

Indigenous Influence as Science Diplomacy:

The Case of the Arctic Council and Its Scientific Assessments

An InsSciDE Case Study

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The Arctic is home to a great number of Indigenous peoples who are directly and indirectly affected by changes that they themselves have not caused. It has become increasingly important to include Indigenous peoples and their knowledge in the governance of the Arctic. This case is concerned with the Arctic Council, an organization where Indigenous knowledge is included through “science diplomacy” in the terminology of the Royal Society and American Association for the Advancement of Science. The science diplomacy is performed on three different levels: in the Arctic Council itself and its structure which integrates both Arctic Member States and the Indigenous Permanent Participants as diplomacy for science; in the policy recommendations negotiated on the basis of scientific assessments as science in diplomacy; and in the increased inclusion of Indigenous knowledge in the assessments as science for diplomacy.



Image credit: Harald Finkler/ Arctic Council

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After the end of the Cold War, the Arctic became a region of increased international interest, because of both its strategic geographic position and its resources. Simultaneously, growing knowledge of environmental degradation in the region was cause for concern and action. Pollution from other parts of the world ended up in the Arctic, with severe effects on the people, flora and animals that live there. The end of the Cold War made it possible to organize circumpolar collaboration to battle pollutants and protect the region. Finland took the first initiative to develop a shared strategy. Not only nation-states signed on to this. Indigenous peoples also demanded to be included in the governance of the new Arctic.

Indigenous Arctic peoples' presence in deliberation and decision making aligns with a post-colonial and post-Cold War world order. It was no longer possible for nation-states to totally overlook and overrule the rights of Indigenous peoples, as had previously often been the case. As the governance structure put in place also relied on environmental expertise and new knowledge about the region and its changing nature, the inclusion of Indigenous peoples, their practices and their ways of knowing took on importance.

Science diplomacy takes place on three levels in the workings of the Arctic Council, a "high-level intergovernmental forum" established in 1996. The first level is in the Council itself and its structure integrating both Arctic Member States and the Indigenous Permanent Participants. The second level concerns the recommendations that result from scientific assessments and where agreement is reached with "full consultation and involvement of the Permanent Participants". The third is the growing variety of ways in which Indigenous knowledge is included in the production of knowledge that can feed into the assessments. This case study will describe how these three levels came about and function, before considering issues of capacity for participation in the Arctic Council hybrid governance structure.

The Arctic: A place for imaginaries

The Arctic has for a long time been an exceptional arena for western imaginaries. Multiple stories about the distant, dark, and dangerous region have fed European cultural understanding of the far north. At the same time, it has been a region for resource extraction, with whaling representing the epitome of European arctic exploitation. Whaling was important not least for the resulting oil which was burned in lamps and brought light into European homes. The whaling industry involved a great number of nations and companies competing over the rich bounty. During the 19th century, the far north region also became a place for scientific and other kinds of exploration, producing numerous male heroes who, in line with the understanding of the time, could make claims of discovery. In the 20th century, resource extraction grew to include also fossil resources like coal, and eventually oil and gas. Now the Arctic is an integrated part of global extractivism linking industry, financial systems, and global security. During the Cold War, the Arctic became a place of military presence and observation, to a great degree because the shortest distance between the two superpowers was across the Arctic, adding to the imaginary of the region.

Not a pristine environment

The environmental movement of the 1960s and the 1970s in North America and Europe had generated new initiatives that attempted to monitor and assess global environmental pollution and degradation. To establish a baseline with which to compare the extent of industrial pollution, scientists sought a pristine and unaffected environment. The Arctic seemed suitable, far away from much industrial activity. However, it

turned out that the environment and the Indigenous peoples of the Arctic were not less affected by pollution due to industrialized countries' activities. On the contrary, the levels of persistent organic pollutants and mercury turned out to be very high in certain Indigenous populations. This was in large part because the hazardous substances released elsewhere were distributed globally, tended to be carried to the Arctic and stay

there, and bioaccumulated in the food chain which meant that the traditional food of certain populations was in fact dangerously polluted. Inuit mothers were told not to breastfeed, and the use of traditional and sacred foods was suddenly identified as harmful. Such long-distance impacts of pollution were not only of central scientific interest but had catastrophic social and cultural consequences for the peoples of the Arctic. The background to the creation of first the 1991 Arctic Environmental Protection Strategy (AEPS), and then its outgrowth the Arctic Council in 1996, was a pressing need to attend to threats faced by the Arctic populations and their environment.

Indigenous peoples join states in Arctic Strategy and Council

When the Cold War ended, it became possible to collaborate in new ways in the Arctic. The Arctic Environmental Protection Strategy, following a Finnish initiative, was signed in 1991 by the Arctic states Canada, Denmark (including Greenland), Finland, Iceland, Norway, USSR, Sweden, and the United States. At the same time, Indigenous peoples from three organizations demanded to be part of AEPS: the Inuit Circumpolar Conference (later Inuit Circumpolar Council or ICC), the Saami Council, and the Association of Indigenous Minorities of the North, Siberia and the Far East of the Russian Federation (later Russian Association of Indigenous Peoples of the North or RAIPON). These three organizations duly became observers to the AEPS and took part in most of the discussions and deliberations.



Credit: Inuit Circumpolar Council

A few years later, in 1994, a specific Indigenous Peoples Secretariat was created in Copenhagen to enable coordination between the organizations and further their participation in the work of AEPS. While the formation of an intergovernmental organization aiming for transnational collaboration was not particularly innovative, inclusion of Indigenous organizations was perhaps less common and marked an acknowledgement of their interests.



Credit: Saami Council



Credit: Russian Association of Indigenous Peoples of the North

The Arctic Council, built in 1996 on AEPS foundations, was cast as a "high-level intergovernmental forum". Six Indigenous organizations would claim an active role in the Arctic Council alongside eight Member States. Here the ICC, the Saami Council and RAIPON were made Permanent Participants. This group was extended by the Aleut International Association in 1998 and the Arctic Athabaskan Council and the Gwich'in Council International in 2000.



Credit: Gwich'in Council International

The Arctic Council working groups

Central to the machinery of the Council are working groups, most of which had been created under the aegis of AEPS. It was arguably these organs that would enable science diplomacy to be performed in practice and to become influential.

The groups were originally the Arctic Monitoring and Assessment Program (AMAP), Protection of the Arctic Marine Environment (PAME), Emergency Prevention, Preparedness and Response (EPPR), and Conservation of Arctic Flora and Fauna (CAFF). There was also a task force for Sustainable Development and Utilization. The Arctic Contaminants Action Program (ACAP) was established in 2006. Among these, AMAP was the group that produced the first assessments and has remained highly active since. Its first reports allowed for a deeper understanding of the changes in the Arctic and underscored the necessity of further environmental monitoring.



Credit: Arctic Athabaskan Council



Credit: Aleut International Association

Assessments "with full consultation and involvement"

The central outputs from the working groups are reports and scientific assessments. The purpose of scientific assessments in general is to gather and evaluate scientific data on a region or subject which is put together in reports that also draw conclusions, often for policy makers. AMAP - the Arctic Monitoring and Assessment Programme - has both monitoring and assessment in its name. While monitoring is a scientific practice where surveillance and data gathering take place according to predefined schemes, an assessment is an evaluation of the meaning of the data, involving dimensions that belong to the domain of judgement. (Etymologically the word "assessment" comes from Latin and Roman judicial system where the assessor decided the size of the fine for a convicted crime or taxation of a property.) This meaning has lived on, so the expectation is that an assessment report is not just establishing the state of the art but also offers recommendations and points to further activities.

In the developing practices of AMAP and the other working groups, the work has eventually materialized as two distinct products: one is the scientific report, and the other is the summary for policymakers, also called policy recommendations or plain-language text. The scientific report is peer reviewed in the normal and established way, paying attention to the integrity of scientific knowledge and expertise. Here authorship is essential, and scientists stand by their conclusions. The summary for policymakers, in which the policy recommendations are to be found, are politically negotiated. These texts do not have an author but are instead the product of compromise among the Member States and the Permanent Participants. As the Arctic Council seeks consensus, negotiation is an arduous process and compromise can mean that some findings are not brought forward, that some words are exchanged for others, and that titles are adapted so that everyone can agree.

Indigenous knowledge

There is no consensus on what to call knowledge of the Indigenous peoples of the Arctic. The Ottawa Traditional Knowledge Principles, adopted by the six Permanent Participants in 2015, use the term traditional knowledge and define it as "a systematic way of thinking and knowing that is elaborated and applied to phenomena across biological, physical, cultural and linguistic systems". Moreover, it is "generated through cultural practices, lived experiences including extensive and multigenerational observations, lessons and skills".

The uptake of traditional knowledge is established in the workings of the Arctic Council; however, there is an ongoing discussion about the term. Despite the fact that development and change are underscored as intrinsic to this body of knowledge, the term "traditional" might convey a static character and even be contrasted with knowledge that is perceived as "modern". While that is a misconception, the use of "Indigenous" instead of "traditional" avoids that false dichotomy. Earlier on, the important traditional knowledge in the Arctic context was sometimes regarded as being primarily "ecological", resulting in the abbreviation TEK. However, to draw lines between nature and culture in that way, and to furthermore privilege knowledge that might rest primarily with male hunters (who ranged over a territory observing its ecology), does not necessarily correspond to the inclusive and holistic ways of knowing by Indigenous communities. While "Indigenous" knowledge therefore might be able to better capture and convey what is at hand, that term however would fail to include knowledge in the Arctic carried by local populations that might not be Indigenous. The discussion on terminology is ongoing.

Processes of including Indigenous knowledge

To include Indigenous knowledge into the framework of western science is not a self-evident process. There are, moreover, multiple Indigenous peoples and their respective knowledge systems are not necessarily similar. An often articulated difference between Indigenous and western science knowledge is that the former is practical and aimed at livelihood and survival, whereas the latter is theoretical. Put differently, western scholars make careers and a living out of producing knowledge, whereas knowledge for Indigenous is necessary for living a good life. This also means that the context in which the knowledge production and circulation take place is very different in the two traditions.

Indigenous knowledge can be accessed by western science through methodologies of co-production, such as interviews, questionnaires, workshops, and immersive fieldwork. Gathering and documenting the practical knowledge of Indigenous peoples on, for example, frequencies within and among species, their movements, mating and feeding, have made the knowledge more accessible to others. These methodologies have been developed over time and promoted by scholars with long-term experience of working in the Arctic. However, they build on the premise of voluntary participation. Recently there has been a strong call for a decolonising of western knowledge production in Indigenous areas. This means including Indigenous participants before research projects are embarked upon as well as accepting the Indigenous right to say no to participate in projects. As indicated above, reasons for taking part in research projects vary between the traditions.

A further step in the inclusion of this knowledge into western science is to train Indigenous communities in scientific methods in order to increase control and agency among Indigenous. There are a multitude of projects that focus on this capacity building, although they are not evenly distributed in the circumpolar north.

In the production of assessment reports within the Arctic Council, the editors, lead authors, case-study authors, and contributing authors of different types of text increasingly seek peer reviewed Indigenous knowledge that can be included. Occasionally Indigenous knowledge is directly published through the reports, which in that way makes the knowledge available. In the peer review process of the reports, it is key to find reviewers able to assess the scholarship and conclusions, as with any other peer review.

A few arenas of inclusion

Even though AMAP made early efforts to include Indigenous knowledge in its practice of assessment and evaluation, this was arguably not achieved until the Arctic Climate Impact Assessment, published in 2005 (an accessible "overview" dated 2004 also is available). In the report, climate change was the focus, reflecting the perceived need also to have regional assessments of climate change and impact. This followed the growing understanding that climate change was indeed a severe threat to the planet, but even more so for the polar regions. In the north this fact is called "Arctic amplification". At the time of the introduction of that term it indicated that the temperature change experienced in the Arctic could be twice as great as in the temperate zones of the globe; recent research indicates that this warming is in fact three to four times the global average. The Arctic Climate Impact Assessment (ACIA, 2005) is regarded as having produced an impact not only among already interested parties, but also beyond the Arctic Circle. Indigenous peoples and knowledge were not made the central topic of the report, but after an introduction and a portrait of the Arctic climate past and present, Chapter 3 was devoted to Indigenous perspectives. Both the placement of the chapter and the content signaled the engagement with Indigenous knowledge and interests. The inclusion of Indigenous knowledge varied greatly among other chapters of the report, with the chapter dealing with terrestrial ecosystems standing out for its effort to gather pertinent Indigenous knowledge.

Data gathering and assessment activities during the International Polar Year (IPY) of 2007/8 were also important for deepening understanding of what was sometimes called "the human dimension" of Arctic knowledge production. Natural science has for long relied on machinery to measure items and processes and establish facts. During and after the IPY, there was increased focus on social science and the humanities for studying the Arctic, also furthering methods by which different types of knowledge could be included. Scholarship from the IPY highlighted and brought to the fore the necessity of not just having the natural sciences define the region, but also to expand the types and number of disciplines that can contribute to the understanding of the Arctic.

The Arctic Resilience Assessment that resulted in the Arctic Resilience Report 2016 addressed Arctic peoples' responses in the face of rapid change brought about by climate change. Here the scientific framework was a socio-ecological systems approach that explicitly aimed to integrate environmental and social changes. In the report, the essential importance of traditional knowledge to resilience was underscored from the



"Indigenous communities are facing major economic and cultural impacts": screenshot from "Impacts of a warming Arctic - Highlights" 2004. Source and credit: Arctic Council AMAP, www.amap.no/documents/doc/impacts-of-a-warming-arctic-highlights/792

start. For example, viewing resilience as holistic and integrated, rather than separate, arguably has commonalities with how Indigenous knowledge often view matters as interconnected and where ecosystems and people co-evolve.

A large part of the report was focused on Arctic communities and built on numerous case studies. The studies investigated Arctic communities with the aim of determining resilience. Among the cases were those that showed how fishing had shifted from one species to another or moved in time, exemplifying resilience; others that showed transformation of societies through new activities such as art or tourism; and examples of societies that showed loss of resilience, for example seal hunting brought to a halt because of animal rights movements, or reindeer herding challenged by both state restrictions and technological change. These cases reflected a strong influence of Indigenous knowledge, being co-produced by Indigenous peoples and scientists or relying on peer-reviewed publications using interviews and other methods to learn from the local populations.

Three types of science diplomacy in the Arctic Council

Indigenous peoples are part of the workings of the Arctic Council on all levels. The first one is enabled by the structure of the Arctic Council. There are eight Arctic states and six Permanent Participants, and even though the Arctic Council is an intergovernmental body, the Permanent Participants have from the start been part of the essential work over which the Council presides. This is manifested in the numerous declarations and statements that come out of the Arctic Council and where the Permanent Participants and the people and interests they represent are included and cannot be ignored. The **inclusion of Indigenous peoples at this “high-level intergovernmental forum” can be regarded as diplomacy for science**, in the terminology of the Royal Society/AAAS (2010). This means that including both states and Indigenous organizations can facilitate scientific cooperation in and about the Arctic. Indeed, the Arctic Council is not all about science, but a large part of the work carried out is scientific.

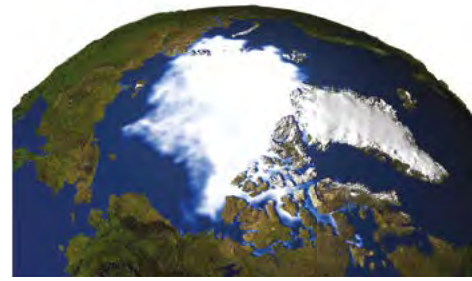
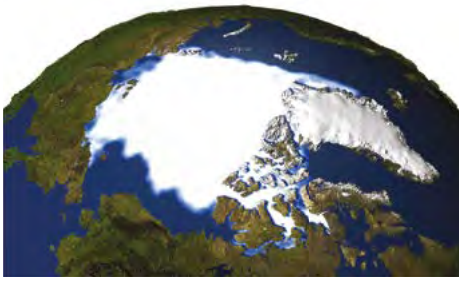
In the framework of the scientific and other assessments that come out of the working group structure, the **inclusion of Indigenous in the production of the assessment reports and the negotiations of the summaries are both examples of science in diplomacy** in the Royal Society/AAAS terminology, meaning that the inclusion informs and aids policy objectives of the Arctic Council and the Arctic states.

It is not possible for an assessment to exclude the Indigenous in the process of producing the report. When the summary for policymakers is written, Permanent Participants also decide what policy conclusions to draw and what words to use. This is mostly contrary to the situations of these peoples in the states they might live in. These processes are political, and interests are negotiated to find formulations around which consensus can be built. Based on scientific findings, a diplomatic exchange on what to try and achieve is carried out.

The knowledge production itself is an example of science for diplomacy, in the terminology of the Royal Society/AAAS. For a long time, western science in the Arctic relied on local expertise and support, but mostly failed to acknowledge the contribution. As of the late 20th and early 21st century, this is no longer possible in an international arena such as the Arctic Council. To exclude Indigenous knowledge from the scientific cooperation that is key to the present working of the Arctic Council would harm the international relations. Thus, inclusion is necessary for the relations within the Arctic Council and has become important to the legitimacy of the Council.

That the Arctic Council openly testifies to the importance of including Indigenous peoples and knowledge does not mean that the science diplomacy is without challenges. There is also a material side to science diplomacy. It is in general regarded to be impossible to exclude Indigenous peoples, but that does not mean that they have the same possibilities or facilities for inclusion. Formal structures might play out differently in practice. The most problematic issue in this context is the challenge of capacity among the Indigenous peoples and their representatives. This is true in all three types of science diplomacy.

The Permanent Participant organizations represent in each case a population base on the order of a few hundred thousand people (some are smaller, some larger). The Arctic Council Member States count hundreds of millions of people, albeit extremely unevenly distributed across the members and with only a minor portion living in the Arctic. The economic and administrative power that the US government has in relation to the Saami Council, for example, is not comparable. Furthermore, most of the representatives to the Permanent Participants do their work part-time, mainly supported by other undertakings, whereas Senior Arctic Officials and other civil servants to the Arctic Council are employed full-time by their respective governments. Similarly, participation in the working groups and the peer-review processes takes a high toll on those few Indigenous participants who can fulfil the demanding tasks. Finally, as indicated above, the knowledge production in itself is taking place under different circumstances than those of the Big Science of centrally funded knowledge economies including



"Comparison of Arctic sea ice concentrations between 1979 and 2003. 1979 marks the first year that data of this kind became available in any meaningful form. 2003 [at the time was] the second lowest concentration of sea ice on record." Archival data. Source: <https://www.nasa.gov/centers/goddard/news/topstory/2003/1023esuiuce.html>

many of the national members of the Arctic Council who draw on professional and employed scientists. Sometimes the very same people need to staff all levels, demanding skills in language and protocol of the varying processes.

That resources are unevenly distributed in collaborative efforts is more common than not. However, to really appreciate the costs of science diplomacy in the Arctic Council to the Permanent Participants, it is crucial to also realize this unequal capacity. Not only are the Indigenous poorly staffed in relation to Member States, but there are also great differences between the six Permanent Participants. An important step towards further inclusion would be to increase the capacity of Indigenous peoples' representation. This is true when it comes to both financial and human resources.

The Arctic Council is one arena where Indigenous interests can be argued and where Indigenous knowledge is important. However, this does not mean that Indigenous peoples do not face silencing and abuse in relation to the states where they are living. In fact, the rights of Indigenous vary substantially in the circumpolar north. In Canada there are several treaties that protect the rights of Indigenous. However, at the same time there are judicial rulings to the benefit of the Indigenous that might not be implemented in Canadian law. In Russia, Indigenous have very few rights and co-production is hardly if ever applied. In Sweden the state can and has recently decided on a new mining project in conflict with the wishes of the Saami village in the area. In Norway the state is empowered to limit the size of the herds of reindeer herders, to give a few examples.

In addition, the atrocities that Indigenous peoples have met with historically from representatives of the states they live in have only recently and partially been acknowledged. Again, the situation varies around the circumpolar north and information about the abuse will likely increase over time. The manner in which Inuit children were removed from their family, culture and religion through mandatory attendance at Canadian state boarding schools, or how Saami children were deprived of their language, form but a few examples.



The Arctic Council Impact Assessment report contains a map indicating the widely diverse localization of member communities of the six Permanent Participants. Modified screenshot for indicative purposes. Source and credit: ACIA (2004) p7, www.amap.no/documents/download/1058/inline

Conclusions

The Arctic Council is an organization which can be termed a science diplomacy actor since science diplomacy with varying objectives is carried out in different activities of the organization. Indigenous knowledge is included and welcomed on all levels and in all activities and has become indispensable in the science diplomacy of the Arctic Council. However, there are challenges to inclusion, and these need to be acknowledged on both a theoretical and a practical level. Furthermore, the implementation of science diplomacy results on the national level does not follow automatically.

Study Questions

- Are there any problems with putting alternative ways of knowing, such as Indigenous Arctic knowledge and observation, into the same category as western scientific knowledge?
- What issues arise regarding knowledge production, visibility and uniqueness?
- In governance contexts marked by great inequality in resources, how can science diplomacy address the challenge of capacity?
- What would be the point of such science diplomatic action if Indigenous rights are not recognized in the national context?

Endnote

- Cover image: "The last Ministerial under the Arctic Environment Protection Strategy in Alta, Norway, in 1997". Photo: Harald Finkler. Source: www.arctic-council.org/about/timeline/25/

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