

U-Arctic Thematic Network

ARCTIC – BOREAL HUB

Recent highlights

Hanna Lappalainen
Institute for Atmospheric and Earth System Research (INAR)
University of Helsinki, FINLAND

UArctic Thematic Networks meeting
Akureyri Iceland 14 - 15 October 2025

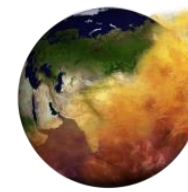
U-Arctic Thematic Network

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- Goals
 - Understand the interactions and feedbacks between land, atmosphere, and ocean, and their effects on Arctic-boreal environments.
 - Identify the processes influencing climate change and air quality in the Arctic-boreal regions.
 - Collaboratively develop new atmospheric datasets and archives that offer continuous and comprehensive data streams.
 - Apply validated and harmonized data products to climate models that cater to various spatial, temporal, and topical requirements.
 - Educate the next generation of multidisciplinary experts and scientists, equipping them with the skills needed to address climate change.

New strategy: re-newing research collaboration network



Pan-Eurasian Experiment

PEEX



MoUs status

- Aims: strengthening the research activities in the Arctic-boreal context and with China & expanding and renewing network with the Near Europe Neighborhood and Newly Independent States countries
- collaboration frozen since **Spring 2022** with **41** Universities/ Res.Organisations from RU & BY
- **currently** active **38** with signed MoUs
- **Since Apr 2024:** signed **12** new PPEX MoUs:
 - ✓ UHMS (11 Apr 2024) - Ukrainian Meteorological and Hydrological Society, Ukraine
 - ✓ UoB (5 Apr 2024) - University of Belgrad, Serbia
 - ✓ EULS (19 Aug 2024) - Estonian University of Life Sciences, Estonia
 - ✓ FDU (12 Jun 2024) - Fudan University, China
 - ✓ OPNU (18 Jun 2024) - Odesa Polytechnic National University, Ukraine
 - ✓ DUT (19 Aug 2024) - Dalian University of Technology, China
 - ✓ KazNU (19 Aug 2024) - Al-Faradi Kazakh National University, Kazakhstan
 - ✓ AUI (11 Oct 2024) - Agricultural University of Iceland, Iceland
 - ✓ ITU (4 Dec 2024) - Istanbul Technical University, Turkey
 - ✓ ONU (21 Mar 2025) - Odesa I.I.Melnikov National University, Ukraine
 - ✓ DBAR (16 May 2025) - Digital Belt and Road Program, Chinese Academy of Sciences
 - ✓ IoI KAS (26 May 2025) Institute of Ionosphere, Kazakhstan Academy of Sciences



New strategy: re-newing research collaboration network

MoUs status - in progress/ signing - 16 Universities/ Research institutions:

- ✓ O.M. Beketov National University of Urban Economy, Ukraine
- ✓ Lviv Polytechnic National University, Ukraine & Odessa National Medical University, Ukraine
- ✓ University of Copenhagen, Denmark & Beijing Normal University, China
- ✓ Max-Planck Institute for BioGeoChemistry, Germany & Max-Planck Institute for Chemistry, Germany
- ✓ ARIANET srl, Italy & University of Tartu, Estonia & Aristotle Univ Thessaloniki, Greece
- ✓ Brunel University London, UK & University of Hertfordshire, UK & Scott Polar Research Institute, UK
- ✓ Charles University in Prague, Czech Republic
- ✓ Satbayev University, Kazakhstan & University of Jordan, Jordan

Outreach

- Benchmarked courses: www.atm.helsinki.fi/peex/index.php/portfolio-items/peex-benchmarked-courses
- NewsLetters: www.atm.helsinki.fi/peex/index.php/portfolio-items/peex-newsletter-blog
- PEEEX Blog: peexhq.home.blog

PEEX Special issue – Part II in Atmospheric Chemistry and Physics – 16

https://acp.copernicus.org/articles/special_issue1103.html



Projects

New projects



- INTERREG "Next Generation Workforce – Empowering Young People for Improved Employment (**REOPEN**)"; funded; start - Sep 2025; 6 Partners, 3 countries, 2.5 yr (2025-2028) budget (1.2 MEu)
- Erasmus+ "EMPOwer ANDES societies to improve adaptation to climate change through cocreation of climate services capacities" (**EMPOANDES**); funded; start - Dec 2025; 16 Partners, 7 countries, 3 yr (2025-2028) budget (687 KEu)

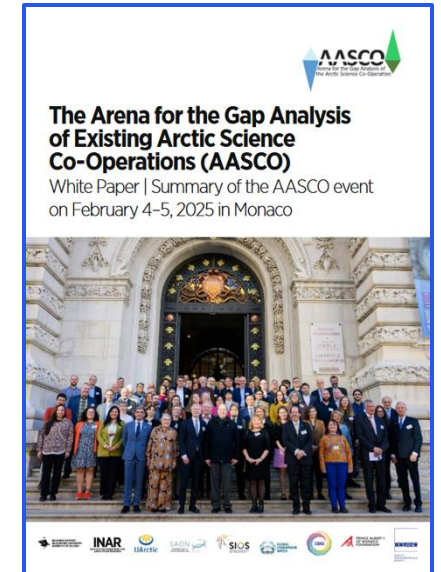
Ongoing projects

- Erasmus+ CLUVEX (<https://www.atm.helsinki.fi/cluvex>) & ClimEd (<http://climed.network>)
- Horizon-2020 RI-URBANS (<https://riurbans.eu>) & CRiceS (<https://www.crices-h2020.eu>)
- Horizon-Europe FOCI (<https://www.project-foci.eu>) & CERTAINTY (<https://certainty-aci.eu>)
- Enviro-PEEX(Next) on ECMWF (https://www.atm.helsinki.fi/peex/index.php/enviro-peex_next)
- PEEX-MP-at-CSC HPCs projects (www.atm.helsinki.fi/peex/index.php/mp-at-csc)
- AASCO Arctic Science Collaboration <https://www.atm.helsinki.fi/peex/index.php/aasco>



Projects - Highlights

- **Gap analysis of the existing Arctic Science Co-Operations : AASCO-I** in 2020-2022, **AASCO-II** in 2023-2025 project funded by Prince Albert Foundation, AASCO-II 7 partners, budget 240.000 euro (Lappalainen, Petäjä)
- **AASCO Conference in Monaco 4-5 Feb 2025:** 100 participants
 - Contribution to ICARP-for-IPY process & Future Call & Research Funding (Commission)
- **Policy Brief.** Lappalainen, H.K. and Petäjä, T. (Lead Editors) (2025) Summary of the AASCO event on February 4–5, 2025, in Monaco, a special edition, ISBN 978-952-84-1294-6, 36 pages. (introduced to EU Arctic Ambassador and Special Envoy Claude Véron-Réville and Finnish Arctic Ambassador Mr. Petteri Vuorimäki 24.6.2025 in Helsinki)
- **Upcoming events:** COP30 Belem Brazil Nordic Pavilion tbc (+ INARUH as a partner “Beyond Arctic Passion” EU proposal submitted in Sep; CR BAS)



Projects - Highlights

https://www.atm.helsinki.fi/peex/wp-content/uploads/2025/03/AASCO_White_Paper_published260325.pdf

Arctic Boreal Hub

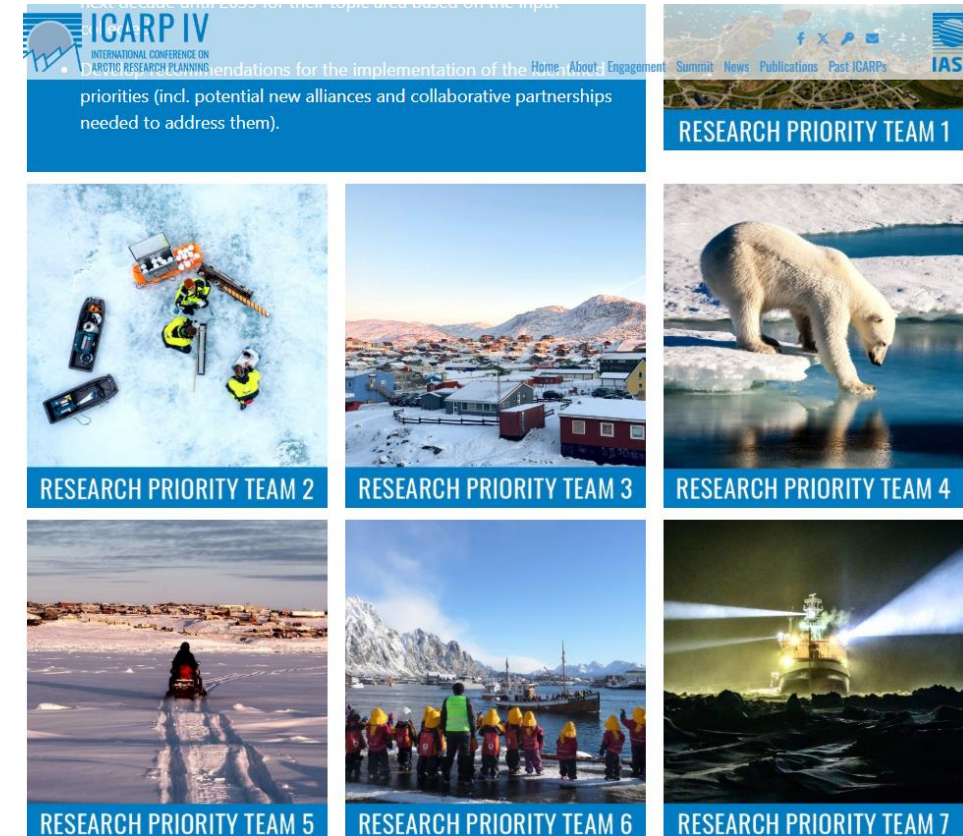


The Arena for the Gap Analysis of Existing Arctic Science Co-Operations (AASCO)

White Paper | Summary of the AASCO event on February 4–5, 2025 in Monaco



- Arctic Sea ice and Greenland Ice Sheet : ICARP RPT 1
- Short-lived climate forcers (SLCFs) : ICARP RPT 1
- Interplay between Arctic processes and the coupled climate system : ICARP RPT 1
- Research priorities around Arctic air pollution ; PACES
- The role of Co-Production and local communities : ICARP RPT 3, 5
- Pan-Arctic Science Research Collaboration : ICARP RPT 4
- Data-sharing, AI :e.g. ICARP RPT 2, 5



Projects - Highlights

- **ICARP-for-IPY**
 - Research Priority Team 4: Arctic Research Cooperation and Diplomacy Working Group for IPY, the priorities and discuss next steps on developing the implementation plans work-in-progress
- **4th Sergej Zilitinkevich Memorial Award:** Prof. Mathias W. Rotach delivered Sep 10, at EMS2025 a keynote lecture titled “*The Mountain Boundary Layer (MoBL) – Do We Need Yet Another Variety?*” *) Award is supported by eminent institutions, including the WMO, EMS, ACCC, INAR, Finnish Network for Atmospheric Sciences, Finnish Geophysical Society, and the Finnish Foundation for Aerosol Research. (Kulmala, Laaksonen, Lappalainen)



Recent proposals in-progress



- Prince Albert Foudation AASCO-3 proposal submitted in June 2025, focus on climate education, virtual exchange, involving local communities especially in Greenland
- EU proposal "*A Standardised and Participatory Framework for Evaluating Adaptation Effectiveness and Limits in Europe*" (**ADAPT-COMPASS**), subm. 4 Sep 2025; 15 Partners, 4 yr budget (6 MEu)
- EU proposal "*Air Quality – Research, Innovation, policy Support and Equity*" (**AQ-RISE**), subm. 17 Sep 2025; 30 Partners, 15 countries, 4 yr budget (10 MEu)
- EU proposal "*Advancing Earth System Modelling to predict the evolving climate and its impacts on weather and atmospheric composition seamlessly across scales*" (**ESMDEV**), subm. 24 Sep 2025; 14 Partners, 11 countries, 4 yr budget (7 MEu)
- COST Action proposal "*Pan-Eurasian EXperiment – Europe – Near Europe Neighbourhood countries Earth System Research Network* (**PEEX-EU-NEN-ReN**)"; to be subm. 21 Oct 2025 ; 34 Universities/ Research organizations, 20 countries, 4 yr budget (600 KEu)
- TFK FI+UA proposal "" (**PEEX-FUESReN**), to be subm. in Apr 2026; 9 Partners, 2 countries, 2 yr budget (80 KEu)
- Fast-Track-Call for Access for Emergencies and Ukrainian Researchers (2025-2028) – <https://www.iriscc.eu/article/fast-track-call-for-access> - 2 proposals in prep. by UHMI, UA

The logo for the Arctic Boreal Hub features a stylized white globe with latitude and longitude lines. A light blue silhouette of a person is positioned in front of the globe. The text "Arctic Boreal Hub" is written in a bold, dark blue sans-serif font across the middle of the logo.

Arctic Boreal Hub



Thank You

- <https://www.uarctic.org/activities/thematic-networks/arctic-boreal-hub/>
 - <https://www.atm.helsinki.fi/peex/>

Hanna.k.Lappalainen@helsinki.fi