Co-creating research agendas: toward a holistic, community-led terrestrial-monitoring transect in SW Greenland

Project Report

Development in the Arctic proceeds at a rapid pace with infrastructure investments promising new services and economic benefits for local communities. These developments, however, may also pose novel environmental and social tradeoffs, as they often cannot be accomplished without disturbing pristine areas of tundra, local wildlife and habitat, and human-wildlife relationships. This tension is also felt within the Arctic science community, as new research infrastructure is often necessary to gain a better understanding of the complex and rapid changes currently underway. As international Arctic researchers, it is our responsibility to understand these dynamics in the regions where we plan to work through early engagement with local stakeholders and by establishing meaningful working relationships to ensure that our research is informed by and is in service to priorities of local communities.

With this goal in mind, the Terrestrial Working Group of IASC recently funded the project "Co-creating research agendas: toward a holistic, community-led terrestrial monitoring transect in SW Greenland," which took place during the 2023 Greenland Science Week (Sisimiut, Sarfanguit, Kangerlussuaq, and Nuuk; Greenland) November 3rd-10th 2023. The purpose of this scoping initiative was to assess the potential interest of the residents, community leaders, businesses, and the scientific community in developing a holistic community-led terrestrial monitoring network in SW Greenland. This project was inspired by the recent efforts by the Qeqqata Kommunia municipality to establish the Arctic Circle ATV Trail connecting the international research hub of Greenland, Kangerlussuaq, to the second largest city in the country, Sisimiut. Project participants joined a diverse cavalcade of international and Greenlandic researchers, tourism operators, and governmental officials and engaged in a series of traveling public workshops and seminars related to science, culture, infrastructure, and tourism organized by the municipality, Arctic DTU, and the Sisimiut Museum.

The trip began with the start of the Greenland Science Week in Sisimiut and consisted of tours of the research infrastructure of the Technical College of Greenland and Arctic DTU and a public panel discussion on "Science, Infrastructure, and Tourism". Here, we learned about the role of scientists in aiding local development efforts including the recent establishment of permanent permafrost bore hole and weather monitoring stations across the trail by Arctic DTU researcher **Thomas Ingeman-Nielson** and upcoming terrestrial wildlife monitoring projects planned by the Greenland Institute of Natural Resources. Most importantly we received word from the municipality that the trail will officially open in September 2024, so be sure to make your travel plans now! Day two was full of more public interactions beginning with a tourism and science workshop where we met with tour operators to discuss their plans for the region and ways of working together to develop mutually beneficial relationships. This discussion was followed by the community world heritage and science festivals where we heard about the latest developments of the Aasivissuit-Nipisat UNESCO World Heritige Site located in the region and participated in a diverse series of lectures from Greenlandic and international researchers where Clay Prater and **Vendy Hazukova gave a presentation** to introduce our initiative. The presentation was followed by Q&A session with the scientific and local community.

Day three of the trip we left Sisimiut harbor and traveled by boat up the fjord to the village of Sarfannguit. Here, we were invited to present our initiative to the community members, heard their concerns about the effects of the road on local wildlife, and discussed our shared observations and questions regarding the recent environmental changes in the region. We also toured the town and were treated to an exhibit of historical photos of the village presented by the Sisimiut Museum in the afternoon. Days 4-5 saw us heading to Kangerlussuaq where we toured the local research infrastructure, including the start of the new trail, and visited the Kangerlussuaq Museum where we sat down with local citizens and hunters to discuss the trail and upcoming plans for the World Heritage Site. Before leaving, we hosted a second community event at the sciencesupport@mit.gl">Kangerlussuaq International Science Station where we talked about local wildlife concerns and discussed the importance of engaging the local youth and getting them involved with the field research efforts around the town.

To wrap up our trip, we headed to Nuuk for a few more days of science at the Greenland Science Conference. Under the theme of "Making Science Matter," we were treated to an opening speech by the Prime Minister of Greenland and the International Chair of the Inuit Circumpolar Council about the importance of conducting research that benefits the Greenlandic people, as outlined in Greenland's National Research Strategy published earlier this year. The following keynotes, panel discussions, and scientific presentations allowed us to take in the wide array of research being conducted in Greenland. On the last day of the conference, we hosted an open community meeting where we presented preliminary insights gained from our trip. Afterwards, we had an open discussion with Greenlandic scientists about the importance of working with the Greenland Institute and the Greenland Ecosystem Monitoring Network to ensure that our efforts our not duplicated and that data are collected using standardized methods so that they can feed into the ever-growing knowledge base generated by the Greenlandic Science Community.

We received sufficient interest in developing a monitoring network along the new transect that we are confident in moving forward with continued support from our local, regional, and national partners. We thank all of those who planned and organized the Nuuk Science Week and are particularly grateful to Laust Løgstrop, Steffen Ringsø Nielsen, and Dorthe Katrine Olsen for hosting open community meetings along with Panninguaq Fleischer Lyberth, Christian Jerimiassen, and Ingvar Knudsen for serving as interpreters and enabling us to talk to directly with local communities. Most importantly, we are very grateful to the people of Sisimiut, Sarfannguit, and Kangerlussuaq for sitting down with us to discuss your concerns, interests, and insights into infrastructure developments and environmental changes in the region.

November 2023 | Sisimiut, Kangerlussuak and Nuuk, Greenland