

Intro Day 2 – Wednesday 13 September 2023

08:30-08:35 Introduction to Day 2

08:35-08:55 Open Floor (continued):

- Test implementing AMAP micro/nano plastic monitoring protocols - **CEN Whapmagoostui-Kuujuarapik Research Station**, Canada (Lise Millera Ferriz)
- Reindeer App - Kolari Research Station, Finland (Mikko Jokinen)

08:55-09:45 The Future of SMF (2) – workshop on challenges, opportunities and priorities - Follow up in plenum

09:45-10:00 Science policy paper

10:00-10:30 Coffee break

10:30-12:15 Science diplomacy – The role of science in a changing Arctic

12:15-12:30 Any other business and closing of SMF 6

12:30-13:30 Lunch

13:30-17:30 Excursion



SMF 6

12-13 Sept 2023

Toolik, Alaska

The Future of SMF (1) – Workshop on Challenges, Opportunities and Priorities

What has been the most important outcome for your station by being a part of INTERACT Station Manager Forum?

What is currently the biggest challenges of your station?

What should be the focus of INTERACT Station Manager Forum in the future without EU-funding (i.e. under INPA)?

What should be the focus of INTERACT Station Manager Forum in the future with new EU-funding or other extensive funding?



The Future of INTERACT SMF

What is the INTERACT Station Managers' Forum?

ChatGPT

As of my last knowledge update in September 2021, the INTERACT Station Managers' Forum is a platform within the International Network for Terrestrial Research and Monitoring in the Arctic (INTERACT) specifically designed for station managers of Arctic research facilities. The INTERACT Station Managers' Forum serves as a dedicated space for station managers to:

- 1.Exchange Knowledge and Best Practices:** Station managers can share their experiences, expertise, and best practices related to the operation and management of Arctic research stations. This can include discussions on logistics, infrastructure maintenance, safety protocols, and more.
- 2.Discuss Challenges and Solutions:** The forum provides a venue for station managers to discuss common challenges faced in the operation of research stations in the Arctic. This could encompass issues related to logistics, health and safety, environmental sustainability, and more.
- 3.Collaborate on Station Management Issues:** Station managers can collaborate on projects or initiatives related to the management of research stations. This could involve joint efforts to improve infrastructure, develop standardized protocols, or address specific operational concerns.
- 4.Stay Informed on Network Activities:** The forum likely serves as a means of disseminating information about INTERACT activities, updates, and opportunities relevant to station managers.
- 5.Facilitate Communication and Networking:** It provides a platform for station managers to connect with their peers from other research stations, fostering a sense of community and enabling networking opportunities.
- 6.Contribute to the Advancement of Arctic Research Infrastructure:** By collaborating through the forum, station managers can contribute to the overall improvement and sustainability of Arctic research infrastructure, which is critical for advancing scientific knowledge in the region.

The Future of INTERACT SMF

What are the most important challenges facing Arctic research stations in the future?

ChatGPT

As of my last knowledge update in September 2021, the Arctic region faces several significant challenges, and these are likely to continue impacting research stations in the future. Some of the key challenges include:

1. **Climate Change:** The Arctic is warming at more than twice the global average rate, leading to rapid ice melt, altered weather patterns, and shifts in ecosystems. This makes it challenging for research stations to adapt to changing conditions.
2. **Infrastructure Sustainability:** Many Arctic research stations face difficulties in maintaining and upgrading their infrastructure due to permafrost degradation and the need for specialized building techniques. Rising temperatures can lead to destabilization of structures and difficulties in accessing remote sites.
3. **Logistical Challenges:** Remote locations and harsh environmental conditions make it difficult and expensive to transport personnel, equipment, and supplies to and from research stations. This includes challenges in providing food, water, and energy.
4. **Human Health and Safety:** Extreme cold, isolation, and limited medical facilities can pose significant risks to the health and safety of personnel at Arctic research stations. The nearest medical facilities may be hundreds of kilometers away.
5. **Security and Geopolitical Tensions:** The Arctic is an area of increasing geopolitical interest, which could lead to security concerns for research stations. Issues related to sovereignty, resource extraction, and international cooperation may affect research operations.
6. **Ecosystem Changes:** Rapid environmental shifts in the Arctic can lead to disruptions in ecosystems, affecting the species that researchers are studying. This can make it more challenging to draw accurate conclusions and predictions.
7. **Data Management and Accessibility:** The collection and management of data in the Arctic can be particularly challenging due to the remote and harsh conditions. Ensuring data accuracy, storage, and accessibility are vital for ongoing research efforts.
8. **Indigenous Engagement and Cultural Sensitivity:** Many Arctic regions are home to Indigenous communities with their own unique cultures, languages, and ways of life. Engaging with these communities in a respectful and collaborative manner is essential for conducting ethical and meaningful research.
9. **Regulatory and Legal Issues:** There may be complex regulatory and legal issues related to conducting research in the Arctic, including obtaining permits, respecting protected areas, and navigating international agreements.
10. **Ethical Considerations:** Balancing the pursuit of scientific knowledge with the potential impacts on local ecosystems and communities is a crucial ethical consideration for Arctic research.

It's important to note that these challenges may evolve over time as new technologies, policies, and scientific understandings develop. Researchers, policymakers, and stakeholders in Arctic research will need to continue to work collaboratively to address these challenges in a sustainable and responsible manner.

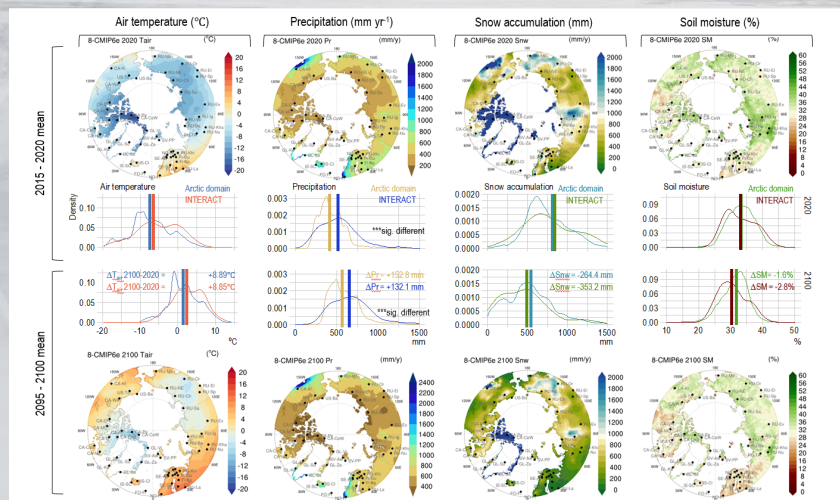
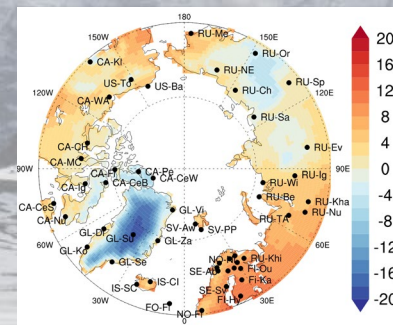
Science policy paper

D2.5 Updated 'INTERACT Minimum Monitoring Programme'

Initial idea to evaluate the representativeness of INTERACT stations for assess arctic change now and 100 years ahead.

Focus on 8 essential variables (AMAP) and using ESMs.

The war in Ukraine added another objective: Representativeness of INTERACT stations +/- Russian stations.



Science policy paper

D2.5 Updated 'INTERACT Minimum Monitoring Programme'

Brief science communication in review

Towards an increasingly biased view on Arctic change?

Representativeness of INTERACT stations (+/- Russian stations)

A comprehensive statistical analysis has been carried out to explore the consequences of the lack of representation from Russia using the most recent IPCC Climate models.



Science policy paper

D2.5 Updated 'INTERACT Minimum Monitoring Programme'

Preliminary results indicate that by excluding Russian stations the representativeness is markedly reduced, and biases are in some cases of the same magnitude as the expected shifts caused by climate change by the end of the century.



Coffee break

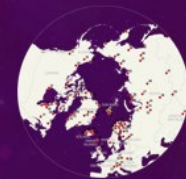
Science diplomacy – The role of science in a changing Arctic

Any other business and closing of SMF 6

Lunch

Excursion

Dinner at the station



SMF 6

12-13 Sept 2023

Toolik, Alaska

The Future of INTERACT SMF

What education is needed to become a research station manager in the arctic

ChatGPT

To become a research station manager in the Arctic, you typically need a combination of education, experience, and specific skills:

- 1. Educational Background:**
 - **Bachelor's Degree:** A bachelor's degree in a relevant field is usually the minimum requirement. Fields such as environmental science, biology, geology, engineering, or management could be suitable.
 - **Master's Degree (Optional):** While not always necessary, having a master's degree in a field related to Arctic research, environmental management, or business administration can be beneficial, especially for more advanced positions.
- 2. Relevant Coursework:**
 - Courses in environmental science, Arctic studies, biology, geology, environmental management, logistics, project management, and business administration can be particularly useful.
- 3. Specific Skills and Knowledge:**
 - **Arctic Knowledge:** An in-depth understanding of Arctic ecosystems, climate, and environmental challenges is crucial.
 - **Logistics and Operations:** Familiarity with logistical planning, supply chain management, and operational procedures in remote and extreme environments is essential.
 - **Safety and Emergency Response:** Knowledge of safety protocols, emergency response procedures, and first aid/CPR training is critical for managing a research station.
 - **Communication and Leadership Skills:** Strong interpersonal skills, effective communication, and leadership abilities are vital for managing a team of researchers and support staff.
 - **Budgeting and Financial Management:** Understanding budgeting processes, financial management, and resource allocation.
 - **Regulatory Compliance:** Familiarity with regulations governing research activities, environmental protection, and safety standards in the Arctic region is crucial.
 - **Problem-Solving and Adaptability:** The ability to think critically, adapt to changing conditions, and solve problems efficiently is invaluable.
- 4. Experience:**
 - Prior experience in Arctic research or fieldwork is highly valuable. This could be gained through internships, research assistant positions, or working in similar environments.
 - Leadership or management experience, even in a different context, can be beneficial. This demonstrates your ability to oversee a team and manage operations.
- 5. Certifications and Training:**
 - Depending on the specific research station and its operations, certifications in areas like wilderness first aid, HAZMAT handling, or specific technical skills may be required.
- 6. Networking:**
 - Building a professional network within the field of Arctic research can be immensely beneficial. It can provide opportunities for mentorship, collaboration, and job openings.

Remember that specific requirements may vary depending on the research station, its focus areas, and the organization running it. It's always a good idea to research specific job postings and consult with professionals currently working in similar roles to understand the specific qualifications and skills that are most valued in the field.