

A stylized map of the Arctic region, including parts of North America, Europe, and Asia. The map is colored in shades of green and teal. Overlaid on the map are several orange dots of varying sizes, connected by thin orange lines that form arcs across the sky. The largest arc connects a dot on the western coast of North America to a dot in the Faroe Islands. Other arcs connect dots in the Faroe Islands to dots in the Arctic region of Europe and Asia. The text 'ABS' is written in a large, dark grey serif font, with 'Bios' in a smaller, light green serif font below it. A faint green leafy branch is visible behind the 'Bios' text.

ABS
Bios

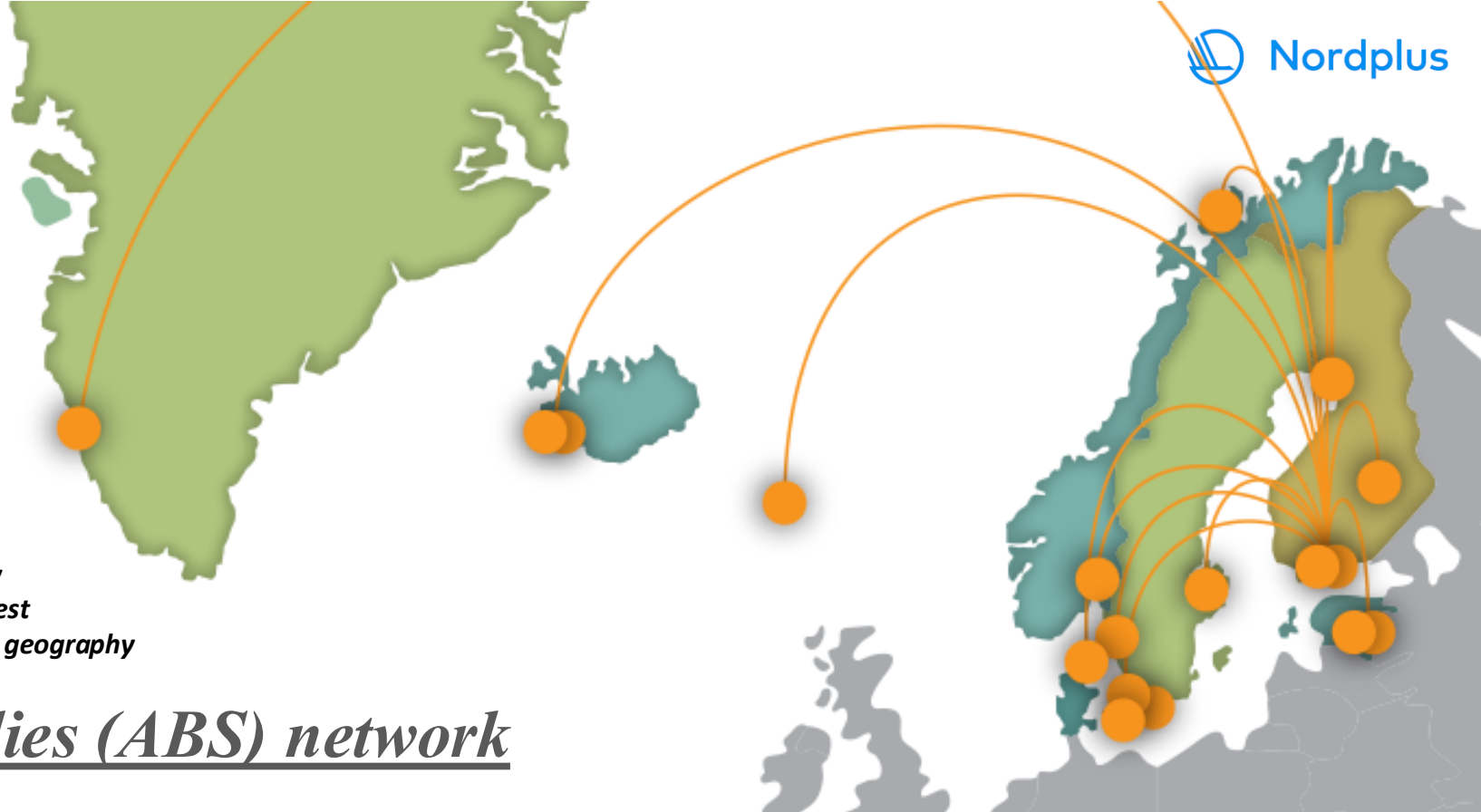
Atmosphere-Biosphere Studies
Since 2006

UArctic 2026 – Faroe Islands



Katja Anniina Lauri
University of Helsinki

ABS coordinator



*Physics Earth Science Chemistry Social Sciences Meteorology
Economics Geophysics Journalism Biology Geosciences Forest
Science Sustainability Science Environmental Science Physical geography*

Atmosphere-Biosphere Studies (ABS) network

University of Helsinki (coord.)

Aarhus University

Agricultural University of Iceland

University of Copenhagen

Estonian University of Life Sci.

Gothenburg University

Lund University

University of Oslo

University of Oulu

Stockholm University

Tartu University

Technical University of Denmark

UiT Arctic University of Norway

University of Eastern Finland

University of Greenland

University of Iceland

University of the Arts Helsinki

University of the Faroe Islands

...





Radical!

For 20 years, we have brought different communities working genuinely together in educational settings.

Past

1999 NorFA NAD
BACCI / NECC
CBACCI
2003 1st CBACCI
teacher workshop
2006 UH, UEF, LU, GU,
KU joined
2007 SU joined
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2020 EnCHiL
2022 WeBelong
UiT joined
2023 Art-Science Melbu
2024 First multisite course
2025 EnCHiL
Co-development
Art-Science Viinistu



Future

2026 UAH, UFI joined
ABS 20 years
Art-Science programme
development
2027 Second multisite course
...



Harry Lankreijer
Lund University

Steffen Noe
Estonian University of Life Sciences



2003 Pilot project of

- Nordic Council of Ministers,
- Nordic Academy for Advanced Study (NorFa)
- Joint Committee of the Nordic natural Science Research Councils (NOS-N)

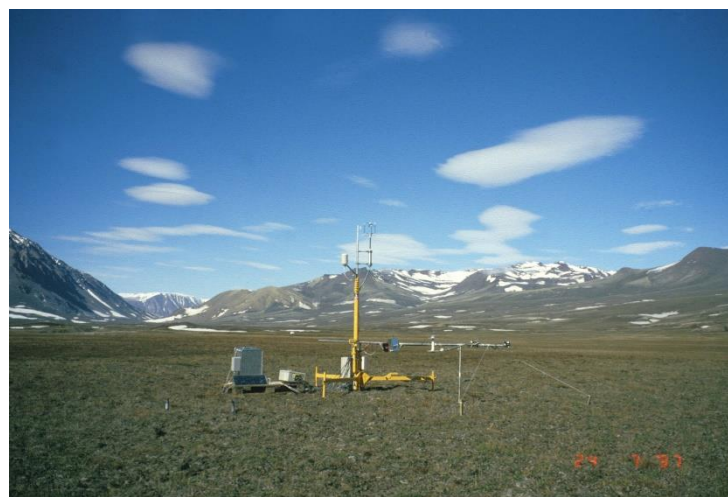
- Initiated the Nordic Centres of Excellence (NCoE) program

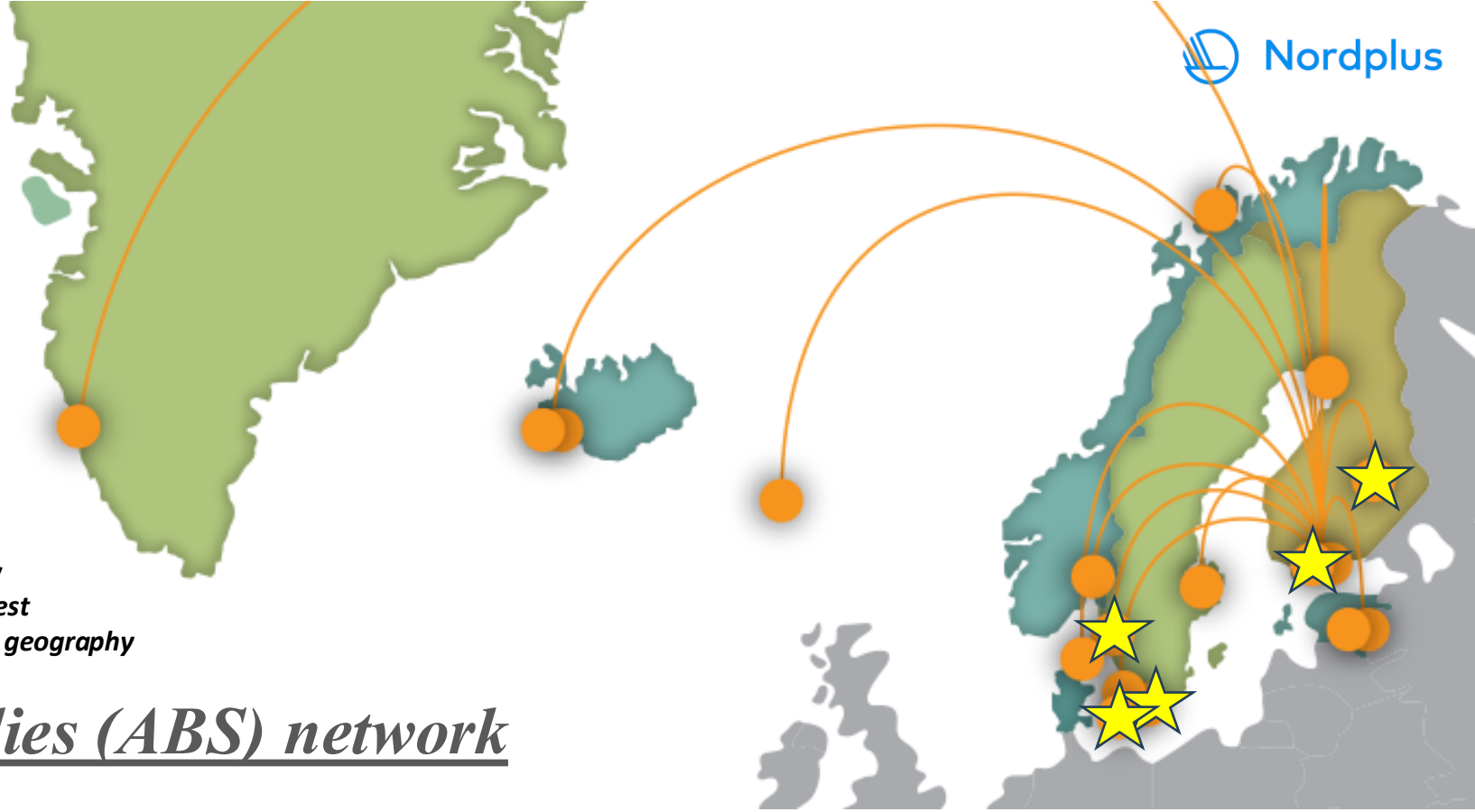
Two NCoE (2003-2007)

Nordic Centre for Studies of **Ecosystem Carbon Exchange** and its Interaction with the **Climate System (NECC)**

Biosphere-Atmosphere-Cloud-Climate Interactions (BACCI)

CBACCI
Research school





Physics Earth Science Chemistry Social Sciences Meteorology
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...





ABS is a pioneering project considering multidisciplinary environmental education

A word cloud from themes at the teachers' workshops:





*Pavla Dagsson
Waldhauserová
Agricultural University of Iceland*

*Stephany Mazon
Stakeholder engagement*



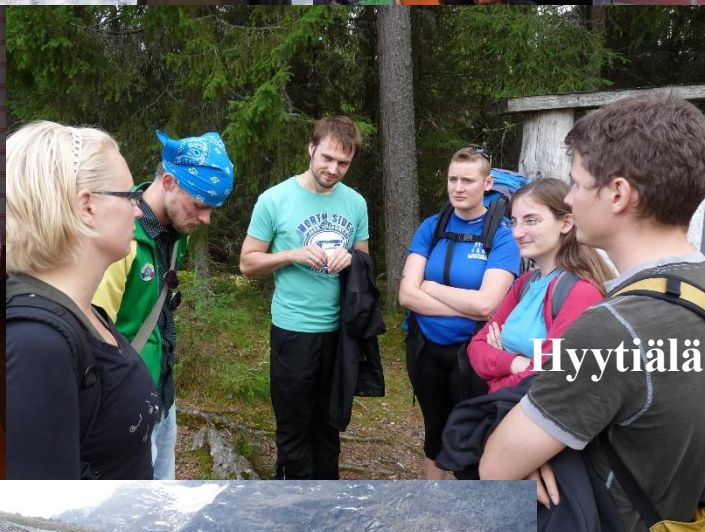
Abisko 2010



Hyytiälä 2007



Hyytiälä 2009



Hyytiälä 2010



Barðarbunga 2014



Kobbefjord 2016





ABS goes West 2016/2018

- Effects of climate change on Arctic ecosystems and societies
- Climate change teaching in Greenland
- Changes in the cryosphere: effects on Arctic livelihoods and living conditions





*The first phase brought together
atmospheric and biospheric research
communities and students therein*

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Bjarni D. Sigurðsson
Agricultural University of Iceland

Pelle Tejsner
University of Greenland

Ingibjörg Jónsdóttir
University of Iceland

Janne J. Salovaara
University of Helsinki



Present activities

Nordic Master in Environmental Changes at Higher Latitudes (EnCHiL)

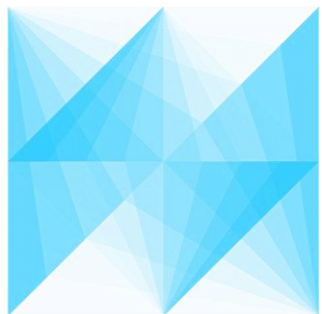


Britta and Karo exploring Greenland in May 2022
Photo: Steinunn Helgadóttir



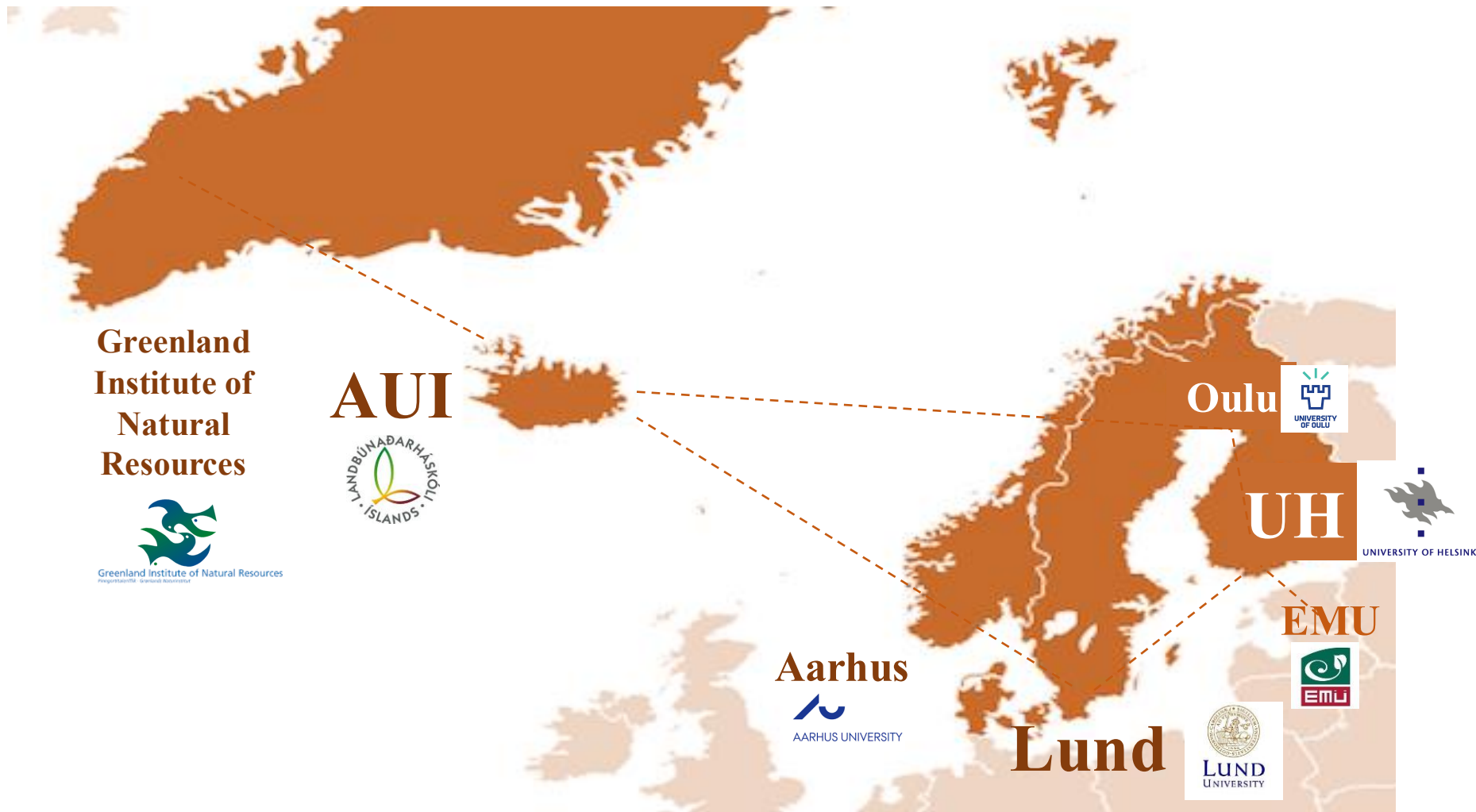
ABS BO

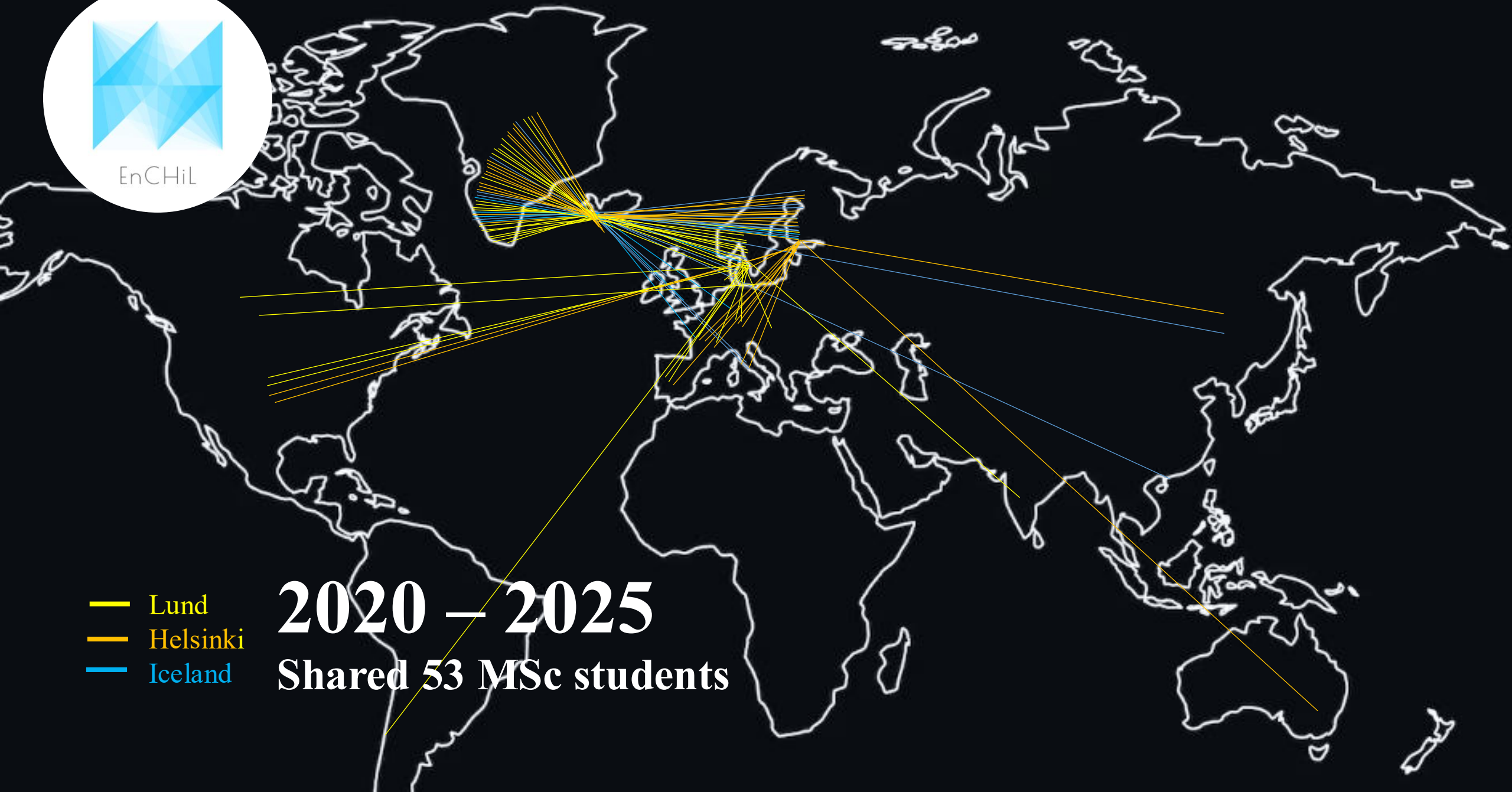
Bringing together students, teachers and local communities in Iceland and Greenland



EnCHiL

All students start their studies in Iceland and move to Lund or Helsinki after the first autumn semester





- Lund
- Helsinki
- Iceland

2020 – 2025
Shared 53 MSc students



What do our students think about having to spend one semester in Iceland and Greenland?



Íslenskt jarðfrægsnið

Goðafoss

Auðkúluheiði

Makulauðin



What do our students think about interacting with local people as part of their studies?





Small Places – Large Issues:

- Enhancing community voices in critical interdisciplinary research
- Unique communities//close-knit relations
- The “situated” ethics of everyday fieldwork
- 3 observables (*for lack of better word*)!
 - continuity: yearly/seasonal fieldwork routine
 - confidentiality the privacy/intimacy of home/belonging
 - commonality: interpersonally-based conversations/relatedness across cultures
- About being there *with..*



22.6.2026



EnCHiL



ABS at the Arctic Circle Assembly

MSc courses have been developed both at the University of Iceland and the Agricultural University of Iceland where participation in the ACA is focal

In a way an unusual scientific conference – certainly many focused scientific sessions but also an opportunity to link to different industries, politics, NGO's and cultural groups

A pedagogical study was conducted to understand students' experiences of the AUI course

The UI course does also have a post conference review process

Overall, a good experience, but also important to see how the ACA environment is challenging and triggers critical thinking and new experience for the students



So, yet another opportunity to build new bridges within the ABS network

In many cases the first conference the students attend

A lot of topics and aspects to learn from and “digest“, see a complicated world in larger perspective, try to understand the interaction between regions and “actors”, and have the opportunity to have a dialogue between different groups



Thinking about the sustainability of ABS...

How has the network been able to sustain for 20 years – and will of course continue to do so in the future?

How has the programme contributed to sustainability – and will of course do even more so in the future?



Base funding + special projects

Funding



*The second phase brought together
natural and social science
researchers and students.*

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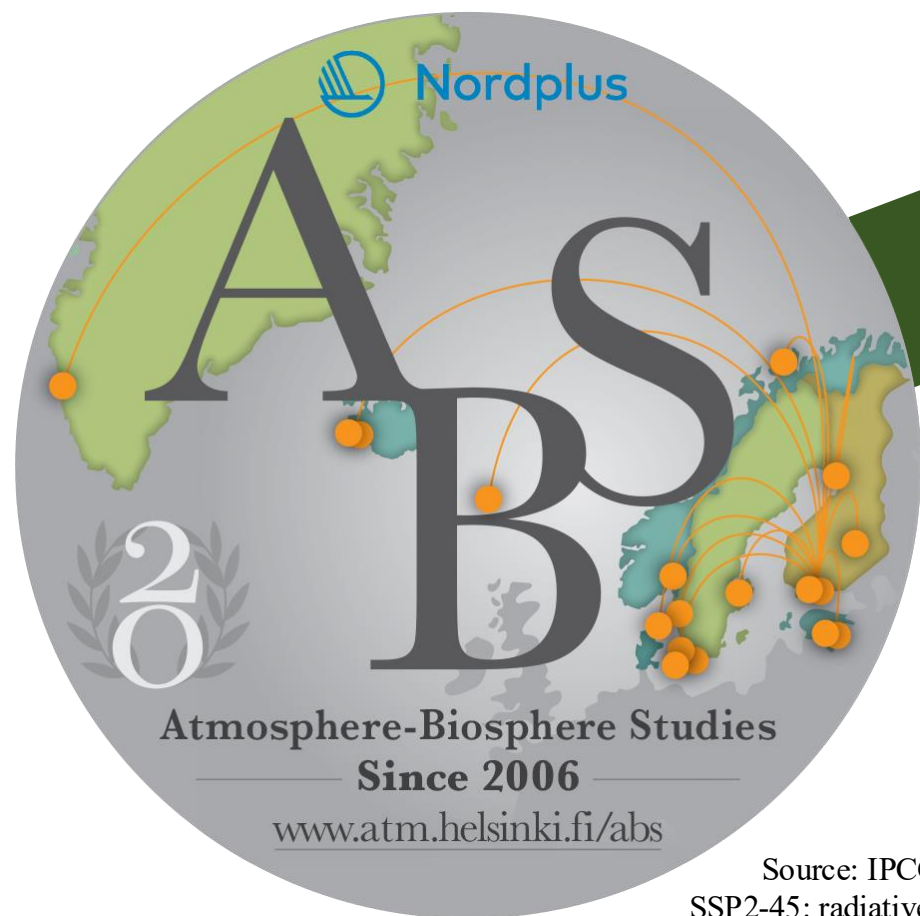
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Liisi Jakobson
University of Tartu

ABS 20 *Future plans*



Bridging Art and Science

SSP2-4.5 Scenario

“As you can see, under the SSP2-4.5 scenario we project an increase in average temperature by mid-century...”

Source: IPCC Sixth Assessment Report (AR6), CMIP6 scenarios
SSP2-45: radiative forcing reaches $\sim 4.5 \text{ W/m}^2$ by 2100 (moderate emissions pathway)



Liisi Jakobson
University of Tartu

Ville Sandqvist
The University of the Arts Helsinki



Liisi Jakobson
University of Tartu

Ville Sandqvist
The University of the Arts Helsinki

Lise Lotte Sørensen
Aarhus University

Sigurd Christiansen
University of the Faroe Islands



Maybe we then can jointly agree that all expertise and viewpoints have to be brought to the table, not only for understanding, but also for acting.



*The third phase brings
together art and science.*



What then?

- The journey will continue
- Arctic Futures: Transdisciplinary Solutions for a Changing World
 - Nordic joint master programme combining art and science
 - First degree students would start in 2030
- 2027: Second wave of multisite field course
 - Low- and mid-cost sensors in aerosol science

AS
BO

Skål! Kippis!
Skál! Kassutta!
Terviseks!