



**SAON Board meeting 3rd December 2018
Teleconference 16-17 (CET) /10-11 AM (EST)
Minutes**

1. Introductions and adoption of agenda

Thorsteinn Gunnarsson (Chair) welcomed the participants and thanked Craig Larlee (Group on Earth Observations, GEO) for attending. The agenda was adopted (Appendix 1). The list of participants is found in Appendix 2, the list of documents is found in Appendix 3, and the list of actions is found in Appendix 4.

2. An Overview of GEO and its Capabilities

Graig Larlee presented an overview of GEO. GEO's mandate comes from periodic Ministerial meetings, and GEO acts by advocating the importance of Earth observations, engaging stakeholders, and delivering data, information and knowledge to improve decision making. Participating Organizations (like SAON) bring their own mandate and expertise, and may be able to collaborate with others and may be tapping into existing expertise.

The GEO Work Programme is done by volunteers and is the compilation of all collaborative activities undertaken by GEO Members and Participating Organizations within the GEO framework. The collaborative activities that make up the GEO Work Programme are classified into 5 types that reflect different roles and different stages of maturity: *GEO Community Activities*, *GEO Initiatives*, *GEO Flagships*, *Regional GEOs*, and *Foundational Tasks*. The three first are of most relevance to SAON. *GEO Initiatives* are the core type and the definition is that they develop and implement pilot/prototype services according to GEO priorities and have identified committed resources to a certain extent. *Regional GEOs* are caucus-chartered and is a new category that has grown out of *GEO Initiatives*. They are scaling from global to regional and have a coordinating and outreach role (symposia, daily communication, resource mobilization, and user engagement). An example is HimalayaGEOSS.

GEO is connecting to the work of other global initiatives, like the UN's SDG. The role of an ArcticGEOSS should be seen as establishing a connection to the Arctic Council.

In the following discussion, Sandy Starkweather (USA) wanted to know about *GEO Initiatives* and *Flagships* that had been successful and what could be learned from these. Where had the resources come from?

Craig Larlee made reference to *GEO Global Agricultural Monitoring (GEOGLAM)* for three reasons: 1) the political mandate was important; 2) the organization was able to produce products for economists - it was a key product that could address a particular problem; and 3) the product was developed in communication

with the users. Resources had been in-kind and from a variety of agencies, but also universities. It was critical that these came from many sources, and it was also critical that reports were developed on a consensus basis.

Barbara Ryan (Former GEO Secretariat Director, invited expert) added that these resources are in-kind from the GEO perspective, but 'real on the ground' in the sense that they are generated and spent within the countries because of the political attention. She saw GEO's role in a coordinated international effort as generating governments interest and governments support to GEO structures.

Yana Gevorgyan (USA) added about GEOGLAM that the provision of early-warning reports in developing countries had leveraged national resources into operational budgets. On the policy mandate, she noted that the attractiveness of SAON to GEO is that SAON has the political mandate from the Arctic Council, and overall, GEO perceives this as sufficient. Recently, however, it has been discussed if a mandate should be to GEO itself, and in this case, it would be insufficient.

Craig Larlee believed, however, that this aspect should not be overplayed. He believed that GEO would be happy to welcome SAON and the work on ArcticGEOSS. The advantage of a policy mandate, whatever form it takes, is that it helps to focus efforts that are most directed towards making an impact on decision-makers.

3. SAON and GEO/GEOSS

3a What are the potential benefits of SAON's engagement with GEO?

In answering this question, Craig Larlee believed that GEO provide a framework in which collaboration could occur. Associated initiatives obtain insight from other members of the community and connect to experts in other organizations. This includes hearing about best practice and providing opportunities to reach out to a broad political forum, including national governments. GEO offers basic support within basic technology, especially GEO's System of Systems (GEOSS). The GEO Secretariat offers help in communicating the initiative's messages back to their own community.

Mikko Strahlendorff (Finland) added that SAON has a similar model on how to organize its planned activities, including the dependency on in-kind contributions. SAON activities come from the bottom and are not top-down steered, and he believed that GEO could serve as a model in this respect. As a practical example he mentioned that the recent ADC workshop had worked with data architecture, and the agreement was that such structures should not only be developed from an Arctic or polar perspective, but from a global perspective. But it was also agreed that global action get more drive when they have a particular goal. It would be at that level that GEO and SAON could benefit from each other. From the GEO perspective, there are good and active Arctic members, and there are from both sides good potentials.

Yana Gevorgyan (USA) noted that an initiative should have a focus area and she believed that SAON should look at GEO from the perspective of what GEO is not currently getting done as effectively with the current institutional infrastructure and partners. Which are the areas where GEO needs additional support, engagement or diversity, like observation gaps that need leveraging non-traditional partners? Or is it for instance an area of application? A *GEO Initiative* should define what communities the initiative wants to

serve, and engagement with these should have been initiated from a perspective of co-design and co-production. Where are the needs for SAON that are not currently being met with the resources in place? She noted that the question about data management and data repositories were being taken care of within the Arctic Data Committee.

Peter Pulsifer (ADC chair) made reference to a presentation by Google at the recent ADC workshop. Google has released a data search facility and the workshop agreed that it will be quite transformative. But he still believed that GEO and SAON would serve a role as 'knowledge hubs' or in defining particular applications; since such institutions would have much more 'on the ground knowledge'. In keeping with GEO's emerging priorities, our community (researchers, operations etc.) needs to help tune these efforts (e.g. developing vocabularies etc.). Additionally, developing specific information and knowledge products requires domain expertise and may be the most productive point of collaboration for SAON and GEO. We are already making good progress through our collaboration with GEOCRI, for example.

3b Are there current SAON efforts (e.g. as Participating Organisation or Community Activity; GEOCRI) that could immediately benefit? Longer term efforts?

Mikko Strahlendorff pointed out that as an example of a gap, there is a wish to do better numerical weather predictions (NWP) for the Arctic, but that the observations for this are insufficient. He saw a need for building a broader base of support for sustaining observations within this area and believed that GEO/SAON collaboration could serve this purpose.

Rodica Nitu (WMO) agreed that there is a need for additional meteorological observations in the Arctic, and hoped that an extended cooperation could result in sustainable and consistent observations.

Sandy Starkweather summarised the discussion, noting the point that GEO engagement is mobilising investments in more observations. GEO also mobilises focus in a situation where there are multiple political drivers within a region. She noted the discussion about NWP, but also saw the agreement on the central Arctic ocean fisheries as an area that could require coordinated observing. She asked if topics like these would help SAON to partner well with GEO?

Mikko Strahlendorff responded that the Finland Arctic Council chairmanship has worked towards meteorological cooperation and as a response, WMO now has more Arctic actions, and highlighted the Year of Polar Prediction (YOPP).

Rodica Nitu added that what is special for NWP is that it requires data in real time and that imposes a much stricter framework for data access and data exchange and is consequently within the framework of operational programmes; these are the place to address these questions. But there is a need for better observations. The best contribution that SAON and GEO could have would be to facilitate to strengthen the role of weather services.

Mikko Strahlendorff pointed out as an example that AWI in Germany has capacity that would be interesting in a NWP picture but this would mean data have to be made available in near real-time, but traditionally research organizations have not had this requirement. His point was that combining resources from different communities to tackle joint issues would be in line with GEO goals.

Sandy Starkweather asked if in order to engage in something like ArcticGEOSS, should something like NWP be further developed within SAON, and how should it be ensured that this was not pursued in other contexts?

Craig Larlee wanted to know more about the relationship with GEOCRI, and wanted to understand this in the context of the discussion on the area of focus. He believed that the ArcticGEOSS proposal seems very similar to the SAON strategy and activities. An area where GEO can benefit organisations would be by creating an environment where organisations can work together toward common goals. Would SAON be facing challenges that others would also be interesting in working towards? If yes, could the initiative be framed around that? Are there specific parts of the SAON work programme that could benefit from collaboration? The next step would be that since SAON already partnering with GEOCRI, which aspects are being addressed through that mechanism versus ones that cannot be addressed through GEOCRI?

In his response, Mikko mentioned as an example the Arctic Council Working Group on marine safety *Emergency Prevention, Preparedness and Response* (EPPR). He believed that this was an area where SAON should have focus on co-design and reaching out to end-users. He did not believe that GEOCRI would cover an oil disaster prevention discussion.

Hannele Savela (CON chair) described hers and Peter Pulsifer's engagement in GEOCRI and mentioned specifically engagement in the Community Portal development and the polar data planning effort. She saw these areas as well aligned with current SAON activities. She believed that the discussion about ArcticGEOSS should be boiled down to defining the information services and products that it would be aiming towards. She agreed that the areas proposed earlier on NWP, Arctic fisheries and Arctic safety were areas where there currently are gaps in observations and knowledge and where an ArcticGEOSS could play a role in creating services and products.

Jan Rene Larsen (SAON Secretary) mentioned that certain SAON services already exists, like the Community Based Monitoring Atlas and that SAON is developing an inventory of existing observational capacity. He also mentioned that Societal Benefit Area Framework and noted that it would make a difference if SAON should develop new services or should seek to develop existing.

Yana Gevorgyan asked if indigenous community requirements were translated into requirement drivers for SAON's mandate and if there were areas that are emerging as the near-term opportunities.

Jan Rene Larsen responded that the Permanent Participants (indigenous organisations) to the Arctic Council are a part of SAON as members of the Board and Executive. The SAON mission, vision and goals are formulated in order to meet the interests of indigenous people and to utilise traditional and local knowledge. This includes in the ethical management of data.

Hajo Eicken (USA) believed the indigenous peoples and Permanent Participants engagement would greatly benefit from a more focussed effort that addresses some of their primary concerns. A concern that has been voices clearly is the issue of food security. One way of linking SAON and GEO/GEOSS would be to identify a question that is of high concern to indigenous people in the Arctic and develop a joint effort around this; this would bring some clarity to how the two initiatives could collaborate. In dialogue with indigenous people he had noted that while something like the central Arctic Ocean fisheries agreement is far away from indigenous people's concern, it could still be related to fisheries that occur in the coastal

zone. Would there be something that could be done that focuses on Arctic changes as pertaining to fisheries that are both important at the community level and are commercially relevant?

Adam Houben (Canada) added that , Polar Knowledge Canada recently conducted a broad engagement phase with northern and Indigenous groups in Canada's Arctic and the primary concern, amongst many, was traditional food access (caribou, marine mammals, fish, etc.) in both a food security and cultural context. But as important, was the two-way sharing of scientific and Indigenous knowledge in building northern capacity. So how does SAON help build that capacity in a relevant manner, if and where possible?

Peter Pulsifer added that that indigenous organizations had been actively engaging in the planning of recent data meetings. Funds have been developed that will be used by a number of Permanent Participants and related organizations to move forward on a complementary and converging processes that build on work already done in relation to data.

Thorsteinn Gunnarsson concluded that opportunities had been identified that could be of mutual benefit.

3c What are the commitments from SAON or GEO towards this engagement?

Craig Larlee outlined the process for the next GEO Work Programme, noting that ArcticGEOSS is currently a *GEO Community Activity*, which is a place for thinking about focus, framing, and testing out ideas in a relatively low-risk environment. There are few commitments to GEO and it is a good initial stage. For the 2020-2022 period, GEO is in the process of launching the process for developing the work programme. If there is an interest in migrating to a *GEO Initiative*, there will be a call for an implementation plan, and a revised implementation plan could describe engagement and collaboration with indigenous people; this would have a wider resonance within GEO.

Yana Gevorgyan informed that there is a ministerial summit in 2019 and believed that it would offer an opportunity to highlight those initiatives that require more support. She believed it would be worthwhile to consider how cold regions in general could be on the agenda

Mikko Strahlendorff believed that a topic for the ministerial could be that the need for a fully encompassing global observing system around the world is pressing when global and climate change issues is dominant everywhere.

3d What is the appropriate level of engagement of SAON with GEO now and in the future?

Mikko Strahlendorff believed that more engagement would benefit SAON as well as GEO and that that should happen through an ArcticGEOSS as a *GEO Initiative*.

Jan Rene Larsen believed that the convening power of GEO and the opportunity to raise the profile of SAON should be the focus of engagement.

Craig Larlee believed that the discussion had pointed to some areas for follow-up. He encouraged SAON to look at this aspect of thinking beyond SAON's own organisation, including what are the connections to other organisations that may be already working in GEO and look for communalities. The benefit of GEO would come from the collaboration with other organisations, trying to find aspects of SAON's mandate where GEO partners would like to work on these particular aspects.

Yana Gevorgyan believed that it would be important to continue the dialogue and define a focus area, and if this could be multi-purpose in its downstream use, that would be an even bigger value-added.

Thorsteinn Gunnarsson concluded that important focus areas had been identified like NWP, Arctic fisheries, marine safety, food security, connecting to indigenous people. These are huge tasks, but important.

4. Recommendations for the response to the review

Jan Rene Larsen explained that the application as a *GEO Initiative* had been submitted in summer 2018, and that the GEO Programme Board review had been received in September with additional information in October. The advice given in the review was to provide responses to the questions raised for the next meeting in the Programme Board in February with a deadline in January.

Mikko Strahlendorff believed that answers should be given to the questions raised by the Programme Board. He believed that the recent meeting in Geneva added a component to the picture, noting that both GEO and SAON are at the same evolution path when it comes to the discussion about data system architecture.

Craig Larlee added that SAON should probably have less focus on the application and the process with the Programme Board, since ArcticGEOSS is already in the GEO work programme. He believed that it would be useful to continue the dialogue with the Programme Board so that they have a clear understanding of what SAON is proposing. SAON has been a valued member of the GEO community. The next step should be to continue to define what ArcticGEOSS is really proposing in terms of services offered to users, who are those users, what data are required to support those services. As a *GEO Community Activity*, SAON has got the space to go through that, since there is no rush.

He saw the questions raised by the Programme Board as outstanding and it would be useful to provide answers. He believed that the discussion with the SAON Board had raised some fundamental issues of what the focus of this initiative would be.

Yana Gevorgyan: It would be useful, rather than answering to the specific questions to send a communication to the Programme Board that SAON leveraging the opportunity that the status as a *GEO Community Activity* provides and think through some of the fundamental topics. She also offered as a member of the Programme Board to be a spokesperson for the conversation in the Programme Board.

In a response to the earlier proposal from Mikko Strahlendorff that the message to the ministerial meeting should be that the need is for a global observing system, Yana Gevorgyan would worry that such a message would be too broad. Within the area of meteorological services, she wanted the role of WMO to be recognized but also think beyond what can be done through GEO; this could have focus on under-observed areas and trying to develop partnership with for instance the commercial sector. She proposed a 'light' response to the Programme Board that would say 'we are looking into it'.

Barbara Ryan noted that she was aware of a call on the European side on Arctic issues. In a response to such a call it could be an issue if the status as a *GEO Community Activity* would be sufficient.

Mikko Strahlendorff confirmed that there is a specific call coming up on GEOSS actions in the Arctic under EU's H2020 and he did not believe that it would be difficult to provide answers to the questions raised by the Programme Board.

Thorsteinn Gunnarsson expressed his thanks to Craig Larlee and Yana Gevorgyan for their contribution. He believed that there had been a useful exchange of views and that the discussion will continue.

5. Any other business

There were none.

6. Next telephone conference

The next teleconference is 9th January 16 CET / 10 am EST.

Appendix 1: Agenda

1. Introductions and adoption of agenda (5 min)
[Thorsteinn Gunnarsson]
2. An Overview of GEO and its Capabilities [*Craig Larlee*] (10 min)
Read aheads:
 - a. [GEO Strategic Plan 2016-2025](#) [*GEO's what and why. Mission and vision. Not very long*]
 - b. [Ministerial Declaration: Mexico City 2015](#) [*Shows the political level at which GEO is engaged*]
 - c. [GEO Highlights 2017-2018](#) [*What is GEO? What has GEO been doing?*]
3. SAON and GEO/GEOSS (70 min)
[Dialog or 'virtual panel' co-led by GEO-representatives (Craig Larlee and Yana Gevorgyan) and Board Member (Mikko Strahlendorff and Jan Rene Larsen) with Q&A by the Board. Tour de table]
 - a. What are the potential benefits of SAON's engagement with GEO?
 - b. Are there current SAON efforts (e.g. as Participating Organisation or Community Activity; GEOCRI) that could immediately benefit? Longer term efforts?
 - c. What are the commitments from SAON or GEO towards this engagement?
 - d. What is the appropriate level of engagement of SAON with GEO now and in the future?
4. Recommendations for the response to the review (Reads: *GEO Program Board review of ArcticGEOSS*) (30 min)
5. Any other business (5 min)
6. Next telephone conference: 12th December 16 CET / 10 AM EST? Alternatively 9th January 16 CET / 10 AM EST

Appendix 2: List of Participants

Affiliation	Name	Institution name	Mailing address	Phone	e-mail
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	Barbara Ryan	Former GEO Secretariat Director, invited expert			

Appendix 3: List of meeting documents

Agenda item	Document Title	Document author
0	GoToMeeting dial-in	Secretariat
0	Draft agenda. Version 2nd December	Secretariat
2	GEO Strategic Plan 2016-2025	GEO
	Ministerial Declaration: Mexico City 2015	GEO
	GEO Highlights 2017-2018	GEO
	Overview of the Group on Earth Observations (Presentation)	Craig Larlee
	Role of Regional GEOs	GEO
	Aligning Arctic regional observing and global programs (Presentation from ASM2)	Doug Cripe
3	Text on relation between SAON and GEO	Jan Rene Larsen and Barbara Ryan
4	GEO Program Board review of ArcticGEOSS (from 17th September 2018)	GEO
	GEO Program Board review of ArcticGEOSS: Additional information (from 3rd October 2018)	GEO
	Draft response to GEO Program Board. Version 16th November	Secretariat

<https://www.arcticobserving.org/governance/board/board-meetings/12-board-meetings/336-meeting-documents-for-board-meeting-teleconference-3rd-december-2018>

Appendix 4: Actions

	Agenda item	Action	Who	When
1	4	Draft a response to the GEO review	SAON Executive	1st January