

Fostering Capacity Sharing in Permafrost Research Processes: Learnings from the APECS and Arctic PASSION's Sharing Circle

Fabian Seemann^{1,2} & Louise Mercer³

¹Alfred Wegener Institute Helmholtz Center for Polar and Marine Research, Permafrost Research Section, Potsdam, Germany

²Institute of Geosciences, University of Potsdam, Potsdam, Germany

³Department of Geography and Environmental Sciences, Northumbria University, Newcastle upon Tyne, United Kingdom

Background

The Arctic is warming faster than any other region globally¹. This has profound impact on Indigenous Peoples and local communities living across permafrost landscapes including infrastructure damage, changes to subsistence harvesting and contaminant release. These consequences have significant implications on human health and well-being across the pan-Arctic region.

Permafrost research often excludes the diverse knowledge systems of Peoples living on permafrost, missing the great potential to support adaptation and resiliency efforts as well as contributing to a better understanding of socio-ecological change. If done in the right way research can empower Indigenous Peoples and local communities.

Capacity Sharing in Arctic Research

Arctic research is moving towards being application-oriented to address the needs of those directly facing the impacts of accelerating change across permafrost landscapes.

One key aspect which characterizes successful application-oriented research efforts is **Capacity sharing**. It is a two-way knowledge exchange process developed from a basis of reciprocity, communication and collaboration². Multi-directional knowledge exchange can exist in a variety of contexts, including intercultural and transdisciplinary collaborations and the science-policy interface.

A Sharing Circle for Arctic Youth and Early Career Professionals

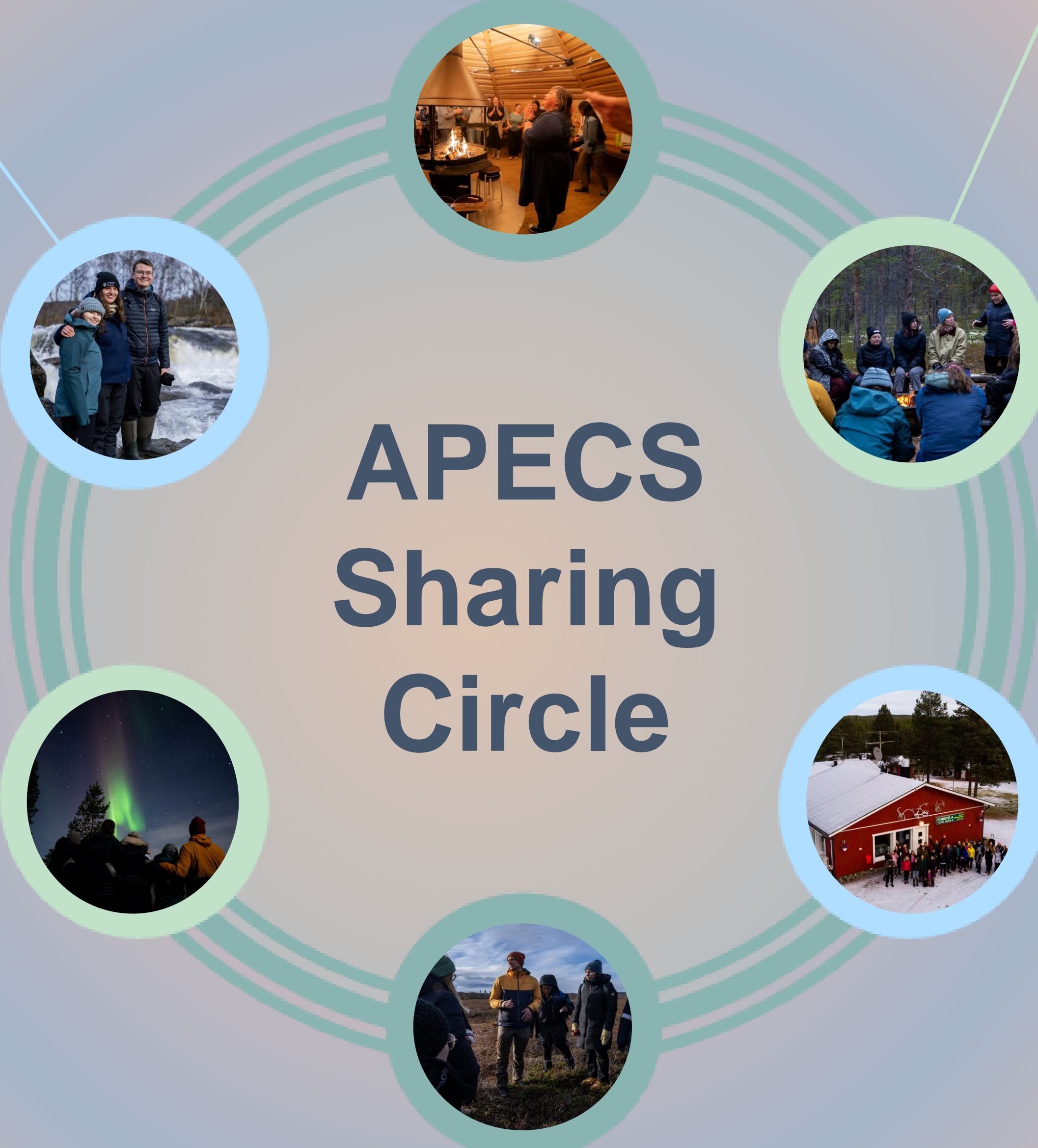
The Association of Polar Early Career Scientists (APECS) and the EU Horizon 2020 Arctic PASSION Project organized the Sharing Circle workshop taking place in October 2023.

The Sharing Circle brought together Arctic youth and early-career researchers (ECRs) to facilitate knowledge sharing and learning across diverse disciplines and knowledge systems. Hosted in the Skolt Sámi community, Sápmi (northern Finland), the event created a space that fostered cross-cultural learning between each other and experienced collaborators who have together co-created environmental community-based monitoring (CBM), management and restoration projects.

The week was filled with a diverse range of activities including seminars circled around a wood fire and on the land learning activities. The Sharing Circle participants are now serving as Arctic PASSION Ambassadors for one year, to pass on their learnings to larger audiences.

Challenges	Solutions
Co-Creation projects are facing	For co-creation projects
Trust-building & finding partners In the past trust has been misused, making it often challenging to find partners.	<ul style="list-style-type: none"> Building trust requires sustained engagement overtime and cultural humility Build from pre-existing long-term relationships wherever possible
Develop project ideas & contents There is risk for a mismatch in research interests of the different parties involved.	<ul style="list-style-type: none"> Projects should address community research priorities, both scientific outcomes (i.e., research topic) and process outcomes (i.e., levels of engagement, job opportunities) Clear communication and transparency required from the onset
Funding Funding providers and their systems are often not aligned to support Indigenous self-determination in research or research projects that can be sustained.	<ul style="list-style-type: none"> Co-created and co-managed research projects should be prioritized by funders Flexible funding structures required Resources allocated to support sustained and repeated community visits
Project organization Local partners are often not meaningfully consulted and involved in projects beyond initial consultation meetings and seasonal monitoring positions.	<ul style="list-style-type: none"> Training and funding allocated to community partners to participate and lead specific components of projects wherever possible (e.g., maintaining monitoring equipment) Levels of appropriate community engagement should be determined early in research processes.
Reporting (back) Project outcomes are often not equitable or reported back to communities in applicable and understandable ways. This has caused distrust, harmed community well being and impacted future research efforts.	<ul style="list-style-type: none"> Appropriate communication pathways should be determined in initial project phase and adapted when necessary Deliverables should address community needs (e.g., adaptation and resiliency efforts) and inform next steps (e.g., monitoring needs)

APECS Sharing Circle



Key Learnings from the Sharing Circle

As permafrost scientists, we carry a responsibility beyond our field of research to respect Indigenous cultures and address relevant community priorities wherever possible.

We must take steps to educate ourselves about the cultures and customs of Indigenous Peoples and local communities where the research we participate in is situated.

Permafrost research must aim to address community priorities and empower community voices through appropriate community engaged research processes, for example through co-created and co-management approaches. A long-term outlook should be taken to sustain relationships, equitable outcomes and high-quality permafrost research.

Capacity sharing can help to produce greater equity in research outcomes and contribute to a better understanding of the multifaceted impacts of rapid change across permafrost landscapes.

Good Practice: examples from co-created & co-managed research projects

Supporting the co-development of community-based contaminant monitoring through two-way capacity sharing in Tuktoyaktuk, Inuvialuit Settlement Region	Ecological restoration of a river in cooperation with the Snowchange Cooperative ² - a community based scientific & cultural non-profit organization	Integrating local environmental observations and remote sensing to better understand the life cycle of a thermokarst lake in Arctic Alaska
L. Mercer, D.-I. Pokiak, D. Whalen, et al. ³	T. Mustonen, K. Mustonen, P. Feodoroff, et al. ⁴	B. M. Jones, S. S. Tessier, T. Tessier, et al. ⁵
<ul style="list-style-type: none"> Early and sustained dialogue facilitated two-way learning between a non-Indigenous ECR and Community Liaison An accessible and applicable CBM study was co-developed to address community concern of contaminants from legacy infrastructure sources Results disseminated back to community and fed into longer-term Indigenous-led program, supporting further monitoring, training and youth engagement 	<ul style="list-style-type: none"> Industrial alteration at Vainosjoki river (northern Finland) in the 1960s Subsequent loss of spawning grounds Cultural impacts for the Sámi community Sámi-led ecological habitat restoration (2013-2017), accompanied by monitoring of water quality and ecological indicators The Finnish Forestry Agency adopted the quota system for the river 	<ul style="list-style-type: none"> Collaborative study on a thermokarst lake life cycle Local observers documented the drainage event in 2022 With remote sensing applications, prior lake developments could be traced back to 1951 Foundation for additional studies, such as those discerning greenhouse gas production potentials
		



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Contact

fabian.seemann@awi.de
louise.mercer@northumbria.ac.uk

YouTube

Scan the QR code for the Sharing Circle video.



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Olivia Rempel, GRID-Arendal

