

**FARO Annual Meeting 2018**

**ASSW, Davos, Switzerland**

**18 June 2018, 9:00-17:00**

**Venue: Congress Centre Davos, Room: A Flüela**

**Minutes**

1. **Opening and reporting Session (James Drummond, FARO Chair)**
* James Drummond (FARO Chair) welcomed participant to the 20th annual meeting of FARO.
* Minutes of the FARO annual Meeting 2017 were approved (Czech Republic 2017).
* James Drummond presented the agenda, with more focus on topical discussions, country slides of past, present and future infrastructure to celebrate 20 years anniversary of FARO, election of a new Chair for FARO and two new FARO ExCom members. The agenda was adopted with no changes.
* Report from the Chair: In 2017, the FARO ExCom held a number of teleconferences for the day-to-day running of the organization and preparations for conferences and celebration event. The loss of key staff, and the resulting loss of knowledge, has meant that FARO officers have had focus on formalizing procedures and consolidating ongoing activities.

Outreach products: FARO has produced brochures, posters, roll-ups and a celebration flag for use at conferences. FARO had a booth at the Arctic Circle Conference 2017 and at the Polar 2018 Conference.

Risk Management Initiative: The risk management initiative has been led by Jennifer Mercer. The initiative offers a platform for sharing risk management related documents on the FARO website. Many countries have taken this opportunity and the FARO Secretariat is always interested in adding additional country information that can be used by FARO members and infrastructure managers for developing appropriate risk management documents. The documents do not have to be in English.

COMNAP Interaction: COMNAP and FARO held a teleconference to explore opportunities for collaboration. This led to a moderated discussion between the two chairs at the 2018 Annual Meeting. FARO participated in the COMNAP General Assembly 2017 and COMNAP was invited to attend the FARO Annual Meeting 2018 (incl. Chair, Executive Secretary and ExCom members).

20th Anniversary: 2018 is FARO’s 20th anniversary. Piotr Glowacki (Poland) will give a presentation of the History of FARO from 1998 until today and country representatives will present slides of past, present and future arctic infrastructure. FARO has also joined a number of other organizations to arrange a ‘Celebrate the Arctic’ event and here FARO will also celebrate its 20 year anniversary. A document on the history of FARO has been produced by Piotr Glowacki and James Drummond and will be made available on the FARO website.

Elections: James Drummond described the election process for electing a new Chair and two new ExCom members. Hyoung Chul Shin was thanked for his contributions to the FARO ExCom over the years. James Drummond also shortly presented a suggestion to have the ex-Chair stay on the FARO ExCom for one year after their chair term ends.

New Members: James Drummond welcomed Switzerland as a new member country to FARO and welcomed Greenland as an observer to the meeting.

Appreciation: James Drummond thanked the late Lillian Magelund Jensen, Kirstine Skov and Elmer Topp-Jørgensen, Aarhus University, for the Secretarial support during his time as FARO Chair.

1. **Information from Countries (all National Points Of Contact)**
* Country presentations – three country slides on past, present and future infrastructure (slides are available on the FARO website):
	+ Canada, China, Czech Republic, Finland, France, Germany, Greenland/Denmark, Japan, Korea, Norway, Poland, Portugal, Sweden, UK, US
	+ SECRETARIAL NOTE: If other member countries wish to be added to the presentation, please contact the secretariat
1. **Other information - Projects and programs of relevance to FARO (presentations are available on the FARO website)**
* FARO history (Piotr Glowacki)

FARO started in 1998 with 24 infrastructure operators from 11 countries developing a mission with four focus areas. The FARO logo is a lighthouse, symbolizing safety of operations, and furthermore, ‘faro’ is the Spanish work for lighthouse. FARO has developed to become a platform for friendly exchange of information on operation of research vessels, stations and other infrastructure and over the years FARO has inspired many collaborations between member countries/institutions and organizations. Today FARO has an 8 point long mission and now counts 21 member countries.

* SIOS (Heikki Lihavainen) – See presentation on [www.faro-arctic.org](http://www.faro-arctic.org)

Svalbard Integrated Observing System (SIOS) has 25 member institutions (incl. 2 observers) from 10 countries. It is a multi-domain research infrastructure initiated with EU funding and part of ENVRI+.

* ARICE (Nicole Biebow) - See presentation on [www.faro-arctic.org](http://www.faro-arctic.org)

ARICE is an icebreaker network project funded by the EU. The project builds capacity for operation of arctic icebreakers and offers transnational access for researchers to icebreakers. ARICE hopes to show that there is a demand for increased access to marine platforms in the Arctic, and will develop a web platform to show where ships are going and what equipment they have onboard. ARICE proposed that FARO could be a potential co-host of a workshop 4th October 2018 during IRSO (International research Ship Operators meeting).

* INTERACT (Elmer Topp-Jørgensen) - See presentation on [www.faro-arctic.org](http://www.faro-arctic.org)

INTERACT is a network of terrestrial research stations in the Arctic and adjacent boreal and alpine areas. The project aims to build capacity to observe, understand, predict and respond to change in arctic climate and ecosystems. The project offers transnational access, remote access and virtual access to 43 research station in all Arctic countries and beyond.

* Government of Greenland (Sten Lund) - See presentation on [www.faro-arctic.org](http://www.faro-arctic.org)

Sten Lund (research coordinator in the Government of Greenland) gave a short history of Greenland and described the devolvement of decision making power from the Danish government to the Greenland Self Rule Government. It is the aim of the government to i) promote research in Greenland, ii) enhance research activities, iii) anchor research activities in Greenland and iv) secure benefit of the research for the Greenland society.

* PAG (Jackie Grebmeier/Takashi Kikuchi) - See presentation on [www.faro-arctic.org](http://www.faro-arctic.org)

The Pacific Arctic Group (PAG) is a distributed network of biological observatories. PAG provides an overview of infrastructures and cruise plan on their website. PAG is open for cooperation and work with others to study marine mammals and birds.

* IARPC (Jessica Rohde) - See presentation on [www.faro-arctic.org](http://www.faro-arctic.org)

The Interagency Arctic Research Policy Committee (IARPC ) is a US initiative which consists of principals from 16 agencies, departments, and offices across the U.S. Federal government charged with enhancing both the scientific monitoring of and research on local, regional, and global environmental issues in the Arctic. ‘IARPC Collaborations’ has been formed to connect Federal government and non-Federal government researchers and other stakeholders, including those overseas, to work together to solve the hard problems laid out in its 5-year Research Plan.

1. **Discussions**
* Moderated discussion by Jennifer Mercer between FARO chair (James Drummond) and COMNAP chair (Kelly Falkner).

Kelly Falkner and Michelle Rogan-Finnemore (COMNAP Executive Secretary) gave a short overview of COMNAP. COMNAP is an organization for countries with national Antarctic programs. It is a non-political fully independent organization with its own rules and procedures. COMNAP is an observer to the Antarctic Treaty and provides practical and technical advice to the political level. It differs from FARO in having a legal status in relation to the Antarctic Treaty and must provide advice to the treaty upon request.

COMNAP was established 30 years ago, but cooperation stretches back to the IGY project about 60 years ago. Today COMNAP includes 30 member countries and 6 observers. COMNAP is highly dependent on an efficient Secretariat providing a platform for exchange of information, development of best practices and giving the community a collective voice.

*Question one: What are the approaches to working groups in the two organizations?*

FARO: Working groups have existed, but ceased for a period before being re-activated a few years back. It is, however, possible to extend and structure the working groups in FARO.

COMNAP: operates a number of groups:

1. Regional break-out groups with Chair and co-Chairs exchanging logistic plans and leading discussions on logistical cooperation.
2. Expert groups within specific fields (e.g. environment, technology and education/outreach - <https://www.comnap.aq/Groups/SitePages/Home.aspx>).
3. COMNAP projects - <https://www.comnap.aq/Projects/SitePages/Home.aspx>,
4. Networking activities.

*Question two: Can you mention 1-2 cross-over themes between FARO and COMNAP?*

FARO: Similarities include cold environment, clean energy demand, social interaction in small communities (discrimination, harassment, mental health) and challenging communication. Development from individual infrastructure to networks (INTERACT and ARICE).

COMNAP: Marine infrastructures both subjected to Marine Polar Code, new marine assets are coming in (both north and south), COMNAP is looking to ARICE for its Transnational Access component and gender issues.

Comments from the floor:

Marine infrastructure cooperation - Magnus Augner (Sweden):

Interesting to follow the development of cooperation within ARICE and the potential inspiration to Antarctic operations.

Health and safety operations - Uwe Nixdorf (Germany):

Health and safety is often more challenging in the Arctic because of different legal regimes, many operators, easy access making it difficult to control who comes in. Jennifer Mercer (US) supplemented this by stating that emergency response procedures are clear to operators, but may be more challenging for individual researchers/projects. Magnus Augner (Sweden): suggested a joint workshop between FARO and COMNAP on health and safety, contact points, commonalities and best practices.

Outreach: COMNAP suggested that SCAR, COMNAP, IASC and FARO could work together on social media to provide a constant stream of polar news to the international community.

Setting the agenda for tomorrow - Jérôme Chappellaz (France):

IPY did a lot for polar science and now there seems to be a need to set the agenda for what comes next. New technologies bring new opportunities, e.g. automatic measurements and clean energy operations. Michelle Rogan-Finnemore (COMNAP): overlap between FARO member countries and persons provide opportunities for influencing polar decision makers.

* Break out discussion on topics suggested by NPOCs (1 hour)
	+ Sexual harassment initiatives at NSF (Jennifer Mercer)

A recent study form the US identified three types of sexual harassment ranging from unwanted attention to sexual misconduct. The National Science Foundation of the US, through its support contractor, provides training of leaders and fieldworkers with focus on behavior, harassment and discrimination and ensures that all know about procedures for reporting and how to deal with incidents.

Agnieszka Kruszewska (COMNAP): The topic was discussed at the recent COMNAP General Assembly, with recommendations on developing zero-tolerance harassment policies and training of staff and visitors. Members agreed to policies and procedures and follow up to develop best practices.

Jérôme Chappellaz (France): Isolation and different cultures may increase harassment incidents. Therefore it is good that the issue is being taken seriously by both FARO and COMNAP.

Magnus Augner (Sweden): Zero-tolerence is important to reduce risk of incidents. Sweden compared policies between operators and scientists and found it important that these develop similar guidelines for bullying, disrespect, discrimination and sexual harassment.

Agnieszka Kruszewska (COMNAP): Communicating norms and expected behavior is better that screening applicants, and important to combine with clear procedures and reporting systems where people feel free to report. Social media has been seen as a tool where people write about these type of incidents.

Jennifer Mercer (US): Suggested that the national/institutional policies and procedures can be posted on the FARO website.

Members also pointed out that “normal behavior” can depend upon the culture and therefore it is important that researchers going into a new (to them) culture are aware of the norms of that culture.

* + Risk management (Jennifer Mercer)

Risk management is central to all operators in the Arctic. FARO has posted risk management documents on the FARO website from national sources (governments/institutions/infrastructures) that can be used by institutions for developing or revising risk management procedures and health and safety related documents.

Suggested focus areas of FARO:

* + - Uwe Nixdorf (Germany): Search and rescue (SAR) procedures at member countries’ infrastructure and national SAR contacts.
		- Jennifer Mercer (US): Polar bear incidents are on the rise and sharing of practices could be a good idea. Polar bears recently were shot at stations on the Greenland Ice Sheet after attempts to scare them away failed. Recent attacks have also taken place in settlements in Greenland.
		- Eva Mätzler (Greenland): The use of local knowledge (local people) can be significant when working in high-risk areas of the Arctic. This includes knowledge on polar bear detection and behavior, local sea ice conditions, local weather change predictions, etc.
	+ Future communication development in the Arctic (James Drummond)

Communication at off- the grid infrastructures is problematic at northern latitudes as it is not possible to have geo-stationary communication satellites over the polar areas. New possibilities with Low Earth Orbit (LEO) satellites provide hope of better and cheaper communication. At least nine companies are working on establishing LEO satellite networks, which could be a game changer for arctic communication that can improve data access and remote operation, and reduce latency.

Tim Stockings (UK): Agree to rapid development in the field of polar communication and adds that an improved Iridium system allows easy sending of e-mails from remote UK station in Antarctica.

James Drummond (Canada): There are many companies working to improve communication links and it is important to follow developments over the coming years.

* Short film: ‘Polish Arctic Exploration’ (15 min) (Piotr Glowacki) – https://www.youtube.com/watch?v=sIIO93XnyRQ&t=111s
1. **Internal business (Open session) (½ hour)**
* NEW FARO member: Switzerland (Rod Danièle) - See presentation on [www.faro-arctic.org](http://www.faro-arctic.org)
* Update and proposed FARO activities until next annual meeting

Upcoming conferences:

* Arctic Circle Conference (19-22 October 2018).
* Arctic Science Ministerial (25-26 October 2018).
* The International Union of Geodesy and Geophysics (IUGG) (8-18 July 2019).

New initiatives/Open discussion

* Joint workshop with COMNAP: Discrimination and harassment.
* Suggested FARO Working Groups: Risk Management (continued), SAR, Coordinated Science (Designing systems for the entire Arctic and how FARO can contribute – collaborative observing network).
* MoU with IASC renewed

James Drummond renewed the MoU with IASC on 17 June 2018. The MoU remains in force for five years and includes the following terms of agreement:

1. To invite each other to attend meetings of their major bodies (FARO plenary meetings and IASC Council).
2. To encourage interaction of their relevant working groups and committees.
3. That FARO contributes to the implementation of IASC activities by encouraging and facilitating multilateral collaborations on research infrastructure and operations.
4. That FARO and IASC work together to promote observing systems, data sharing, freedom for scientific exploration and international access, environmental awareness and ethical conduct of science in the Arctic.
5. **Internal business (Closed session)**
* The FARO Secretariat (2017 finance report, 2018 budget)

The FARO financial report and proposed budget for 2018 was approved. Over the past few years FARO has had a surplus in the finances. It was agreed not to reduce the annual fee, but to increase activities instead.

* Policy concerning non-paying members: Policy agreed at the FARO Annual Meeting 2017. Member countries that are not paying, but active should be approached by FARO to discuss the challenges. Member countries that are not paying the annual fee and not active should be discussed by the FARO ExCom.Tim Stockings (UK): recommend that the FARO Secretariat/ExCom should formulate the benefits of being a member of FARO and seek to prove it with facts/examples.
* Election of 2 new FARO ExCom member(s) for the period 2018-2021 Nalan Koc (Norway) and Takuji Nakamura (Japan) were elected new members of the FARO ExCom.
* Election of new FARO chair: Jennifer Mercer (US) was elected new Chair of FARO.
* Proposal to have the ex-FARO chair stay on the ExCom for one year after end of term: Accepted with proposed changes to election procedures/ExCom governance.
* Next FARO Annual meeting: Arkhangelsk, Russia, late May 2019.
* Any other business: Jennifer Mercer (US) thanked James Drummond for keeping momentum in FARO during his presidency. Jennifer said it was an honor to be nominated for the position as FARO Chair and thanked everyone for the election. Jennifer looks forward to getting to know each member of FARO even better, and to lively discussions that will contribute to the next generation of Arctic infrastructure operation.
* FARO celebrated its 20 years anniversary at the ‘celebrate the Arctic’ event held jointly with other Arctic organizations on the evening of 18 June 2018.