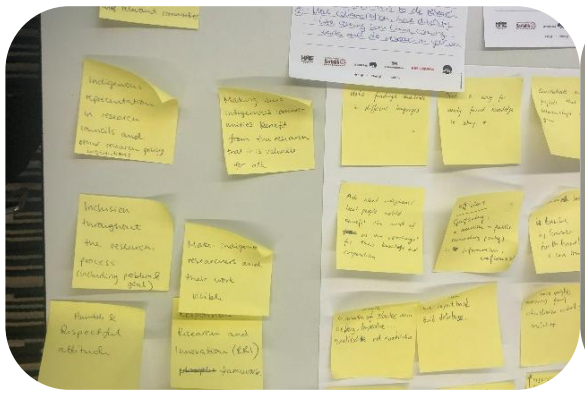
ARCTIC FRONTIERS ABROAD

APECS Association of Polar Early Career Scientists



# Student Recommendations
# Bridging Indigenous Knowledge and scientific knowledge

## CONTEXT

A group of 44 university students and professors from the UiB One Ocean Course sailed from the Azores to Greenland onboard Statsraad Lehmkuhl from July 8th to July 29th. During this time, they learned about the ocean and climate change and the social changes which are accompanying them. As they approached Greenland, the students also learned about the physical changes in the Greenland ice sheet, the local communities, the history, the culture and the current political environment for cooperation in the Arctic. Once in Nuuk, the students joined other students in Greenland for a workshop focused on bridging Indigenous Knowledge and science. The workshop began with a series of presentations from Dr. Lorenz Meire and Dr. Sascha Schiøtt from the Greenland Institute of Natural Resources, Axel Ingemann-Jeremiassen from the Inuit Circumpolar Council Greenland, and Juhan Nicolaus Wuolab Wolberg – a Sami reindeer herder and biology student at the University of Tromsø.

The first lecture, given by Dr. Lorenz Meire provided an overview of the Greenland Ice Sheet and the ice-ocean interactions observed along the coast and explained some of the monitoring and scientific knowledge limits in Greenland. Then, Dr. Sascha Schiøtt presented the effects of the changes in Jakobshavn Isbræ on the Ilulissat icefjord ecosystem and on how she collaborates with local fishermen. Afterwards, Mr. Axel Ingemann-Jeremiassen's presentation focused on his research on hunters' and fishers' experience and knowledge in Northwest Greenland around Pikialasorsuaq. Mr. Wuolab Wolberg presented his experience and knowledge of Norway as Sami and the experiences he has had going into academia.

The students were then separated into groups of 6-8 participants to discuss two topics: education and research. In each of these topics, the students were asked to develop ideas on Post-Its for how these systems can evolve to be more inclusive of Indigenous knowledge and Peoples. They then presented their recommendations to each other.

IUGG IACS International Association of Cryospheric Sciences

ILISIMATUSARFIK University of Greenland

NORA

Arctic Mayors' Forum

UNIVERSITY OF BERGEN

## RECOMMENDATIONS – EDUCATION

The students were asked to reflect on what topics and modalities could be included or excluded to better bridge the current divide between Indigenous Knowledge and science. They were not limited to only considering university education. Their suggestions included:

- Do not teach in a vacuum. When teaching the science of glacier in Greenland, it is useful to put in context what this place means to people. Teach about the history and society alongside the 'hard science'.
- Universities should offer more interdisciplinary courses which can fill in gaps in knowledge.
- Introduce Indigenous Peoples and their cultures in early education for those who are not Indigenous themselves. Just as children learn about other world cultures, Indigenous Peoples and their cultures should also be introduced early.
- Offer more classes on worldviews so students can learn and be exposed to different perspectives.
- Instil mandatory ethics courses so students also become more conscientious researchers.
- Offer more field courses where students have the opportunity to talk with locals and Indigenous Peoples so they can learn to better understand Indigenous knowledge on the land.
- Avoid tokenistic curricula where Indigenous Peoples and considerations are a box to tick off. It should be a meaningful and respectful inclusion.
- Have more programs such as the SILA program at Ilisimatusarfik which include practical skill development in the tradition of the Indigenous People from that place.
- Teach with nuance and include references to specific Indigenous Knowledge when teaching a topic, for example biology or geography.

## RECOMMENDATIONS – RESEARCH

The students were asked to reflect on how research practices and institutions could be made more inclusive of Indigenous knowledge and collaborators to avoid perpetuating extractive ways.

Some of the suggestions related to how education was developed and thus related closely to the previous question. Other of their recommendations included:

- Involve communities in developing research questions which also address their needs. Have a dialogue to share why certain questions might be important to scientists and seek to understand which questions are important to Indigenous communities.
- Develop a centralized system to avoid redundant research and to avoid putting additional strain on communities already hosting researchers.
- Translate results into the Indigenous language which is suitable for the research. Ensure results are written in simple language without jargon.
- Utilize communication tools: meetings with the community, social media, flyers…to ensure the results return to the community and can be potentially used.
- Offer more training and educational opportunities for Indigenous researchers to further recognize Indigenous leadership in research.
- Build online databases easily accessible to communities to ensure data and results are available to those who need it most.
- Make more funding available for non-academic contributors: fishermen, hunters, guide, etc… and activities: meetings, communication, etc…
- Enable longer term research projects to build trusting relationships with communities.
- Have more Indigenous representation in research governing bodies.
- Have more flexible research proposal timelines and build timelines that respect the traditional practices of Indigenous People, e.g. hunting season.
- Provide cultural and linguistic training to researchers so they may better collaborate with Indigenous communities.

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