

RPT 4 Needs for Research (Draft 2025-03-02)

What to include in chapter 1.1.1:

Please identify the 5 of the most urgent research needs for your RPT topic area and fill them in the table below. Please include for each a description / definition of the research need and a rationale why your RPT decided to include it in this report. . These research needs may include depending on the focus of the RPT e.g. knowledge gaps, practice gaps, investment needs). Focus in this chapter should be on research needs that are only relevant to the RPT topic area.

The DRAFT RPT 4 research needs presented in the table below were produced by the RPT 4 Co-Chairs drawing on the comments and ideas provided by RPT 4 sub-theme groups through the RPT 4 Needs and Priorities Worksheets. Feedback on what is outlined here as well as things that may be missing are welcome. We expect this text to evolve and develop further based on feedback received before and during the ICARP IV Conference 2025.

Need for Research	Description / Definition of the Research Need
1. Enhance the resilience of Arctic Research to political change, instability and shocks.	<p>Current geopolitical tensions and political instability are affecting Arctic research. This contributes to a breakdown in Pan-Arctic research cooperation, hinders the collection and sharing of data, leads to further knowledge gaps, and carries the potential for incomplete or inaccurate research findings.</p> <p>In a changing world order and in the context of an unpredictable future in the Arctic, we need to dedicate attention to analyzing experiences to build an understanding of how these tensions impact what Arctic research is prioritized, how Arctic research is done (data collection, data sharing, transnational partnerships, etc.), approaches to Arctic research cooperation (bilateral initiatives, mini-lateral/regional cooperation), who is involved in Arctic research, who the research serves, how research may serve other functions (diplomatic, relationship building, communication channels, security/military interests, etc.), and how this research informs policy (environmental protection, sustainable development, emergency management, etc.). This knowledge can be used to develop informed strategies to help mitigate challenges and sustain critical Arctic research in the face of political change, instability, and shocks; support research communities to maintain flexibility and adaptability; and inform approaches for re-establishing research cooperation, where and when appropriate.</p>
2. Foster mechanisms for North-to-North knowledge exchange and research collaboration	<p>Arctic knowledge exchange and research collaboration often rely on South-to-North relationships and mechanisms. This reinforces biases in Arctic research, contributes to extractive research practices, and constrains Northern research capacity. There is a need to break down barriers and foster resilient frameworks/mechanisms for North-to-North knowledge exchange and research collaboration between Arctic peoples, communities, researchers, and governments. This could include strengthening existing mechanisms (examples?) or establishing new mechanisms, as needed. Proposed mechanisms? are vital for building North-to-North relationships, facilitating the efficient exchange of ideas, conducting research that meets the needs of Arctic peoples, producing research that benefits from the knowledge and expertise of Arctic peoples, and bolstering long term Northern research capacity. Building these mechanisms recognizes the unique and specific characteristics of the Arctic environment and its peoples.</p>

Need for Research	Description / Definition of the Research Need
3. Continue to strengthen decision-making processes for Arctic research within and between states that prioritize the inclusion of Arctic Indigenous Peoples and Arctic communities and encourage and enable coordination of research that enhances efficiency and effectiveness.	<p>Arctic research cooperation is shaped and enabled by decision-making processes both within and between states. These domestic and transnational decision-making processes involve, to varying degrees, governments, Indigenous rights holders, academia, public and private funding institutions, the private sector, NGOs, and other stakeholders. These various processes define key aspects of Arctic research, including priority setting, resource allocation, infrastructure needs, and conditions and criteria for research.</p> <p>Over the last several decades, Arctic research has evolved. There are a growing number of examples of research decision-making processes and activities that acknowledge the need to include the perspectives and interests of Indigenous Peoples and other Arctic residents (examples). There are also increasing attempts to break down silos between decision-making processes domestically (examples) and transnationally (examples).</p> <p>While progress has been made to establish decision-making processes for Arctic research that are better coordinated and inclusive, there are still significant barriers to operationalizing the inclusive and coordinated Arctic research needs and aspires to, which is made more challenging by current political shifts and instabilities that are creating new constraints and more challenging conditions at a time when pace of change in the Arctic, and by extension the need for Arctic research, is accelerating.</p> <p>Continuing to advance inclusive and coordinated Arctic research requires dedicated effort to develop and sustain research decision-making processes, including Arctic research principles, joint programs, shared funding models, and common research protocols—to strengthen global partnerships. Additionally, identifying successful models for cooperation and establishing common metrics (e.g., joint publications, student exchanges, and shared grants) is essential for assessing the effectiveness of these collaborations, ensuring measurable impact and long-term success.</p>
4. Leverage multilateral fora/bodies to support international Arctic research (collaboration)	<p>While a lot of Arctic research is driven by nationally determined agendas/ nationally set priorities, many circumpolar and international bodies and organizations play a key/central role in fostering international Arctic research (collaboration).</p> <p>Some of those institutions are well established, such as the Arctic Council (AC), Intergovernmental Panel on Climate Change (IPCC), and World Meteorological Organization (WMO). Some are more recent like the 2018 Central Arctic Ocean Fisheries Agreement (CAOFA) that attempts to coordinate scientific research among the parties and relevant stakeholders under its Joint Program for Scientific Research and Monitoring (JPSRM). Finally, other important/relevant instruments, including the 2017 Agreement on Enhancing International Arctic Science Cooperation, while formally in force, remain to be operationalized and implemented.</p> <p>In a rapidly evolving environment, there is a need to both map the existing universe of international bodies relevant to Arctic research as well as identify/examine the impacts on these institutions of ongoing (geo)political developments. Such understanding can help leverage their support to Arctic research as well as inform pathways for ensuring more robust/resilient Arctic research moving forward. It could also facilitate exchange of information and data between and among these institutions, reveal existing gaps, improve synergies and reduce redundancies (if any). Lastly, it could help with pooling resources, including research funding.</p>

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5. Strengthen the dialogue between researchers and decision-makers on critical Arctic issues	<p>Arctic research cooperation performs, or has the potential to perform, multiple objectives. At its most basic, it enables research that depends on accessing data, knowledges, places, and infrastructure across borders in a region with small, remote populations, limited infrastructure, and difficult operating conditions. Cooperation is, in some cases, also critical to conduct Arctic research that is complete and accurate, and, by extension, useful to inform decision-makers (governments, rights holders, private sector, and other stakeholders) on critical Arctic issues and global issues connected to the Arctic.</p> <p>The importance of the research-to-policy interface has been central to Arctic research cooperation for several decades through institutions like the Arctic Council, Polar Code, IPCC, and the CAOFA. Continuing to strengthen communication pathways, frameworks for the exchange of information and ideas, and mechanisms for dialogue between researchers and decision-makers is critical to ensure evidence-based decision-making and research that responds to the present and future opportunities and challenges in the Arctic and globally.</p> <p>Lastly, research cooperation during times of political instability and tension, can play an important role in sustaining diplomatic ties and relationships when more formal mechanisms are damaged or broken, as we currently see in the Arctic.</p> <p>Acknowledging these expanded functions of Arctic research cooperation and the relationship(s) between Arctic research and decision-making highlights the importance of strengthening the capacity of researchers and decision-makers to communicate and translate information and knowledge across these different actors and to develop and implement strategies to increase engagements between them. However, it is also important to actively consider the risks of connections between researchers and decision-makers and consider where and how the Arctic research community can sustain appropriate and important dialogue with decision-makers, while protecting research integrity and ethics.</p>