INAR
INSTITUTE FOR ATMOSPHERIC AND EARTH SYSTEM RESEARCH

AASCO
Arena for the Gap Analysis of the Arctic Science Co-Operation

PRINCE ALBERT II OF MONACO FOUNDATION

Gap analysis of the existing Arctic Science Co-Operations (AASCO)
4-5 Feb 2025

Round Tables Discussions

INAR
INSTITUTE FOR ATMOSPHERIC AND EARTH SYSTEM RESEARCH

AASCO
Arena for the Gap Analysis of the Arctic Science Co-Operation

PRINCE ALBERT II OF MONACO FOUNDATION

- **AIM OF THE AASCO EVENT & ROUND TABLE DISCUSSIONS**
  - to consolidate these efforts and to work towards coordinated and effective outcomes in addressing environmental challenges in the Arctic and in particular:

1) to strengthen connections among the existing research communities focused on feedback research in the Arctic region

INAR
INSTITUTE FOR ATMOSPHERIC AND EARTH SYSTEM RESEARCH

AASCO
Arena for the Gap Analysis of the Arctic Science Co-Operation

PRINCE ALBERT II OF MONACO FOUNDATION

- **AIM OF THE AASCO EVENT & ROUND TABLE DISCUSSIONS**
  - to consolidate these efforts and to work towards coordinated and effective outcomes in addressing environmental challenges in the Arctic and in particular:

2) to contribute to the ongoing ICARP IV Arctic Research Planning processes e.g. RPT1 “The Role of the Arctic in the Global System”, RPT2 “Observing, Reconstructing, and Predicting Future Climate Dynamics and Ecosystem Responses”, RPT4 “Arctic research cooperation & diplomacy” and preparations for the 5th International **Polar Year 2032-33**, **SAON-ROADS process**, **air Pollution in the Arctic: Climate, Environment and Societies (PACES)** initiative and **climate interventions project** (climateinterventions.org)

INAR
INSTITUTE FOR ATMOSPHERIC AND EARTH SYSTEM RESEARCH

AASCO
Arena for the Gap Analysis of the Arctic Science Co-Operation

PRINCE ALBERT II OF MONACO FOUNDATION

- **AIM OF THE AASCO EVENT & ROUND TABLE DISCUSSIONS**
  - to consolidate these efforts and to work towards coordinated and effective outcomes in addressing environmental challenges in the Arctic and in particular:

3) to formulate and to deliver a science-based messages targeted at Arctic research policymakers and funding programmes, such as the 9th EU Framework Programme for R&D (2021-2027) and its successor to ensure informed decision-making and strategic funding allocation.

INAR
INSTITUTE FOR ATMOSPHERIC AND EARTH SYSTEM RESEARCH

AASCO
Arena for the Gap Analysis of the Arctic Science Co-Operation

PRINCE ALBERT II OF MONACO FOUNDATION

- **PRACTICAL IMPLEMENTATION**
  - Discussions on Tue 4th Feb & reporting by the chairs on Wed 5th Feb
  - Ca 90 registered partcipants / experts coming from different backgrounds
  - Participants are divided into groups in advance, but they can freely change groups if they wish
  - Ranuka Badhe (organization ??) as a leading chair of the Round Table session
  - Discussion (ca 2 hours) is coordinated by a designated chairperson and supported by a co-chair

INAR
INSTITUTE FOR ATMOSPHERIC AND EARTH SYSTEM RESEARCH

AASCO
Arena for the Gap Analysis of the Arctic Science Co-Operation

PRINCE ALBERT II OF MONACO FOUNDATION

- **PRACTICAL IMPLEMENTATION**
  - Ppt template with the Table questions will be send to the Tables chairs

For example

Table-7 Pan-Arctic Science Research Collaboration (ICARP RPT 4)

Guiding questions

1. To what extent is Pan-Arctic research collaboration important?
2. What is your vision for Pan-Arctic research collaboration in 2035?
3. What are the challenges for Pan-Arctic research collaboration?
4. What are the tools available and/or do we need to advance Pan-Arctic research collaboration?

- Any other new new emerging questions or research topics can be added
- Key message to be used in the press release etc.
- Your message to the AASCO coordinators, e.g. how do you see the importance of the AASCO discussion forum in the future

INAR
INSTITUTE FOR ATMOSPHERIC AND EARTH SYSTEM RESEARCH

AASCO
Arena for the Gap Analysis of the Arctic Science Co-Operation

PRINCE ALBERT II OF MONACO FOUNDATION

Table-1 Arctic Sea ice and Greenland Ice Sheet (ICARP RPT 1)
Chair Petteri Uotila, University of Helsinki
Co-chair Angelika Humbert, The *Alfred Wegener Institute*

Table-2 Short-lived climate forcers (SLCFs) (ICARP RPT 1)
Chair Heikki Lihavainen, SIOS
Co-chair Yubao Qui, Digital Belt and Road Program (DBAR)

Table-3 Interplay between Arctic processes and the coupled climate system (ICARP RPT 1)
Chair Timo Vihma Finnish Meteorological Institute
Co-chair Dorotea Iovino, Foundation Euro-Mediterranean Centre on Climate Change (CMCC)

Table-4 Climate interventions (climateinterventions.org, ICARP RPT 7)
Chair John Moore, Arctic Centre, University of Lapland
Co-chair Marc Macias-Fauria, Department of Geography & the Scott Polar Research Institute University of Cambridge

INAR
INSTITUTE FOR ATMOSPHERIC AND EARTH SYSTEM RESEARCH

AASCO
Arena for the Gap Analysis of the Arctic Science Co-Operation

PRINCE ALBERT II OF MONACO FOUNDATION

Table-5	Research priorities around Arctic air pollution (PACES)
Chair	Steve Arnold, University of Leeds
Co-chair	Kathy Law, LATMOS –CNRS, Paris / Alexander Baklanov University of Copenhagen
Table-6	The role of Co-Production and local communities (ICARP RPT 3, 5)
Chair	Cana Itchuaqiyaq, Center for Sustainable Engagement in the Arctic
Co-chair	Hanna Snellman, Univeristy of Helsinki
Table-7	Pan-Arctic Science Research Collaboration (ICARP RPT 4)
Chair	Jennifer Spence, Harvard Kennedy School
Co-chair	Kamrul Hossain, Northern Institute for Environmental and Minority Law, Arctic Centre
Table-8	Data-sharing, AI (e.g. ICARP RPT 2, 5)
Chair	Pier Luigi Buttigieg, the Alfred Wegener Institute, Helmholtz Centre for Polar and Marine Research
Co-chair	Jørn Kristiansen, The Norwegian Meteorological Institute

INAR
INSTITUTE FOR ATMOSPHERIC AND EARTH SYSTEM RESEARCH

AASCO
Arena for the Gap Analysis of the Arctic Science Co-Operation

PRINCE ALBERT II OF MONACO FOUNDATION

- **OUTCOMES**
  - Outcomes e.g. recommendations to be published
    - A) as a White Paper tbc
    - B) Concept note peer reviewed paper tbc
    - All participants as co-authors
  - White paper / Recommendations to be distributed to TBD
    - ICARP RPT chairs & co-chairs
    - European Union Commission
  - Press release
  - Core Team to draft the White Paper / Concept note TBD

INAR
INSTITUTE FOR ATMOSPHERIC AND EARTH SYSTEM RESEARCH

AASCO
Arena for the Gap Analysis of the Arctic Science Co-Operation

PRINCE ALBERT II OF MONACO FOUNDATION

- **OUTCOMES:**

the Fourth International Conference for Arctic Research Planning (ICARP IV) at ASSW 2025

The details for your accepted abstract, including the day and time for when it has been scheduled is below:

- **Abstract ID:** 98
- **Title:** Arena for the gap analysis of the existing Arctic Science Co-Operations (AASCO)
- **Presenting author(s):** Hanna Lappalainen
- **Accepted presentation format:** Oral virtual
- **Session:** 2.3. Arctic Science through Observational Network: Opportunities and Challenges
- **Date:** 3/26/2025
- **Time:** 16:00–18:00

Individual abstracts will be added to the ICARP IV session descriptions soon. We will also soon provide further details about presentation guidelines and requirements, including for virtual presenters.

Please note that registration for ASSW is currently open with early bird registration through 31 January 2025. **Register here!**

INAR
INSTITUTE FOR ATMOSPHERIC AND EARTH SYSTEM RESEARCH

AASCO
Arena for the Gap Analysis of the Arctic Science Co-Operation

PRINCE ALBERT II OF MONACO FOUNDATION

- **OUTCOMES**
  - See also the previous AASCO paper published in the ARCTIC YEAR BOOK 2005: Heininen, L., J. Barnes & H. Exner-Pirot, (eds.). (2024). Arctic Yearbook 2024 - Arctic Relations: Transformations, Legacies and Futures. Akureyri, Iceland: Arctic Portal. Available from https://arcticyearbook.com

Advancing the Understanding and Quantification of Arctic Climate Feedbacks to Improve Climate Models and Inform Decision-Making: Insights from the AASCO Project (2020–2022)

Hanna K. Lappalainen, Timo Vihma, Eija Asmi, Alexander Baklanov, Peter Bauer, Paul Arthur Berkman, Federico Bianchi, Nicole Biebow, Jaana Bäck, Torben Røjle Christensen, Richard Davy, Igor Esau, Ekaterina Ezhova, Huadong Guo, Torill Hamre, Angelika Humbert, Veli-Matti Kerminen, Lukas Kohl, Lars Kullerud, Kirsty Langley, Jan Rene Larsen, Heikki Lihavainen, Lasse Loeto, Risto Makkonen, Cecilie Mauritzen, Outi Meinander, Geir Ottersen, Peter Pulsifer, Yubao Qiu, Arja Rautio, Stein Sandven, Britta K. Sannel, Sandy Starkweather, Mikko Strahlendorff, Lise Lotte Sørensen, Jennie L. Thomas, Michael Tjernström, Petteri Uotila, Manfred Wendisch, Markku Kulmala and Tuukka Petäjä

INAR
INSTITUTE FOR ATMOSPHERIC AND EARTH SYSTEM RESEARCH

AASCO
Arena for the Gap Analysis of the Arctic Science Co-Operation

PRINCE ALBERT II OF MONACO FOUNDATION

- **OUTCOMES; FYI MS submitted Big Earth Data (**Out for Review)

1 **Towards a Global Ground-Based Earth Observatory (GGBEO):**

2 **Leveraging Existing Systems and Networks**

3

4 Hanna K. Lappalainen[a*], Alexander Baklanov[b], Jaana Bäck[c], Christos
5 Arvanitidis[d], Sara Basart[e], Natacha Bernier[f], Thomas Bornman[g], Pier Luigi
6 Buttigieg[h] , Gregory Carmichael[i], James Crawford[j], Juanjo Dañobeitia[k], Yann-
7 Hervé De Roeck[l], Sagnik Dey[m], Evangelos Gerasopoulos[n], Shahzad Gani [a,m],
8 Georg Freig[o], Helen Glaves[p], Silja Häme[a,q], Eija Juurola[q], Jörg Klausen[r], Paolo
9 Laj[a,e], Barry Lefer[s], Henry W. Loescher[t,u], Michael Mirtl[v], Beryl Morris[w],
10 Hiroyuki Muraoka[x], Hibiki M. Noda[y], Clare Paton-Walsh[z], Nicolas Pade[aa],
11 Andreas Petzold[bb], Day Sagnik[m], Emmanuel Salmon[cc], Serge Scory[dd], Krishna
12 Achuta Rao[m], Jaswant Rathore[m], Martin Steinbacher[ee], Georg Teutsch[ff], Alex
13 Vermeulen[cc], Xiubo Yu[gg], Steffen Zacharias[hh], Leiming Zhang[ii], Tuukka Petäjä[a],
14 Jürg Luterbacher[jj], James W. Hannigan[kk,ll] and Markku Kulmala[a]