June 2015 ARCTIC SDI BOARD MEETING Minutes

Point of time: June 4, 2015

Locality: Bernstoff Slot, Jaegersborg Allé 93, 2820 Gentofte, Denmark

Meeting language: English

Main purpose of the meeting:

Consideration of approval and adoption of the Arctic SDI Strategic Plan 2015-2020, and related Implementation Plan and Roadmap, along with other documents prepared for the Board

Meeting time:

Thursday, 4 June 2015 9:30 – 16:45 followed by venue tour and dinner hosted by the Danish Geodata Agency.

Participants:

COUNTRY	ORGANIZATION	NAME	POSITION
Board members:			
Canada	Natural Resources Canada, Canada Centre for Mapping and Earth Observation	Prashant Shukle	Director General
Denmark	Danish Geodata Agency	Kristian Møller	Director General
Finland	National Land Survey of Finland	Arvo Kokkonen	Director General
Iceland	National Land Survey of Iceland	Magnús Guðmundsson	Director General
Norway	Norwegian Mapping Authority	Anne Cathrine Frøstrup	Director General
Sweden	Swedish Mapping, Cadastre and Land Registration Authority	Bengt Kjellson	Director General
Russia	The Federal Service for State Registration, Cadastre and Mapping	Igor Vasiliev	Director General
USA	U.S. Geological Survey	Kevin Gallagher	Associate Director Chair of the Arctic SDI Board

Co opted			
Canada	Natural Resources Canada, Canada Centre for Mapping and Earth Observation	Caroline Cloutier	Director
Russia	The Federal Service for State Registration, Cadastre and Mapping	Natalia Vandysheva	Project Manager
USA	U.S. Geological Survey	Lorna Schmid	Arctic SDI Secretariat Lead and National Contact Point Lead
Participated by video/phone			
USA	U.S. Geological Survey	Rebecca Anderson	Arctic SDI Strategy Working Group Lead

Draft documents forwarded to the Board:

- Strategic Plan Materials
  - Strategic Plan 2015-2020
  - Strategic Plan 2015-2020 Implementation Plan
  - Strategic Plan 2015-2020 Roadmap
  - Proposed Revision to the Arctic SDI Vision and Mission Statements
  - Proposed Definitions for Reference and Thematic Data
- Governance Document
- Framework Document
- Communication Materials
  - Technical and General Audience Slideshows
- Calendar of Events

Accompanied by the Table of Actions and Decisions from 2014 Reykjavik Meeting

Board Meeting Minutes by Agenda Topics

Appendix 2 of this document contains the Meeting's Table of Decisions and Actions

1. **Welcome by the Host and opening of the meeting** *(Host Denmark)*
   The host of the meeting Mr. Kristian Møller, Director General of the Danish Geodata Agency, Kingdom of Denmark welcomed all participants.

2. **General Business**
   2.1. Arctic SDI Chairmanship handover from Canada to the United States and Board Discussion *(Canada)*

   Mr. Prashant Shukle, Director General, Natural Resources Canada, Canada Centre for Mapping and Earth Observation, provided highlights of the Board's Accomplishments during Canada's tenure as Chair of the Arctic SDI Board 2013 – 2015.

   Prashant Shukle described the significant evolution of the Arctic SDI over the last two years, including the signing of the MOU by the 8 Arctic states, improvements in the sharing of map data, a significant strengthening of governance and increased engagement with members of the Arctic Council Working Groups, particularly CAFF.

   2.2. Appointment of Chair *(Canada to US)*
   2.2.1. Photograph of Board Transition

   The floor was handed over to the US Chair, Mr. Kevin Gallagher. It was determined that a Board photograph would be taken later in the day.

   2.3. Approval of the agenda and appointment of Secretary *(Chair)*

   The Chair stated that the Preliminary Agenda for the meeting was sent to members on May 21 and the Board decided on the following change to the agenda:

   DECISION: Move Agenda Item 6: **Relevant Arctic Council Ministerial Meeting Topics and Discussion of Pan-Arctic DEM** to Agenda Item 10. This places all Agenda items related to the Reykjavik Board meeting and Arctic SDI documentation first to be followed by the Arctic SDI Board Strategic Discussions.

   DECISION: Chair stated that Lorna Schmid, USA will serve as Secretary for the meeting. It was approved.

3. **Opening Remarks from the new Arctic SDI Chairman** (*US*)

Kevin Gallagher introduced himself and highlighted how USGS activities relate to the Arctic SDI. Kevin included an overview of the USGS mission areas and data collection, monitoring and analysis activities and highlighted stream gaging, seismic monitoring, volcano observatories, geomagnetic observatories, Landsat Ground System and a National Phenology Network to name a few. Kevin stated that as a non-regulatory science agency our "currency" is information.

Kevin then described his role at USGS and how the programs that fall under his Mission Area, Core Science Systems, seek to contribute to understanding the Earth's "Critical Zone" which extends from the tops of the trees to the deepest groundwater, the "place where life happens." The objectives cross cut other USGS Mission Areas with three goals, 1) research, characterize and understand the critical zone, 2) expand applications of USGS research, and 3) conduct scientific analysis and synthesis opportunities. Programs support library services, many types of mapping including Alaska mapping and the 3D Elevation Program, the Big Earth Data Initiative, high performance computing, science synthesis and data integration. Kevin re-iterated that there may be opportunities for the Arctic SDI.

3.1. *Around the table Introductions with Highlights of Discussions*

The Board thanked Prashant Shukle for the last two years, thanked Kristian Møller for hosting the meeting and thanked Kevin Gallagher for his highlights.

The hard work of all those involved in the Arctic SDI Working Groups and Secretariat was praised by the Board. There was consensus that those involved have accomplished a great deal in providing a great structure with all of the documentation submitted to the Board. We've come a long way and are in a very good place to move forward with our work "outside of the house." The Board felt exceptionally well prepared for this meeting. Congratulations to everyone on that!

The question was raised, "How do we ensure that the data we provide meets the needs of users/stakeholders?" Followed by a discussion including: The Arctic Council may need more simple data for their use. We do not want to be a big infrastructure that is too complicated to use. We need to identify how much work needs to be done to ensure that our data is accessible and in the right formats and make it usable for more than just the technical experts, but also schools, etc. So making the data public is important, as are best practices because users may not know what they need. It is important to keep and develop the user-driven approach with the Arctic Council being the most important user so far. We need to provide solutions that they may find easy to use.

Bridging the generational divide with the generation that was born with a device in their hand is key. Our role is not only quality acquisition, quality control and ease of data access, but then how do we value add that data to make it accessible to a greater audience, or do we have the competencies? Perhaps using "hack-a-thons" to allow

others to value add; we don't necessarily have to do more than provide the data and allow others to value add.

Kevin Gallagher closed the opening discussions stating he has a passion for the Arctic and is very happy to be at the table today. The Arctic is under a lot of threat: climate change, development, etc. To be ahead of that curve will help us to make responsible decisions. The Arctic SDI Board, as a group, has the potential to aid policy makers as we move forward. The question to continually ask is, "What's the biggest bang for the buck that will provide the most positive impact?" Then continue, "moving the dial" in that direction.

4. **Presentation of Arctic SDI Strategic Plan 2015 – 2020, Implementation Plan and Roadmap**

The Chair invited the Strategy Working Group Lead, Rebecca (Becci) Anderson, to present the work of the Strategy Working Group and Working Group Leads. The presentation was made remotely from Anchorage, Alaska via the Internet.

The Chair pointed out that according to the Table of Decisions and Actions from the Reykjavik Meeting, all Board requests for the Strategic Plan documentation sent to the Board were complete.

See the presentation provided by Rebecca Anderson for details on what was shared with the Board. **MODIFY THIS LINK, point to Arctic SDI Website when URL is provided. Currently located in public ftp site: ftp://ftpext.usgs.gov/pub/er/va/reston/Lorna/Arctic/2015-Jun-Board-Meeting-Docs**

Prashant Shukle asked a question about what the Arctic SDI is doing to ensure that we are positioned to be an integrating force around the Arctic.

Becci Anderson talked about stakeholder confusion on the difference between GIS mapping applications and tools and a geoportal, for example, the Arctic ERMA (Environmental Response Management Application GIS mapping platform used by the Arctic Council Emergency Prevention, Preparedness and Response (EPPR) Working Group and the Arctic SDI Geoportal. In a December 2014 conversation with the current Chair of the EPPR there was a discussion of having a presentation slide, or other description of the difference between the two types of tools. (See Action reflected in Section 7.3)

4.1. **Discuss and Approve Strategic Plan Documentation**
- Strategic Plan 2015-2020
- Strategic Plan 2015-2020 Implementation Plan
- Strategic Plan 2015-2020 Roadmap
- Proposed Revision to the Vision and Mission Statements.
- Proposed Definitions for Reference and Thematic data.

The Chair pointed out that the goal of this agenda item is to approve the Strategic Plan, Implementation Plan and the Roadmap.

Following are highlights from the discussion by Arctic SDI Board Members along with requests for additions and modifications:

Consistent Use of Terms
> Great job, however it was noted that there could be improved consistency in the use of terms with regard to users, stakeholders and data providers. Some places it is Arctic Council WG, some places it is relevant Arctic stakeholders, etc. The Board discussed the need for a Glossary of Terms to provide a clear determination of these groups and reflect the associated roles and requirements that go along with each. Additionally, the Glossary of Terms will aid in consistent internal and external communication for the Arctic SDI.

Vision and Mission Discussion
> Vision needs to continue to include "monitoring and decision-making support" as it was in the original version. To "support needs in the Arctic" requires not only information, but also a lot of resources.
>
> Russia's proposed change to the Mission Statement: Provide the instrument for the discovery access, integration and sharing of Arctic geodata, and encourage geospatial information management best practices.

Status of Documents
> There was consensus that these documents will be considered final after the requested changes are reflected. The Board agreed however, that future changes could be affected if necessary using an email approval process.

Prioritizing the Work of the Arctic SDI under Objective 1: User Needs
> See Section 11 of these Minutes for highlights of Board discussions along with additional Board Decisions.

DECISION: The Arctic SDI Board has reviewed and discussed the Arctic SDI Strategic Plan 2015 – 2020, Implementation Plan and Roadmap along with the definitions for thematic and reference data and has approved the documents.

DECISION: The Board requests the proposed Arctic SDI Vision and Mission statements are modified taking into account the discussion points found above.

ACTION: Changes to the Vision and Mission will be drafted by the Strategy Working group over the 4-5 weeks after finalization of the Board Meeting Minutes and forwarded to the Board for final decision.

ACTION: The Board requests that these documents then be published on the Arctic SDI website by the Communication Working Group for citation to stakeholders and the public.

DECISION: The Communication Working Group will also capture strategic information for use in presentation materials (See Section 7.3).

DECISION: The Board agreed that the Arctic SDI documentation will change over time as the Working Groups move forward. The Board will approve changes using the email process from the Governance Document as we move forward.

ACTION: Following the development and approval of the Glossary of Terms (See Section 7.5) the Strategy Working Group will go through the Strategy documents for consistent use of terms.

5. Lunch

6. Review of Decisions and Actions from November 2015 Board Meeting:
Items Not Associated with Arctic SDI Documentation

The Chair pointed out that the goal of this agenda item is to address the not yet complete decisions and actions found in Appendix 1. The Board discussed the two remaining items, Russian update on status of legal issues with access to their data and attendance at the 5-7 Aug 2015 UN-GGIM meeting and dinner gathering covered in 6.1 and 6.2 below. Additional insights of relevance to the Arctic SDI on both topics were covered.

6.1. Russian update on status of legal issues with access to their data

Legal issues have been resolved and Russia is currently working on Shoreline boundaries and islands, and topographic maps. Web Mapping Service (WMS) on the Russian Arctic Zone in the scale of 1:200K is published on the official website of Rosreeestr in test mode. The extent covers 2, 280K square km of map data.

Status: Russia is 36% complete preparing the data with 152 completed sheets. By the end of July they anticipate 47% completion. During this year and next remaining WMS data will be implemented. The WMS link is public and in accordance with the Agreement on Use of Data it is provided in Russian and English. The public access point for the data today is:
http://82.138.13.246:6080/arcgis/rest/services/Russia_Base_Map_test_Ver2/MapServer?f=jsapi

This is great progress and the data were demonstrated for the Board. The Technical Working Group is working to make the data available via the Arctic SDI Geoportal.

Arctic SDI

6.2. Attendance at the 5-7 Aug 2015 UN-GGIM meeting and dinner gathering.

All Nations will attend the United Nations Initiative on Global Geospatial Information Management (UN-GGIM) meeting in New York.

ACTION: US Secretariat will coordinate the dinner and meeting. Wed or Thurs would be the best day. Look for an hour, perhaps 8:30 a – 10a meeting, and perhaps dinner or drinks. Another option was finding a slot later in the day for a meeting and going straight to dinner

ACTION: Kevin Gallagher will follow up with the US representative to the UN-GGIM to identify options for a briefing or update regarding Arctic SDI accomplishments at the UN-GGIM meeting.

7. Review of Decisions and Actions from November 2015 Board Meeting:
Discuss and Approve Remaining Draft Arctic SDI Documentation

The Chair pointed out that the goal of this Agenda Item 7 is to act on the remaining Arctic SDI documentation requested by the Board at the November 2015 Reykjavik meeting. The Chair pointed out that the draft documents were distributed for review on May 21, 2015 along with the Table of Decisions and Actions that was sorted by document and provides status.

The Chair commended the Working Groups and Lead Countries for all the dedication and hard work that went into finalizing this suite of documents for the Board in such a short timeframe. It was noted that all this work was completed in slightly more than 4 months.

DECISION: Cover pages for of all documents will be the same. The Board would like a consistent look and feel for all documents.

ACTION: Any presentation, or document, where there are flags used needs to have the Kingdom of Denmark representation updated (Greenland and the Faroe Island flags are not customarily used).

DECISION: The Decision from Section 4, which states all Arctic SDI documents are subject to change, also applies to the documents covered under this Section 7.

7.1. Arctic SDI Governance Document. Lead: Secretariat

DECISION: The Arctic SDI Board has reviewed and approved the Arctic SDI Governance Document. No requests for change were made on this document and it can be designated final.

ACTION: The Governance Document tables need to be updated to reflect that Norway's Strategy WG and National Contact Point will be Kare Kyrkjeeide and they are looking to identify the person for Communications WG.

DECISION: Since Norway's member for the Communications Working Group will be new they should not be the lead. (See Section 7.3.)

7.2. Revised Arctic SDI Framework Document. Lead: Norway, Sweden and US

DECISION: The Arctic SDI Board has reviewed and approved the Arctic SDI Framework Document and this document will not be updated. As the Working Groups move forward to develop and enhance the Arctic SDI the content of this document may be used to document and inform data providers, users and stakeholders about the Arctic SDI infrastructure.

ACTIONS: The following requests for change were made for this document in order to finalize:
- The consistent cover from the Governance and Strategy documents will be applied to this document.
- The Document History/Version Control section will be modified as presented to the Board.

7.3. Communication Materials. Lead: Communications WG

The Board discussed the need for an Arctic SDI Fact Sheet, a video and updated presentation slides.

Discussion of the Arctic SDI presentation materials: For technical audiences they are too simple and for a lay audience they are too technical. Presentations must be able to meet the needs and level of understanding of the audience to whom the presentation is being given.

DECISION: Norway will no longer be lead of Communication WG.

ACTION: The Board will discuss who will lead the Communication WG.

DECISION: Canada, Denmark, Finland, Norway, Russia, Sweden and the US will share the costs of building a movie and fact sheet modeled after those created by UN-GGIM (up to USD 2500 per member):
- http://ggim.un.org/
  - Movie: Linked on main page
  - Fact Sheet: http://ggim.un.org/docs/meetings/GGIM4/UN%20GGIM_Flyer_april2014.pdf

ACTION: Prashant Shukle from Canada will lead the activity and coordinate with other countries to have a Draft movie ready by the Aug 2015 UN-GGIM meeting.

ACTION: Kristian Møller from Denmark will fund the fact sheet and lead the activity, coordinating with other countries, to draft a one-page fact sheet that will be ready by the Aug 2015 UN-GGIM meeting.

DECISION: The Arctic SDI Board has reviewed and discussed the Arctic SDI Technical and General Use presentation slides and approves their continued use until such time as they are (professionally reviewed and or created).

ACTION: Lorna Schmid from the US will take the lead to edit and modify the existing presentation materials to provide a lay audience presentation by the Aug 2015 UN-GGIM meeting.

ACTION: Presentations need to be updated to highlight the maturing of the Arctic SDI by including information on the approval of the suite of strategic and governance documents.

ACTION: Presentations need to be updated to highlight the difference between GIS mapping tools and an SDI Geoportal as described in Section 4 above.

ACTION: Presentations need to be updated to highlight elements of the Strategic documents described in Section 4.

7.4. Calendar of Events. Lead: Secretariat

The Chair stated that the Arctic SDI Calendar should reflect meetings where presentations about Arctic SDI are provided and the Board members, or Working Group Leads will inform the Secretariat of presentations to ensure that the Calendar of Events is kept up-to-date using the documented procedure from the Governance Document.

DECISION: The Arctic SDI Board has reviewed and approved the Arctic SDI Calendar of Events.

ACTION: The Calendar of Events will be updated to reflect attendance by all Nations at the UN-GGIM meeting in Aug 2015 as discussed in Section 6.2 of these Minutes.

7.5. Glossary of Terms. Lead: Strategy Working Group

The Chair stated that the National Contact Points, Strategy Working Group and Working Group leads requested a Board decision regarding which working group should be responsible for the Glossary of Terms.

There was consensus by the Board that there is a need to understand terms and allow for a consistent use across documents. Users can be providers of data and they can be users of the data. Future agenda items rely on the consistent use of terms. Often the reason that it takes a long time for the Arctic SDI to move forward is because of different understandings of the same terms

ACTION: The Arctic SDI Board has identified the Strategy Working Group as the lead for development and management of the Arctic SDI Glossary of Terms.

7.6. Confirmation of next Board Meeting: 14 – 16 June 2016

DECISION: The Board confirmed the dates for the next Board meeting in June 2016, which will occur in Anchorage, Alaska. The Chair described some of the options for field trips during the visit.

DECISION: The US will arrange talks about the mapping program in Alaska and key challenges that the US is dealing with in the Alaska region.

ACTION: The Chair stated that the US would take the lead to reserve a block of rooms for the Board Members and work to make arrangements for a field trip. Also, provide a list of options for additional excursions before or after the Board Meeting.

8. **Relevant Arctic Council Ministerial Meeting Topics and Discussion of Pan-Arctic DEM**
    The Chair covered a quick set of highlights from the Ninth Arctic Council Ministerial Meeting in Iqaluit, Nunavut, Canada from April 24-25, 2015 including excerpts from *US Secretary of State Kerry's Intervention Comments, Iqaluit Declaration 2015* and *the Senior Arctic Officials' Report to Ministers*.

    The Chair then introduced the topic of the Pan-Arctic DEM for the Board's consideration. Following are highlights from the Board's discussion:
    * This is a big opportunity for the Arctic SDI.
    * Need an inventory of available data across the participant countries.
    * Perhaps a DEM "hack-a-thon"
    * Will need to identify what resolution would be required to accomplish, or derive benefit. Cost benefits will need to be considered.
    * A Workshop could result in having a series of options including costs, resources, and documentation of why having a Pan-Arctic DEM is so important
    * Workshop needs to be populated by Elevation experts within the mapping organizations.
    * Bring the data to the table

    DECISION: US will take the lead on working with National Contact Points (NCP), Secretariat and technical experts to work together to coordinate within the organizations to

document a path forward [for the Pan-Arctic DEM] and return recommendations to the Board.

ACTION: The US Chair has identified Tracy Fuller as the Pan-Arctic DEM project lead for the USGS. Tracy will discuss Pan-Arctic DEM paths forward and Arctic SDI potential role with the CAFF Executive Secretary, Arctic SDI NCPs, Secretariat and other identified experts. Tracy will lead the effort to document options for the discussed workshop and other identified outcomes and return recommendations to the Board for consideration in eight weeks, or by August 1.

9.   Break

10. Demonstration highlighting Arctic SDI current state and future possibilities:
Web Services and possible OGC Pilot Project in support of the Arctic SDI Strategic Plan

The Chair invited Lorna Schmid, US NCP, to provide a presentation on behalf of the Canadian Natural Resources Canada and USGS team members who have been working on the requirements for an Arctic SDI OGC Interoperability Pilot Project as part of Objective 4 Activity 4.5.

The presentation highlighted that the OGC Interoperability Pilot is meant to highlight and expand the diversity of data, services and applications. The pilot is being approached in two phases, the output of phase one will inform phase two.
- Phase One will include an inventory of available data from across the Arctic which can be used to reflect a broad range of geospatial services, development of a Use Case, or Scenario, that will use identified data and services to tell the story, or address the issue(s), and identification of gaps in data or services and an OGC RFI to identify sources of data and participants.
- Phase Two will, *among other things*, demonstrate the usefulness of the new standards and produce a recommended high level architecture along with a video which tells the story of the Scenario, and showcase incorporation of the services into Arctic SDI Web Portal and other Mapping Tools (e.g. QGIS).

Board discussion points included:
- Ensuring that the OGC Interoperability pilot incorporates the premise of Open Data.
- A discussion of ISO vs. OGC standards and ensuring that feedback from the Technical Working Group is obtained.

ACTION: A one-pager will be generated covering the OGC Interoperability Pilot and a meeting will be set up with the CA-US team leading Objective 4: Activity 4.5 and the Technical Working Group who has the lead for Objective 4.

11. Strategic follow-up discussion. What do we need to accomplish between now and the next Board Meeting?

The Arctic SDI Board represents a unique group with the heads of the participating mapping agencies getting together and having strategic discussions of this magnitude.

Having the Russian Director General attend the meeting highlights the importance of the work on which this Arctic SDI Board is focusing.

There was significant discussion by the Board Members regarding how to prioritize the work of the Arctic SDI, especially with regard to addressing the needs of stakeholders and taking on a more external focus. A common understanding of priorities will:

- Allow Working Groups to optimize activity plans associated with the Strategic Plan, especially Objective 1, and
- Ensure that we can give stakeholders/Arctic Council what they ask for and meet their needs and ensure an appropriately narrow scope.

Additional discussion points on strategic priorities with regard to users and stakeholders included:

- Conducting a needs analysis to include user needs and requirements also needs to include their potential contributions
- Looking at the idea of scope with regard to the flowchart in the Strategic Roadmap: As the information is collected from the users/stakeholders/data providers: Is there a confirmation from the Board on how we prioritize our focus?
- Anne Cathrine Frøstrup stated that the Arctic SDI was formed initially to support the Arctic Council Working Group needs. We need to focus on their needs.
  - o Liaison work with the Arctic Council is the most important; they are the biggest benefactors for the work of our groups. Academia is also important, but not the most important.
- Kristian Møller agreed, although he stated that it is not just about the Arctic Council, it is slightly more
- Natalia stated that Russia needs to involve other agencies of their governments, so they need to be in one of the categories of users that we look to. Bringing in other players will help the Arctic SDI
- Prashant Shukle agreed with Kristian Møller: Hit the nail on the head. We have engaged with parts of the Arctic Council, and the "gifts have been taken," but we have not yet made a significant enough impact on the Arctic Council. Need to broaden the discussion with the Arctic Council. Proposing the Pan-Arctic DEM will get the Arctic Council to stand up and take notice; if we broaden our discussions with others it will help us succeed.
- Kristian Møller described an example of why the continued dialog is important: the Nautical SDI in Denmark: It took years for people to understand the value of this SDI and get people to want to participate.
- Policy makers, Ambassadors, others need to understand the power of authoritative data.

- Kevin Gallagher wants to reserve the right to call a Board Meeting to discuss prioritizing the activities of Objective 1.
  - o Providing information up-front about some generalized priorities from the Board will assist with the stacking of activities.

ACTION: The Board stated there was a need to further discuss the priorities for Objective 1 and how the Board will influence those activities.

DECISION: The Chair reserves the right to call a Board Meeting to discuss the priorities of Objective 1.

DECISION: Nordic countries have an interest in identifying links between Arctic SDI and the European Location Framework Project (ELF). Before next meeting the Board will discuss the Geographic Information Technology within the Barents Region (GIT Barents) and how the results of this project may be moved into the Arctic SDI. For information see: http://nativemaps.org/node/2872

ACTION: The Secretariat will communicate with Arvo Kokkonen to evaluate a process for including the GIT-Barents project data into ASDI. The Nordic members of the Technical Working Group will evaluate the linkages between ASDI and ELF.

Creating an Inventory of Projects & Mapping Activities
An inventory of mapping activities across the Arctic countries was discussed: An inventory of ongoing projects within each country with descriptions that would identify domestic mapping priorities, and how they can intersect with what might done with the Arctic SDI.

DECISION: The National Contact Points will take up the issue of documenting a high level inventory of mapping priorities and projects which may intersect with Arctic SDI and make their recommendations to the Board.

ACTION: The inventory should be developed according to the Governance, ensuring that the National Contact Points will coordinate across Arctic SDI Working Groups and their mapping institutions to develop project descriptions that can be used to inform the work of the Arctic SDI Working Groups.

12. Any Other Business?

13. Closing and Adjourn the Meeting

The Chair thanked Kristian Møller for his very thoughtful choice of venue and obtaining a wonderful place to host a meeting. Thanks to Prashant Shukle and Cameron Wilson for all the

transitional assistance in coming up to speed. Thanks to Lorna for the work to get us off the ground.

APPENDIX 1 for Agenda Item 7:
Decisions and Actions Not Associated with Arctic SDI Documentation

Decision or Action	Reykjavik Minutes Section	Status
The Secretariat will ensure that the June Board Meeting will cover the topic of what constitutes a quorum for the Board.	1	COMPLETE: June 4, 2015 Arctic SDI Board Meeting. Governance Document was approved and Section 4.1.a. includes details on quorum based on Arctic Council procedures.
Feb 2014 Reston Action Item 7: Russia to resolve legal issues with intention of providing Russian data to the Arctic SDI Web Map Service. **Reykjavik Meeting Update:** Russia stated that there are still some details they are working through with regard to data sharing and they expect everything to be solved in 2015, hopefully in the spring.	4.g.	COMPLETE: June 4, 2015 Arctic SDI Board Meeting. See notes on follow-up discussion and detailed status in Meeting Minutes Section 6.1 above. Legal issues have been resolved and Russia is currently working on Shoreline boundaries and islands, topographic maps. This information can be made available via the Arctic SDI and the Technical WG is working to incorporate that data.
The Board discussed the UN-GGIM meeting in NYC in August [2015] and that most Board Members will be there, so perhaps there will be a dinner meeting of the Board Members.	8	COMPLETE: June 4, 2015 Arctic SDI Board Meeting. See notes with follow-up actions and decisions in Meeting Minutes Section 6.2 above.
Board will decide when the proposed 2016 Board Meeting will occur: First choice is June 14-16, 2016 (TBD)	8	COMPLETE prior to June 4, 2015.
Distribution of the Signed MOUs to signatories who were not present: Magnús Guðmundsson, Iceland will mail the copy to Andrey Mukhin, Russia. Lorna Schmid, USA, will mail the copy to Prashant Shunkle, Canada. Kristian Møller, Denmark took the copy for Greenland	4.a.	COMPLETE prior to June 4, 2015.
Canada and US Board Members need to check their calendars. Magnús Guðmundsson will check the dates. First choice is June 4, 2015. Second choice is June 25, 2015	8	COMPLETE prior to June 4, 2015.

Appendix 2:
Decisions and Actions from the June 2015 Arctic SDI Copenhagen Board Meeting

There is an excel spreadsheet for managing the status of the actions and decisions below which were taken directly from these minutes. For details please read the identified sections of the Minutes.

Note: Content in the status column is not final, but reflects updates after the Board Meeting.

Decision	Action	Minutes Section	Document or Topic	Lead	Status
Decision: Move Agenda Item 6: Relevant Arctic Council Ministerial Meeting Topics and Discussion of Pan-Arctic DEM to Agenda Item 10. This places all Agenda items related to the Reykjavik Board meeting and Arctic SDI documentation first to be followed by the Arctic SDI Board Strategic Discussions.		2.3			Comlete
Decision: Chair stated that Lorna Schmid, USA will serve as Secretary for the meeting. It was approved.		2.3			Complete
Decision: The Arctic SDI Board has reviewed and discussed the Arctic SDI Strategic Plan 2015 – 2020, Implementation Plan and Roadmap along with the definitions for thematic and reference data and has approved the documents.		4.1	Strategic Documents		Complete
Decision: The Board requests the proposed Arctic SDI Vision and Mission statements are modified taking into account the discussion points found above.		4.1	Vision and Mission	Strategy WG	
	Action: Changes to the Vision and Mission will be drafted by the Strategy Working group over the 4-5 weeks after finalization of the Board Meeting Minutes and forwarded to the Board for final decision.	4.1	Vision and Mission	Strategy WG	
	Action: The Board requests that these documents [updated Strategy documents] then be published on the Arctic SDI website by the Communication Working Group for citation to stakeholders and the public.	4.1	Strategic Documents	Communication WG	
Decision: The Communication Working Group will also capture strategic information for use in presentation materials (See Section 7.3).		4.1	Communication Materials	Communication WG	
Decision: The Board agreed that the Arctic SDI documentation will change over time as the Working Groups move forward. The Board will approve changes using the email process from the Governance Document as we move forward.		4.1	Arctic SDI Documentation		
	Action: Following the development and approval of the Glossary of Terms (See Section 7.5) the Strategy Working Group will go through the Strategy documents for consistent use of terms.	4.1	Glossary of Terms	Strategy WG	
	Action: US Secretariat will coordinate the dinner and meeting. Wed or Thurs would be the best day. Look for an hour, perhaps 8:30 a – 10a meeting, and perhaps dinner or drinks. Another option was finding a slot later in the day for a meeting and going straight to dinner.	6.2	UN-GGIM Meeting	Lead Secretariat	Complete
	Action: Kevin will follow up with the US representative to the UN-GGIM to identify options for a briefing or update regarding Arctic SDI accomplishments at the UN-GGIM meeting.	6.2	Un-GGIM	US	
Decision: Cover pages for of all documents will be the same. The Board would like a consistent look and feel for all documents.		7	Arctic SDI Documentation		
	Action: Any presentation, or document, where there are flags used needs to have the Kingdom of Denmark representation updated (Greenland and the Faroe Island flags are not customarily used).	7	Arctic SDI Documentation		
Decision: The Decision from Section 4, which states all Arctic SDI documents are subject to change, also applies to the documents covered under this Section 7.		7	Arctic SDI Documentation		
Decision: The Arctic SDI Board has reviewed and approved the Arctic SDI Governance Document. No requests for change were made on this document and it can be designated final.		7.1	Governance Document		
	Action: The Governance Document tables need to be updated to reflect that Norway's Strategy WG and National Contact Point will be Kare Kyrkjeeide and they are looking to identify the person for Communications WG.	7.1	Governance Document		
Decision: Since Norway's member for the Communications Working Group will be new they should not be the lead. (See Section 7.3.)		7.1	Governance Document		

Decision	Actions	#	Topic	Lead	Notes
Decision: The Arctic SDI Board has reviewed and approved the Arctic SDI Framework Document and this document will not be updated. As the Working Groups move forward to develop and enhance the Arctic SDI the content of this document may be used to document and inform data providers, users and stakeholders about the Arctic SDI infrastructure.	**Actions:** The following requests for change were made for this document in order to finalize: -- The consistent cover from the Governance and Strategy documents will be applied to this document. -- The Document History/Version Control section will be modified as presented to the Board.	7.2	Framework Document	NO-SE-US	
Decision: Norway will no longer be lead of Communication WG.	**Action:** The Board will discuss who will lead the Communication WG.	7.3	Communication WG	Secretariat WG	Board decided to take this item up via email.
Decision: Canada, Denmark, Finland, Norway, Russia, Sweden and the US will share the costs of building a movie and fact sheet modeled after those created by UN-GGIM (up to USD 2500 per member). (See links in Board Minutes)		7.3	Communication Materials	US	
	Action: Prashant Shukle from Canada will lead the activity and coordinate with other countries to have a Draft movie ready by the Aug 2015 UN-GGIM meeting.	7.3	Communication Materials	CA	
	Action: Kristian Møller from Denmark will fund the fact sheet and lead the activity, coordinating with other countries, to draft a one-page fact sheet that will be ready by the Aug 2015 UN-GGIM meeting.	7.3	Communication Materials	DK	
Decision: The Arctic SDI Board has reviewed and discussed the Arctic SDI Technical and General Use presentation slides and approves their continued use until such time as they are (professionally reviewed and or created).		7.3	Communication Materials	Communication WG	
	Action: Lorna Schmid from the US will take the lead to edit and modify the existing presentation materials to provide a lay audience presentation by the Aug 2015 UN-GGIM meeting.	7.3	Communication Materials	US	The presentations were discussed at the June UN-GGIM Board meeting. Lorna Schmid will coordinate presentation updates with the NCPs.
	Action: Presentations need to be updated to highlight the maturing of the Arctic SDI by including information on the approval of the suite of strategic and governance documents.	7.3	Communication Materials	US	
	Action: Presentations need to be updated to highlight the difference between GIS mapping tools and an SDI Geoportal as described in Section 4 above.	7.3	Communication Materials	US	
	Action: Presentations need to be updated to highlight elements of the Strategic documents described in Section 4.	7.3	Communication Materials	US	
Decision: The Arctic SDI Board has reviewed and approved the Arctic SDI Calendar of Events.	**Action:** The Calendar of Events will be updated to reflect attendance by all Nations at the UN-GGIM meeting in Aug 2015 as discussed in Section 6.2 of these Minutes.	7.4	Calendar of Events	Secretariat WG	
	Action: The Arctic SDI Board has identified the Strategy Working Group as the lead for development and management of the Arctic SDI Glossary of Terms.	7.5	Glossary of Terms	Strategy WG	
Decision: The Board confirmed the dates for the next Board meeting in June 2016, which will occur in Anchorage, Alaska. The Chair described some of the options for field trips during the visit.		7.6	June 2016 Anchhorage Meeting	US	
Decision: The US will arrange talks about the mapping program in Alaska and key challenges that the US is dealing with in the Alaska region.	**Action:** The Chair stated that the US would take the lead to reserve a block of rooms for the Board Members and work to make arrangements for a field trip. Also, provide a list of options for additional excursions before or after the Board Meeting.	7.6	June 2016 Anchhorage Meeting	US	
Decision: US will take the lead on working with National Contact Points (NCP), Secretariat and technical experts to work together to coordinate within the organizations to document a path forward [for the Pan-Arctic DEM] and return recommendations to the Board.	**Action:** The US Chair has identified Tracy Fuller as the Pan-Arctic DEM project lead for the USGS. Tracy will discuss Pan-Arctic DEM paths forward and Arctic SDI potential role with the CAFF Executive Secretary, Arctic SDI NCPs, Secretariat and other identified experts. Tracy will lead the effort to document options for the discussed workshop and other identified outcomes and return recommendations to the Board for consideration in eight weeks, or by August 1.	8	Pan-Arctic DEM	US (Tracy Fuller)	

Decision	Action	#	Topic	Lead	Notes
	Action: A one-pager will be generated covering the OGC Interoperability Pilot and a meeting will be set up with the CA-US team leading Objective 4: Activity 4.5 and the Technical Working Group who has the lead for Objective 4.	10	OGC Interoperability Pilot	Technical WG (CA-US)	There was a discussion of the OGC pilot at the Technical Working Group meeting on June 15, 2015. From the TWG Meeting Minutes: "The goal of this pilot is to demonstrate the diversity, richness and value of Spatial Data Infrastructure (SDI) web services to Arctic SDI stakeholders."
Decision: The Chair reserves the right to call a Board Meeting to discuss the priorities of Objective 1.	**Action:** The Board stated there was a need to further discuss the priorities for Objective 1 and how the Board will influence those activities.	11	Strategic Follow-Up	US	
Decision: Nordic countries have an interest in identifying links between Arctic SDI and the European Location Framework Project (ELF). Before next meeting the Board will discuss the Geographic Information Technology within the Barents Region (GIT Barents) and how the results of this project may be moved into the Arctic SDI.	**Action:** The Secretariat will communicate with Arvo Kokkonen to evaluate a process for including the GIT-Barents project data into ASDI. The Nordic members of the Technical Working Group will evaluate the linkages between ASDI and ELF	11	Strategic Follow-Up	Secretariat WG	For information see: http://nativemaps.org/node/2872
Decision: The National Contact Points will take up the issue of documenting a high level inventory of mapping priorities and projects which may intersect with Arctic SDI and make their recommendations to the Board.	**Action:** The inventory should be developed according to the Governance, ensuring that the National Contact Points will coordinate across Arctic SDI Working Groups and their mapping institutions to develop project descriptions that can be used to inform the work of the Arctic SDI Working Groups	11	Strategic Follow-Up	NCPs	