational Policies

The Working Group on Operational Policies is assigned the following tasks:
- Policies and legal framework
- Implementing Arrangements and contracts, etc.

7.7.   Working Group on Communication

The Working Group on Communication is assigned the following tasks:
- Point of contact for stakeholders, users and the public in general;
- Work with the Secretariat to coordinate information across National Contact Points, Lead and Support Countries
- When meetings are identified where Arctic SDI representation would be valuable, work with the Secretariat to coordinate across National Contact Points, Lead and Support Countries to identify the right representative(s);
- Public Arctic SDI Website – operation, updating and editing;
- Information and key, strategic messages (presentations, pamphlets, posters);
- Documentation – documents, protocols etc. from the Board meetings, National Contact Points activities to be uploaded to the website.

8. *Appendix 1*: Arctic SDI – Memorandum of Understanding

The document is originally established and elaborated in English language and then translated into French and Russian languages.

The MOU in the three languages has been signed between February and May 2014 by the participating organizations. The *signed* documents are available on the Arctic SDI Website.

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MEMORANDUM OF UNDERSTANDING

between

The Earth Sciences Sector of the Department of Natural Resources Canada,
the Danish Geodata Agency, the National Land Survey of Finland, the Government of
Greenland, the National Land Survey of Iceland, the Norwegian Mapping Authority, the Federal
Service for State Registration, Cadastre and Mapping of the Russian Federation,
the Swedish Mapping, Cadastral and Land Registration Authority, the United States Geological
Survey

concerning

CO-OPERATION IN THE DEVELOPMENT OF AN ARCTIC SPATIAL DATA INFRASTRUCTURE

The Earth Sciences Sector of the Department of Natural Resources Canada,
the Danish Geodata Agency, the National Land Survey of Finland, the Government of
Greenland, the National Land Survey of Iceland, the Norwegian Mapping Authority, the Federal
Service for State Registration, Cadastre and Mapping of the Russian Federation,
the Swedish Mapping, Cadastral and Land Registration Authority, the United States Geological
Survey

hereinafter referred to as the "Participants"

Considering that the Arctic Spatial Data Infrastructure (Arctic-SDI) is a complex of spatial information resources, organizational structures, technologies of creation, processing and exchange of spatial data, that provides broad access and efficient use of spatial data for the Arctic,

Considering that mutual benefits would result from the establishment of a cooperative framework providing national geospatial map data for the analysis and monitoring of the Arctic environment and resources,

Having determined that the primary objectives of their co-operation are the access and distribution of national geospatial datasets through an Arctic-SDI,

Stating their mutual desire to develop, maintain and administer the Arctic-SDI and provide national geospatial information and associated systems for the sharing of relevant reference data,

Wishing to contribute to the advancement of scientific co-operation and reinforcing and strengthening the links among them,

Have reached the following understanding:

1. The objective of this Memorandum of Understanding (MOU) is the access and distribution, of national geospatial datasets through an Arctic-SDI on the basis of equality and mutual benefit.
2. The Participants understand that data under this MOU may include the following:

(a) relevant national cartographic data;
(b) other types of data (such as land cover & hydrology);
(c) other areas of mutual interest within the framework of development of the Arctic-SDI as they may determine.

3. The Participants understand that their co-operation in the development, maintenance and administration of the Arctic-SDI may include the following forms:

(a) exchange of cartographic and other necessary information;
(b) education and training for work with the Arctic-SDI;
(c) liaison with industrial, academic, professional and other organizations that participate in the Arctic-SDI;
(d) organizational and support of technical seminars and meetings;
(e) encouragement of co-operation regarding consulting services, technology assessment and applications development; and
(f) other forms of co-operation as they may determine.

4. The Participants intend to designate appropriate representatives to identify co-operative activities and details of implementation of this MOU.

5. The Participants intend to conclude Implementing Arrangements for each of their activity of co-operation identified in paragraph 3 that will set forth the timing and scope of the specific forms of co-operation and any other matters on which their consent may be desirable.

6. (a) Each Participant intends to pay for the cost it incurs in the application of this MOU unless otherwise decided upon in writing under an Implementing Arrangement.
(b) The Participants intend to ensure that all costs or estimated costs are detailed in the Implementing Arrangements.

(c) The Participants understand that their activities are subject to the availability of their respective funds and resources.

7. (a) This MOU will enter into operation upon signature by all Participants and will remain in operation for five (5) years, unless extended or discontinued by the Participants.

(b) The Participants may amend this MOU or extend its application upon their mutual consent in writing.

(c) A Participant may cease its cooperation under this MOU by giving a three (3) months written notice to the other Participants.

(d) This MOU is not legally binding.

Signed in nine (9) originals at……………………in the English, French and Russian languages.

For the Earth Sciences Sector of the Department of Natural Resources Canada

Date	Signature & clarification of signature

For Geodatastyrelsen- The Danish Geodata Agency

Date	Signature & clarification of signature

For Maanmittauslaitos - National Land Survey of Finland

Date	Signature & clarification of signature

For the Government of Greenland

Date	Signature & clarification of signature

For Landmælingar Íslands - National Land Survey of Iceland

Date	Signature & clarification of signature

For Kartverket– Norwegian Mapping Authority

Date	Signature & clarification of signature

For Rosreestr - The Federal Service for State Registration, Cadastre and Mapping (the Russian Federation)

Date	Signature & clarification of signature

For Lantmäteriet - the Swedish mapping, cadastral and land registration authority

Date	Signature & clarification of signature

For U.S. Geological Survey – Office of the Director

Date	Signature & clarification of signature

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9. Appendix 2. Arctic SDI Working Group Membership as of December 2015

	Canada	Denmark	Finland	Iceland	Norway	Russia	Sweden	USA
National Contact Points	Cameron Wilson	Peter Pouplier	Heli Ursin	Eydis Líndal Finnbogadóttir	Kåre Kyrkjeeide	Andrey Mukhin	Fredrik Persäter, (Owe Palmér)	**Lorna Schmid**
Secretariat	Cameron Wilson	Peter Pouplier	Heli Ursin		Kåre Kyrkjeeide		Fredrik Persäter, (Owe Palmér)	**Lorna Schmid**
Communication	Cameron Wilson	Peter Pouplier			Kåre Kyrkjeeide		Fredrik Persäter, (Owe Palmér)	**Lorna Schmid**
Strategy 2015-2020	Cameron Wilson	Peter Pouplier	Heli Ursin, Antti Kosonnen	Eydis Líndal Finnbogadóttir	Kåre Kyrkjeeide	Natalia Vandysheva, Andrey Mukhin	Fredrik Persäter, (Owe Palmér)	**Rebecca Anderson**, Lorna Schmid
Operational Policies	Simon Riopel	**Peter Pouplier**						Ingrid Verstraeten, Lorna Schmid
Technical Working Group	Cameron Wilson	Andrew Flatman, Eva Mätzler, Jens Gottlieb	Jani Kylmäaho	Ásta Kristín Óladóttir	Trond Johannessen, Frank Arntsen, Anders Skoglund	Natalia Vandysheva, Alexandra Osipova, Andrey Mukhin	**Fredrik Persäter**	Rebecca Anderson
Cloud & Cascading Service			Jakob Ventin		**Roy H. Mellum,** Frank Arntsen, Lars Bjørnar Bockmann			
Geoportal			**Jani Kylmäaho**		Trond Johannessen, Frank Arntsen, Anders Skoglund			

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