Ethical Collaborations in Arctic Research

Photo: Árvu

Guidance for Researchers and Indigenous Communities

Imprint

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Photos, composition and layout: Árvu

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[1] Ikaarvik is an Indigenous-led youth organization bridging research and communities across knowledge systems (www.ikaarvik.org). Ikaarvik chose to be included as an organization.

Reviewers

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Photo: Lia Laureen Schulz

About the partners

The Saami Council is a voluntary Sámi organization with Sámi member organizations across Sápmi (Sámi territory) working to promote Sámi rights and interests since it was founded in 1956.

Ikaarvik is an Indigenous-led organization based in Mittimatalik (Nunavut, Canada) that creates opportunities which allow Northern Indigenous youth to empower their communities for self-determination in Arctic research and decision making. Ikaarvik was envisioned over a decade ago by a group of youth who wanted to create greater and more meaningful Indigenous involvement and leadership in Arctic research.

Based in Potsdam, Germany, the **Research Institute for Sustainability** conducts transdisciplinary research with the goal of understanding, advancing, and guiding processes of societal change towards sustainable development. Since 2020, the research group now called reIMAGINE Arctic Research: Relations, Ethics, and Methods has focused on ethical and equitable research relations across knowledge systems, focusing especially on the circumpolar North.

This document's guidance is primarily focused on Arctic regions where our organisations operate, including parts of Sápmi (northern Europe), North America, and Kalaallit Nunaat (Greenland). While our organisations bring different areas of expertise, together, we offer over 50 years of combined experience engaging with research ethics in these contexts. We are also all contributors to CO-CREATE Arctic[2], a collaborative of Indigenous and non-Indigenous partners focused on co-creation in the Arctic. Through this work, we have learned a great deal from other contributors and continue to reflect on how research processes and systems can more meaningfully uphold Indigenous rights. These experiences inform the guidance we share here and shape our ongoing efforts to strengthen ethical collaboration in the Arctic.

[2] For more information about CO-CREATE Arctic, please visit https://co-create-arctic.org/

Introduction

Research conducted collaboratively between Indigenous and non-Indigenous partners produces better-informed and more relevant data, which may lead to better knowledge for decision-making. While this type of research is the ideal, many scientists and researchers are uncertain as to how to develop the proper relationships to begin such processes. In addition, many Arctic Indigenous communities have not published their own formal research guidelines, making it difficult for researchers to know where and how to begin the co-creative process. Understanding these challenges, the Saami Council, Ikaarvik, and the Research Institute for Sustainability have partnered to create this guidance document to support progress towards collaborative research. Our intention is to support researchers and communities in building good relations and developing project-specific agreements for ethical engagement. This document's guidance is primarily focused on Arctic regions where our organisations operate, including Sápmi (northern Europe), North America, and Kalaallit Nunaat (Greenland). It is important to note, however, that if a community has its own research guidelines, these take precedence over any general information provided herein, and researchers must follow those as a priority. This guidance does not prescribe a single approach but instead emphasises listening to the community and respecting their ways and needs. Each community may choose different pathways to collaboration, and researchers should adapt accordingly.

> **This guidance does not prescribe a single approach but instead emphasises listening to the community and respecting their ways and needs.**

What's in this document, and how to use it

This document is intended to provide guidance for researchers and Arctic Indigenous communities seeking to establish ethical, respectful, and mutually beneficial research collaborations. It includes an overview of the colonial legacy of research, the importance of reflexivity, and considerations for building trust-based relationships. The document offers guidance for co-creating ethical agreements and highlights the importance of data sovereignty. It also offers practical questions to guide researchers in their internal reflections and structured discussions with communities. It is a tool that can and should be used throughout all stages of a research project–from the planning phase to evaluation–to ensure meaningful, equitable, and mutually beneficial engagement.

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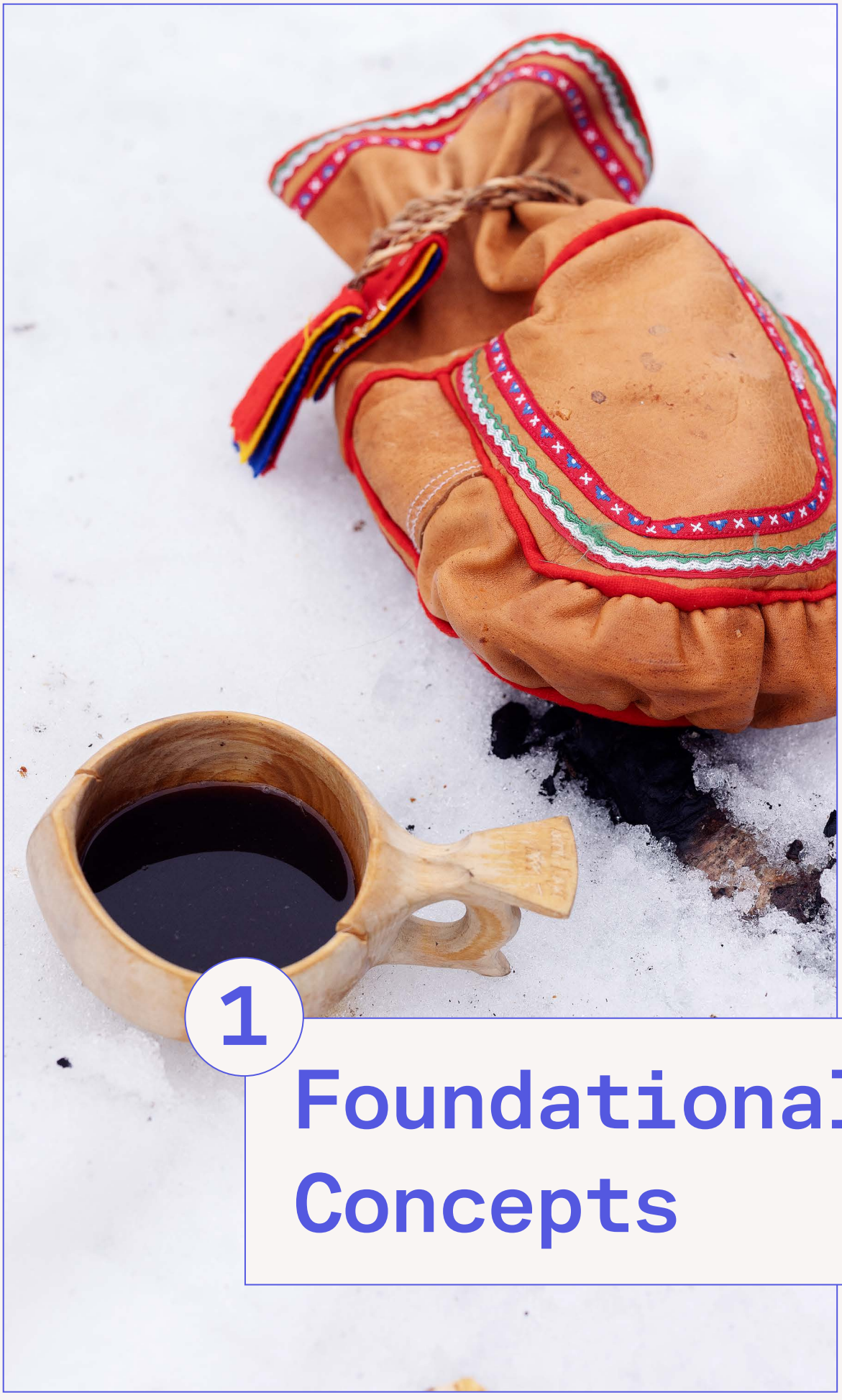
Who is this for?

This guidance is applicable to all researchers whose work in the European and North American Arctic involves or affects Indigenous lands, peoples, cultures, or livelihoods. If your research focuses on topics like water, wildlife, or ecosystems, it is likely deeply connected to the lives of Indigenous peoples, making this guidance relevant to most Arctic research. Whether conducting natural or social science research, engaging with Arctic ecosystems, resource management, governance, or cultural studies, researchers must consider the ethical implications of their work. Research that is not perceived to directly involve communities of Indigenous Peoples may still have an impact on their rights, territories, or ways of life. This document is intended to guide navigating these complexities, ensuring that research is conducted with respect, transparency, and meaningful collaboration where appropriate.

> **Whether conducting natural or social science research, engaging with Arctic ecosystems, resource management, governance, or cultural studies, researchers must consider the ethical implications of their work.**

When should you use it?

This guidance document should be revisited throughout the research process, from initial engagement through project evaluation. It can help researchers build relationships, establish ethical agreements, and navigate challenges as they arise. Since each research project and community context is different, not all sections will be equally relevant. Researchers and communities should apply the guidance flexibly, using the parts that best support their specific collaboration rather than treating it as a one-size-fits-all solution. We encourage researchers to share this guidance with colleagues and collaborators to promote ethical research practices across the Arctic.



1 Foundational Concepts

Photo: Árvu

Glossary: Key concepts explained

Below are key concepts for this guidance document, along with brief explanations. In some cases, there is no single, fixed definition that fully captures their meaning across all contexts. However, the descriptions provided here offer a general sense of how these terms are understood and used within this document.

Photo: Ikaarvik

Co-creation[1]: A way of collaborating across knowledge systems that aims to involve and empower all participants in the research process and ensure equal benefit from the knowledge produced. It recognises that participants bring deep differences in how knowledge and the world are understood. Unlike traditional approaches that try to fit Indigenous science and ways of knowing into dominant science, co-creation seeks to bring different knowledge systems, approaches, and ways of thinking to work alongside each other from the start. Drawing on the strengths of different ways of knowing and being, co-creative practices and processes can help to create more holistic, inclusive, ethical, and relevant outcomes.

Colonialism in science[2]: Ongoing power relations in research that prioritise access to Indigenous lands and the extraction of Indigenous knowledges while marginalising Indigenous lives. Colonialism is systemic. It does not refer to single acts of exclusion, but to the ongoing structures and institutions that maintain unequal power. This system continues to support dominant knowledge systems and benefits a dominant minority at the expense of others.

Dominant science/knowledge[3]: Ways of knowing that hold power in institutions and decision-making. While often shaped by Western (see explanation below) traditions, dominant science is defined by how it takes up space, sets rules, and excludes or devalues other ways of knowing.

Indigenous data sovereignty[4]: The right of Indigenous Peoples to govern the collection, ownership, and application of their own data. It derives from the inherent rights of Indigenous Peoples to exercise control over their knowledge, information, and data following their values, priorities, and self-determination.

Indigenous science/knowledge[1]: Sciences rooted in the unique ways in which Indigenous Peoples and communities create and pass on ways of knowing, being, and relating to the world.

Indigenous self-determination[5]: The inherent right of Indigenous Peoples to govern their political, legal, social, spiritual, and intellectual lives. It challenges colonial control by rejecting the need for validation from dominant systems. Indigenous self-determination supports strengthening communities and knowledge systems based on their own terms.

Reflexivity: The practice of critically reflecting on one's position, biases, and assumptions and how these factors influence situations and contexts.

Research process[6]: The full cycle of research activities, beginning with early relationship-building and community engagement, continuing through design and data collection, and extending into sharing results, evaluation, and lasting collaboration. Each of these stages provides its own unique possibilities for co-creation and collaboration.

Western science/knowledge[1, 7]: Knowledge systems that are mainly based on European ways of understanding the natural world. Some of these systems have become dominant in contemporary academic systems by claiming to be neutral, universal, and superior. However, they are actually shaped by specific worldviews and values.

Definitions are adapted from:

[1] Herrmann, T.M., Brunner Alfani, F., Chahine, A., Doering, N., Dudeck, S., Elster, J., Fjellheim, E., Henriksen, J.E., Hermansen, N., Holmberg, A., Kramvig, B., Keskitalo, A.M.N., Omma, E.M., Saxinger, G., Scheepstra, & A., van der Schot, J. (2023). Comprehensive Policy-Brief to the EU Commission: Roadmap to Decolonial Arctic Research. University of Oulu, Helmholtz-Centre for Environmental ResearchUFZ, The Indigenous Voices (IVO) research group – Álgoálbmogii jienat, Arctic University of Norway UiT, Saami Council. Áltá – Kárášjohka – Leipzig – Oulu. https://doi.org/10.25365/phaidra.400.

[2] Smith, L. T. (2012). Decolonizing methodologies (2nd ed.). Zed Books.

[3] Liboiron, M. (2021). Pollution is colonialism. Duke University Press.

[4] The First Nations principles of OCAP® (Ownership, Control, Access, and Possession). OCAP® is a registered trademark of the First Nations Information Governance Centre (FNIGC). For more information visit: https://fnigc.ca/ocap-training/

[5] Coulthard, G. S. (2014). Red skin, white masks: Rejecting the colonial politics of recognition. University of Minnesota Press.

[6] C. Pedersen, M. Otokiak, I. Koonoo, J. Milton, E. Maktar, A. Anaviapik, M. Milton, G. Porter, A. Scott, C. Newman, C. Porter, T. Aaluk, B. Tiriraniaq, A. Pedersen, M. Riffi, E. Solomon, & S. Elverum. 2020. ScIQ: an invitation and recommendations to combine science and Inuit Qaujimajatuqangit for meaningful engagement of Inuit communities in research. Arctic Science. 6(3): 326-339. https://doi.org/10.1139/as-2020-0015

[7] Aikenhead, G. S., & Ogawa, M. (2007). Indigenous knowledge and science revisited. Cultural Studies of Science Education. 2: 539-620. https://doi.org/10.1007/s11422-007-9067-8

2 Background research

Photo: Árvu

Research Landscape

This section offers a high-level overview of important themes – like Indigenous rights, ethical engagement, data sovereignty, and trust-building – that shape Arctic research today. It is designed to help you reflect on the broader context, prepare thoughtfully, and identify areas to explore more deeply within your own field.

Photo: Ikaarvik

Recognising the colonial legacy of research

The history of research in the Arctic is deeply intertwined with colonial practices. We understand that colonial history may be unfamiliar to researchers from different backgrounds and can be uncomfortable to face. Very briefly, it is important to understand that Indigenous Peoples have often been treated as passive subjects of study, with little consideration for their perspectives, rights, or the impacts of research on their lives. This legacy includes practices such as extracting knowledge, objects, and human remains without consent, misrepresenting Indigenous perspectives, and failing to return benefits to communities. These historical injustices continue to influence research relationships today, creating inherent power imbalances between external researchers and Indigenous communities. Researchers must actively work to dismantle these inequities by fostering equitable and collaborative partnerships, and we encourage you to learn the specific realities of colonisation on the regions and peoples that you will be working with.

> **Researchers should critically examine how their position, goals, and institutional affiliations influence the dynamics of a project.**

Reflexivity – the practice of critically reflecting on one's position, biases, and assumptions – is a vital part of this work. Researchers should critically examine how their position, goals, and institutional affiliations influence the dynamics of a project. This can be an uncomfortable, but deeply necessary, step in your work. Understanding and acknowledging how one's positionality and particular research practices tie into larger systems of colonialism may help mitigate doing further harm. It may also reduce the introduction of cultural biases into the research and contribute

to making space for values like mutual respect, inclusivity, and fairness to be introduced into a project. By thoughtfully reflecting on their own roles, all research partners can take meaningful steps to build trust and align with each other during all stages of a research project.

Regulatory landscape

Indigenous Peoples have inherent rights that exist regardless of whether they are recognised by states, including rights to land, knowledge, self-determination, and to maintain and practice distinct cultures, languages, governance systems, and ways of life. However, these rights have been repeatedly infringed, including through research processes. Therefore, many states and international bodies have developed laws, agreements, and policies to help sustain efforts to uphold these human rights and build better relationships. These legal frameworks vary in strength across jurisdictions but reflect a responsibility and often an obligation to uphold Indigenous rights in research. For example, the United Nations Declaration on the Rights of Indigenous Peoples (2007) is recognised internationally and enforced in Canada. While some of these frameworks are directed at governments and institutions, individual researchers also carry responsibilities and should reflect on their own obligations to act in accordance with these principles. It is also important to acknowledge that Indigenous Peoples are actively reclaiming and strengthening their own governance over research and data by developing and practising protocols that reflect their values, responsibilities, and authority, making respectful, project-specific ethical agreements an essential foundation for collaboration.

> **researchers also carry responsibilities and should reflect on their own obligations to act in accordance with these principles.**

Establishing ethical agreements

Collaboration with Indigenous communities often requires project-specific agreements to guide ethical engagement. While these agreements may not always be formalised as "guidelines," they could take the form of protocols, Memoranda of Understanding (MoUs), or agreements on specific practices. Such agreements should outline mutual expectations, roles, and responsibilities, ensuring transparency and clarity for all parties involved. Importantly, these agreements should be co-created with the community, reflecting their priorities and ways of working.

> **agreements should be co-created with the community, reflecting their priorities and ways of working.**

To do this effectively, researchers should engage in open dialogue, listen actively, and be prepared to adapt their approach based on the community's capacity, timelines, and preferred ways of collaborating. This might involve holding multiple discussions, working with community liaisons, or allowing sufficient time for community input and decision-making. It is important to note that the structures for collaboration – such as who to engage with and how to work with Indigenous knowledge – vary from one community to another, and many communities may lack formal structures for such processes. Researchers must remain flexible and responsive

to the unique context of each community. It is crucial to strike a balance between ethical engagement and preventing research fatigue by avoiding overburdening communities with additional tasks or uncompensated work.

The importance of data sovereignty

The ownership, control, use, and interpretation of data generated during research are critical considerations in ethical engagement. Indigenous communities have the right to determine how data about their lands, knowledge, and lives are collected, stored, and shared. Researchers should ensure that data sovereignty principles are respected, prioritising community ownership and decision-making over research outputs. This includes ensuring that data is not misappropriated, misinterpreted, or used in ways that could harm the community. While good intentions are important, they do not always guarantee that no harm will be done. Therefore, communities should define what they consider harmful, ensuring their perspectives and needs are prioritised. Agreements should also clarify data-sharing protocols, long-term storage, and accessibility, enabling the community to retain control over their knowledge and its dissemination.

> **communities should define what they consider harmful, ensuring their perspectives and needs are prioritised**

Examples of Indigenous Data Sovereignty Principles:

- The Global Indigenous Data Alliance's Collective Benefit, Authority to Control, Responsibility, and Ethics (CARE) Principles
- The Saami Council's Sámi Ownership and Data Access (SODA) Principles
- The First Nations Information Governance Centre's Principles of Ownership, Control, Access, and Possession (OCAP®)*

Photo: Lia Laureen Schulz

*OCAP® is a registered trademark of the First Nations Information Governance Centre (FNIGC). For more information visit: https://fnigc.ca/ocap-training/

Building trust through long-term relationships

Trust is central to successful collaboration with Indigenous communities. Building trust requires time, patience, and a commitment to genuine engagement. Researchers should prioritise the perspectives of the community, even when these challenge or reshape their initial research goals. Respecting the community's ways of working – whether in terms of venues, languages, or the involvement of key participants like elders and youth – demonstrates a commitment to meaningful partnership. Establishing trust also enables researchers to work more effectively with Indigenous knowledge, ensuring that it is treated with sensitivity and care, which benefits both the research process and the community.

Photo: Lia Laureen Schulz

Broader aims of research

Research is not always about producing entirely new knowledge. It can also involve refining, articulating, and presenting existing knowledge in ways that are accessible and useful to both the community and the broader public. By aligning research with community needs and ensuring relevance, researchers can create outcomes that are not only academically valuable but also meaningful for the communities involved. It is important to consider whether the research aligns with the community's priorities and whether it is truly necessary. Communities have no obligation to engage in research and have the right to choose not to dedicate their time or resources to a project if it does not align with their needs or priorities.

> **science, research and Indigenous knowledge are bridged to create the best information for making solid decisions and policies in a rapidly changing Arctic.**

Further, we believe that using this guidance document can build researchers' capacity to work collaboratively and co-creatively, which is an essential part of improving the way Arctic research is and will be conducted in the future. By improving your own capacity to work collaboratively with Indigenous Peoples, you are playing an active role in determining a path where science, research and Indigenous knowledge are bridged to create the best information for making solid decisions and policies in a rapidly changing Arctic.

This document seeks to support researchers in creating partnerships that respect Indigenous rights, centre community perspectives, and produce outcomes that benefit both science and the people at the heart of Arctic research. By fostering more ethical and collaborative approaches, we can collectively move toward a future where research uplifts, rather than exploits, the communities it engages.

3 Implementation

Photo: Árvu

Guiding questions

These guiding questions are meant to support both personal reflection and meaningful conversations with project partners. The first set helps researchers think about their own role and readiness; the second set focuses on how the research is designed and how it aligns with community priorities and protocols.

Reflexive Questions for Researchers to Consider

Learning, Understanding Context, and Preparing for Engagement

- What do I know about the community's history, culture, and current challenges? Do I need to familiarise myself with it more?
- In what ways has colonization (governmental, economic, spiritual, linguistic and cultural), both past and present, impacted the community or region I will be working with?
- What is the colonial history of research in this region, and how might it influence the community's perceptions of my work?
- What is the colonial history of research in this region, and does my work reinforce or potentially undo ongoing systems of colonialism in this research context?
- What biases or assumptions might I bring to this project, and how can I address them?
- Are there existing research guidelines or examples of best practices in similar contexts that I can learn from?

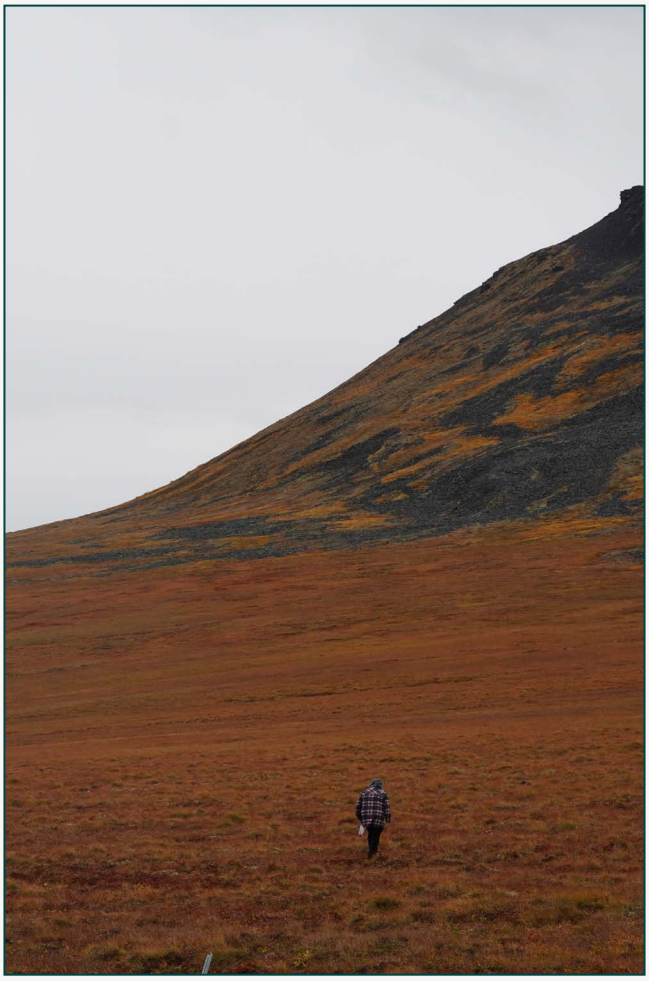


Photo: Lia Laureen Schulz

Defining Intentions and Goals

- What are my goals for this research, and how can I align them with the community's needs?
- How will this research benefit the community directly or indirectly?
- Am I prepared to adjust my project's focus based on the community's input and priorities?

Practical Preparations

- What ethical guidelines are already available within the region, and is everyone familiar with them?
- How can I ensure that Indigenous knowledge is treated respectfully and not exploited?
- How will I approach data collection, storage, and sharing to uphold the principles of data sovereignty?
- What steps can I take to mitigate power imbalances during collaboration?

Ethical Considerations

- Have I identified all relevant rightsholders (e.g., elders, youth, knowledge holders) who might need to be involved?
- How can I ensure transparency and accountability in my communication and actions?
- Do I have the necessary resources (time, funding, flexibility) to invest in building a meaningful relationship with the community?

Photo: Ilaria Sartini

Questions to Discuss and Co-Create with the Community

Understanding Community Needs and Perspectives'

- What does the community see as the purpose and potential benefits of this research?
- Are there existing traditions, practices, or informal protocols that should guide the collaboration?
- What are the community's priorities, challenges, or pressing issues that might shape the research focus?

Building Relationships and Trust

- What are the best ways to build trust and respect between researchers and the community?
- Who should be involved in the discussions and decision-making process (e.g., elders, youth, leaders)?
- Are there specific cultural practices or norms researchers should follow to show respect?

Ethical Data Management

- How does the community want data to be collected, stored, and shared?
- Who will own the data, and how will decisions about its use be made?
- What safeguards should be in place to protect sensitive or culturally significant information?

Developing the Protocol

- What form should our agreement take (e.g., protocol, MoU, shared principles)?
- How can we ensure that the protocol reflects the community's needs and values?
- What processes should we include for revisiting and revising the protocol during the project?

Post-Research Considerations

- How should research findings be shared with the community, and in what formats?
- What are the community's expectations for ongoing access to the results and data?
- How will relationships be maintained after the project and are there ways the collaboration could extend beyond this project, if mutually beneficial?

Collaboration and Communication

- What are the community's preferred ways of staying informed about the project (e.g., regular meetings, written updates)?
- How can we ensure the community is meaningfully involved in decision-making throughout the project, without overburdening them?
- What processes can we establish to address any conflicts or misunderstandings that arise?

Photo: Ikaarvik

Discussion starters

This section offers six possible entry points to spark conversations about why co-creative research between Indigenous and non-Indigenous partners matters. It's not exhaustive – adapt and build on these themes to fit your context.

1

Legal responsibilities and upholding Indigenous rights

Indigenous Peoples have inherent rights – including to land, knowledge, and self-determination – that are often overlooked in research. Laws and agreements exist to uphold these rights, and researchers should align with them.

Example: Free, Prior, and Informed Consent (FPIC): A foundation of ethical research[1]

FPIC refers to the right of indigenous peoples to give or withhold their consent for any action that would affect them. This principle is included or recognized in many laws, declarations, and agreements. Free means no one is forced; Prior means it happens before any decisions; and Informed means people get all the important facts to understand.

2

Fulfill ethical responsibilities beyond the law

Legal frameworks set minimum standards, but they often don't reflect specificities of Indigenous laws or the long-standing and unique relationships Indigenous Peoples hold with their lands. Following community protocols respects these relationships and supports self-determination.

Example: Näätämö Watershed co-management: Guided by Skolt Sámi protocols[2]

Despite existing legal protections, Skolt Sámi felt their rights were not upheld in practice, so they developed a Näätämö watershed co-management initiative with the Snowchange Cooperative as a bridge to other knowledge systems. Guided by Skolt priorities, this ongoing initiative has produced ecosystem insights, informed restoration, and strengthened Sámi self-determination.

[1] Declaration on the Rights of Indigenous Peoples. (2007). United Nations General Assembly. Retrieved May 19, 2025, from https://www.un.org/development/desa/indigenouspeoples/wp-content/uploads/sites/19/2018/11/UNDRIP_E_web.pdf

3

Deepen understandings through multiple ways of knowing

Indigenous Peoples have long gathered information and data about their territories through generations of close observation and relationship. Combining knowledge systems can deepen understanding and lead to more complete, contextually grounded research.

Example: Braiding knowledge systems to understand goose populations[3]

Inuit geese harvesters and Elders partnered with southern researchers (Environment and Climate Change Canada) to combine generations of lived knowledge with aerial survey data to track light goose population changes. Together, they identified shifting migration patterns, population trends, and ecosystem impacts across space and time.

4

Support mutual learning and two-way capacity sharing

Collaborative research draws on partners' different strengths, such as place-based observation, specific tools, or funding. Meaningful partnerships involve reciprocal sharing through genuine exchange of time, knowledge, and resources throughout the research process.

Example: Kugluktuk Youth & Oceans North: Sharing skills, building knowledge[4]

Kugluktuk youth partnered with Oceans North (Vancouver, Canada) to sample microplastics, bringing local priorities, site knowledge, and sustained monitoring. Visiting researchers contributed lab tools and training to analyse water in new ways. The partnership built skills on both sides and sparked new community-driven research questions.

[2] Collaborative Management along the Näätämö Watershed. (2025). Snowchange Cooperative. Retrieved May 19, 2025, from https://www.snowchange.org/efforts-in-the-skolt-sami-areas-of-naatamo-watershed-finland/collaborative-management-along-the-naatamo-watershed/

[3] Carter, N. A., L. M. Martinez-Levasseur, V. Johnston, P. A. Smith, A. Irkok, B. Saviakjuk, L. Emiktaut, Salliq Project Management Committee, Arviat Project Management Committee, B. Chaudhary, G. Ljubicic, R. T. Alisauskas, F. Baldwin, P. B. Y. Wong, and D. A. Henri. 2025. Braiding Inuit knowledge and Western science to understand light goose population dynamics under a changing climate. Ecology and Society 30(2):17. https://doi.org/10.5751/ES-16079-300217

[4] Westdal, K. & Mussells, O. (2018, August 1). Monitoring Microplastics in an Arctic Community. Oceans North. Retrieved May 19, 2025, from https://oceansnorth.org/2018/08/01/monitoring-microplastics-in-an-arctic-community/

5

Make research more relevant and applied

Arctic research influences Indigenous communities directly and indirectly. Aligning with local priorities and engaging early helps ensure the right questions are asked and supports decisions grounded in both scientific and lived knowledge, so that the research is actually used.

Example: Climate Impacts on Terrestrial Environments: A co-developed reindeer herding app[5]

Researchers and Sámi herders worked together to build a digital tool tracking weather and grazing conditions. This tool supports local decision-making, climate adaptation, and herder priorities.

6

Foster joy and relationship-building

Working collaboratively creates a space where research is not only meaningful but also enjoyable. When relationships are built on trust and mutual respect, the process becomes energizing and rewarding for everyone involved.

Ikaarvik: Co-creation can be powerful - and fun![6]

Ikaarvik projects have built skills among youth and visiting researchers alike, sparked lasting friendships, and produced relevant, community-driven results, all grounded in mutual respect and shared enthusiasm. They report that co-created research isn't just more ethical and effective – it's more enjoyable.

Photo: Ilaria Sartini

[5] Heatta, M. J. (2024). Climate Impacts on Terrestrial Environments (CITE). Saami Council. Retrieved May 19, 2025, from https://www.saamicouncil.net/en/cite

[6] Towards shared understanding of co-creative and Indigenous-led research for ICARP IV. (2025, March 28). IASC. Retrieved May 19, 2025, from https://iasc.info/our-work/working-groups/social-human/shwg-projects/1307-towards-shared-understanding-of-co-creative-and-indigenous-led-research-for-icarp-iv