

Introduction

Arctic Yearbook 2023

Arctic Indigenous Peoples: Climate, Science, Knowledge and Governance

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As an interdisciplinary journal focused on issues of Arctic governance, economics, environment and society, the Arctic Yearbook has always sought and included contributions by Indigenous Peoples experts and on topics relevant to Indigenous communities. Since our first issue in 2012, we have never dedicated a volume to it; rather Indigenous perspectives, topics and authors were intrinsic to our work.

This year's theme on "**Arctic Indigenous Peoples: Climate, Science, Knowledge and Governance**", however, centers Indigenous Peoples and issues. Rather than occasionally addressing issues of politics, economic and society that relate to Indigenous Peoples, this volume starts with an Indigenous focus and assesses Indigenous experiences, challenges and perspectives through the lens of climate, science, knowledge and governance.

Arctic Indigenous Peoples

The Arctic is currently home to over 4 million people, many of whom are Indigenous and have lived in the region since time immemorial. Building on inherent Indigenous Knowledge systems, Indigenous Peoples of the Arctic contribute throughout science and diplomacy in responding to various challenges and crises. As many northerners and Indigenous leaders from across the Circumpolar Arctic have articulated, Arctic residents and Indigenous Peoples are at the front lines of the climate crisis, of a changing geopolitical environment, and of shifts in international natural resource interests towards the Arctic region. At the same time, Arctic Indigenous Peoples continue to respond to a wide variety of important challenges related to colonial legacies, environmental degradation, and other interrelated socioeconomic challenges in the Arctic, while calling for inclusive and integrated knowledge systems to inform solutions and decision-making.

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At the 2020s, Arctic research and academia are at a turning point. More important, in the long run, than temporary pause in scientific cooperation, debates on decolonization are pushing and reforming our collective views on the role of academia and research in a region where Indigenous Peoples have lived for millennia, and where only a few hundred years' interference have changed the landscape of knowledge immensely. Looking back at the role of science and research in colonization, there is no doubt that an unequal relationship between the colonizer and the colonized has existed, and continues to exist, and that knowledge as a means for gaining power has been a tool predominantly used by southern settler and colonizer powers.

While questions remain about the future of international Arctic science cooperation and the entire pan-Arctic cooperation, particularly at the Arctic Council, the evolving processes that have been increasing the involvement of Indigenous Peoples in Arctic governance at the national and international level, since the 1970s, have had important influences on regional and international politics. Bolstered more recently by increasing international recognition of Indigenous human rights frameworks, including the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) adopted by the UN General Assembly in 2007, and of the many challenges Indigenous Peoples are managing, there is a need to better understand and articulate the central role of Indigenous Peoples in Arctic governance frameworks, policies, knowledge production and programs. Today, Indigenous Peoples demand equal recognition of Indigenous Knowledge, of worldviews and ways of life to be respected, and for science and research to be done by and with them, not only about them. This sparks epistemological debates on how to know and how to approach science, and changes are emerging. Therefore, an Arctic Yearbook edition specifically shedding light on epistemological discussions on ways of knowing, and on the recognition of Indigenous Knowledge as equal to all other knowledge systems, is timely and needed.

While the Arctic Yearbook has generally focused on timely issues and events, an Indigenous-focused volume must be thoughtful with regards to process. The traditional approach to academic writing – the peer review process, a reliance on the established literature, its particular writing style – can be alienating to some Indigenous authors. It may also be a poor fit for describing and sharing Indigenous worldviews and experiences, while ways of ethically and equitably including Indigenous Knowledge, with correct citation and permissions from the knowledge holders, continue to be a challenge to many non-Indigenous scholars. To be conducted in good faith, such an undertaking demands a bridging of conventional scholarly processes and Indigenous ways of knowing. Our Special Issue on Arctic Pandemics, released in July this year, was a successful test of these principles. A special editorial board was set up for that volume, including a number of Indigenous members, and peer review was determined to not necessarily require a PhD review depending on the subject. The Arctic Yearbook has always encouraged non-peer reviewed contributions from decision makers and practitioners in the form of commentaries and briefing notes, and this proved a good option for some Indigenous authors as well. Following from that, we have been pleased and encouraged to approach this year's volume with the guidance of Sara Olsvig, current International Chair of the Inuit Circumpolar Council (ICC).

Region-building with states as the major actors within the current Westphalian unified state system, and circumpolar inter-regional cooperation with Indigenous Peoples as transnational actors, were the major trends in early post-Cold War Arctic International Relations and geopolitics (Heininen, 2004). Although state sovereignty is still firm, the global Arctic is a new trend whereby pan-Arctic

cooperation, including knowledge-building with Indigenous Peoples, together with an epistemic community made up of a variety of other non-state actors, is becoming more important due to a political and practical need to assist decision-making processes. The turbulence of world politics today, with constant great power rivalry, enemy pictures and warfare influencing ongoing discursive battles about the Arctic, requires a balance with the other influential realities that have shaped – and continue to shape – the Arctic.

The idea behind selecting such a multi-dimensional and multi-layered theme - “Arctic Indigenous Peoples: Climate, Science, Knowledge, and Governance” – for this year’s Arctic Yearbook was both to have a holistic approach and emphasize the rich variety of dynamics related to Arctic governance, and to acknowledge the important experiences, knowledge, and roles of Arctic Indigenous Peoples, as well as to provide an opportunity to discuss and analyze their future role in Northern knowledge- and expertise-building. This is particularly important when building on inherent Indigenous Knowledge systems, and when calling for inclusive expertise and integrated knowledge systems in order to find solutions for the climate crisis and other wicked problems.

Governance

The Arctic region, a former geopolitical margin of the northernmost geographical periphery, seems to be in a state of constant transformation, as we discussed at the 2017 Arctic Yearbook. Yet the traditions, practices and knowledge of Arctic peoples have carried on for centuries. Among recent significant changes to the region are, on the one hand, increased globalization due to the impacts of climate change, global economics, and increasing scientific interests worldwide; and on the other, the pause of multilateral (pan-Arctic) cooperation at the Arctic Council due to the Russian invasion of Ukraine, although, despite policy-makers and mainstream scholars often argue about it, there have been no armed conflicts in the Arctic between states since the Cod Wars in the 1970s.

Nevertheless, two other recent transformations are important to consider: Firstly, the increasing self-determination of Arctic Indigenous Peoples in North America and the European Arctic based on devolution, Indigenous Knowledge and circumpolar cooperation by Indigenous Peoples. In particular, the introduction of self-determination arrangements such as the 2009 Act on Self-Government in Greenland marked a turning point in Arctic governance. Secondly, a global ‘environmental awakening’ about the importance of the Arctic’s climate and environment and increased international followed the decades of advocacy by Indigenous Peoples, engaging civil societies and NGOs.

Governance mechanisms in the Arctic have been a unique space for Indigenous Peoples and Indigenous Knowledge to influence programs and policies, particularly in regards to sustainable development and building resilience at the local, regional, and global levels. Through domestic and international reforms, including the devolution of governance processes in the Arctic with self-determination and self-government as key themes, Arctic peoples have become more connected to the political processes responsible for environmental and economic decision-making. Concerns about environmental degradation, and its potential to create conflicts, requires Arctic stakeholders – including state and regional governments, and Indigenous Peoples– to determine how the Arctic’s land and waters should be used or preserved as well as for what and by whom, and in this, recognize that Indigenous Peoples are *rights holders*. Although these types of international and regional debates have historically been dominated by states and their various agencies, Arctic Indigenous Peoples have been breaking through colonial barriers and have become crucial players in environmental

politics and economic debates at national and international levels regarding the Arctic since the 1970's (Kleivan, 1992; English, 2013).

Here, Arctic Indigenous Peoples, together with environmental NGOs and members of the scientific community, have shown their willingness and ability to push the Arctic states' governments to cooperate on environmental protection (Heininen, 2013). A growing environmental awareness about the impacts of long-range pollution from lower latitudes of Europe, North America and Asia, particularly Persistent Organic Pollutants (POPs), heavy metals, and radioactivity, on the Arctic's ecosystems and the human health of the people, as well as their interrelationship with climate change (AMAP, 2002). This increased understanding about the susceptibility of the Arctic environment and its global interconnections also raised concerns about how human inhabitants of the Arctic, and their food security and food sovereignty, were particularly vulnerable to global pollutants (Canadian Institute of International Affairs, 1988; Paci et al., 2004). It was becoming clearer that once these pollutants enter the food cycle, dangerous concentrations can accumulate in the human body, having harmful consequences for northern populations who rely on country foods gathered through hunting and fishing (Huebert, 1997).

These important issues, as well as strong international advocacy by Arctic Indigenous Peoples, helped push the eight Arctic states to develop and sign the Arctic Environmental Protection Strategy (AEPS) (Rovaniemi Declaration, 1991), the beginning of circumpolar cooperation and the foundation for the Arctic Council's establishment in 1996.

While the eight Arctic states are often referred to as the founding members of the Arctic Council, it was International Indigenous Peoples organizations from the Arctic that played a crucial role in kickstarting circumpolar cooperation among the Arctic states and other Arctic stakeholders (see Dean & Lackenbauer, 2021). The work of the ICC, for example, brought significant attention to the issues facing Indigenous Peoples in the region, positioning their interests as a primary feature of the Arctic agenda (English, 2013). With national offices located in Anchorage, Ottawa, and Nuuk (with continues push to include Soviet Inuit in conferences), the ICC was active in establishing guiding principles for activity in the Arctic in a variety of fields that included research and resource development (Canadian Institute of International Affairs, 1988). While the first Arctic Peoples' Conference was held in Copenhagen in November 1973 had not been attended by Russian and Alaskan Indigenous leaders (Kleivan, 1992), the June 1991 "First Arctic Indigenous Leaders' Summit" included Indigenous leaders representing the ICC, Nordic Saami Council, and the USSR Association of Northern Small Peoples, as they gathered in Denmark again to discuss shared priorities, and concluded with the signing of a declaration focused on environmental protection and sustainable development in the Arctic (Rothwell, 1996). The ICC, with the greatest capacity to operate internationally at the time, would first play an important role in advocating for Indigenous participation in the AEPS and its work before becoming one of the primary organizational forces of the Arctic Council (English, 2013; Dean & Lackenbauer, 2021).

In addition to the ICC, the Nordic Saami Council and the Association of Aboriginal Peoples of Northern Russia acted as the main representatives of Indigenous peoples during AEPS negotiations and discussions (Mullen, 1994). This early Indigenous activism helped to establish the structure, norms, and practices of state and non-state relations in the Arctic – a legacy evident in the current structure of the Arctic Council and the influential role the Permanent Participants have in Arctic governance more broadly today.

The founding of the AEPS and Arctic Council launched a new era of science diplomacy focused on circumpolar issues and formalized Indigenous Peoples' central role in Arctic governance processes. Arctic Indigenous Peoples co-founded the Arctic Council and from the outset pushed for their equal participation, resulting in the unique structure of the Arctic Council as a governance body inclusive of Indigenous Peoples. Here, Indigenous peoples responded, and continue to respond, to a wide variety of challenges related to colonial legacies, environmental degradation, and other interrelated socioeconomic challenges in the Arctic, and have been included in, and influenced, the decision-making of the Arctic states.

All in all, Indigenous peoples have always been living in the Arctic region, and thus they, more than anyone else, are *rights holders*. As representatives of five Arctic Indigenous Peoples' Organizations stated in the Statement of the 2023 Arctic Peoples' Conference, which was a commemorative conference celebrating fifty years of Arctic cooperation, Arctic Indigenous Peoples have "*survived, and thrived, through hundreds of years of colonization, and emphasize that many challenges and colonial systems remain to be dismantled*". The conference participants furthermore emphasized "*the rights of Arctic Indigenous Peoples, [their] unique relationship to the Arctic, and [their] commitments to cross-border and people-to-people cooperation in the region*" (ICC, 2023).

Climate changes and Actors

As the Arctic Council, the International Panel on Climate Change (IPCC), and other international bodies have acknowledged, climate change has become a key issue at every level of politics both within and outside the Arctic. According to the IPCC Sixth Assessment Report and other renowned climate reports the Arctic is warming 3-4 times faster than the rest of the globe (Constable et al., 2022; Rantanen, 2022). The high speed at which the climate is warming in the Arctic is a major cause of concern for both local communities and global planetary processes. The cliché that "what happens in the Arctic does not stay there" is true when considering the severe impacts and consequences of thawing sea ice, glaciers and permafrost on the global climate. Small island states of the Indian and Pacific Oceans face dramatic, and in some cases existential, ramifications due to climate change and the possibility that they might totally lose their land, and therefore their legitimacy as a sovereign state, due to rising sea levels. In the Arctic, rising sea levels are causing coastlines and communities in the region to erode away from increasingly extreme weather events. The melting of sea ice, permafrost and ice capes is literally changing the cultural landscape of Indigenous Peoples.

The more obviously the world faces the global climate crisis and the ecological catastrophe, the clearer it is that states lack the ability to manage efficiently global environmental problems on their own, and this has placed more responsibilities on non-state actors (here is a problem in terminology, when being dependent on the term of a 'state'). This raises questions, such as: Who are legitimized and have the power, but are hesitating to make the hard decisions? Who are legitimized and reasonable actors, and willing to find ways to 'save the planet', but do not have the power? And, who are knowledgeable and reasonable actors, and willing to act? In general, what are the factors and drivers of a change, and who are the actors behind a change, and what are their premises?

According to classical geopolitics, as well as political realism, the list of (relevant) factors and actors in international affairs are short: meaningful factors are physical space (including resources) and power based on force, with states as the main actors interacting in a world of international anarchy.

Critical geopolitics, which includes constructivism, acknowledges several other important factors and actors: these factors include identity and identities, knowledge and the power of ideas, the environment, political norms, and the politicization of physical space. In terms of actors, critical geopolitics includes people and civil society, and Non-Governmental Organizations (NGOs) and Transnational Corporations (TNCs) alongside states. Acknowledging and taking into consideration the longer list of factors and actors there are other important contexts to consider, such as environmental or human security, human rights, and more pressure for a paradigm shift to address a broader set of threats and challenges. This was the key issue in the Alta Dam conflict in the 1980s between the Sami and the state of Norway, with parallels taking place in the Fosen case today concerning Sami rights (see Laframboise as well as Payva in this volume). These types of debates in International Relations show that a discursive battle on perceptions and interpretations continues. A fascinating part of this is to analyze how premises - of geopolitics, security or governance - have been changed, and if there has been a paradigm shift (e.g. Heininen and Exner-Pirot 2020; Olsvig, 2022).

States used to change their premises via economic and/or political integration or devolution, as well as by increasing their tolerance of self-determination and self-governing. The devolution of power by the Nordic countries has led to a noticeable change in premises and become a new Arctic governance model. The 'environmental awakening' changed the Arctic states' premises dramatically, after environmental protection cooperation became a trigger for them to reconstruct their geopolitical reality, and by combining western science and Indigenous Knowledge – all this is been materialized by shared interests between the Arctic states, and between them and Arctic Indigenous Peoples (Heininen, 2013). This has not, however, yet meant a paradigm shift, though it has been important to maintain the mutually beneficial high stability in the Arctic, in particular in turbulent times of great power rivalries, regional wars, constant warfare, and arms races. Here again Indigenous Peoples have played an important role.

This kind of more tolerant model of governance which leans on a variety of factors and actors is most probably the best, if not the only, way to tackle the multiple issues related to the climate crisis and ecological destruction globally and particularly for the Arctic. As the climate crisis is global with several local impacts and ramifications, it requires a motivation and firm legitimacy, as well as a holistic approach and capability to be solved. Who are more motivated and legitimized than Indigenous Peoples and civil societies, particularly if they are being acknowledged as equal actors in decision-making and in action?

This is also a part of a long-range global tendency of the breaking of the unified state system, with states as the major, even only, actors in world politics. This is much indicated by the above-mentioned finding that states seem to be unable to efficiently manage global environmental problems, and if so, we have to lean on people(s) and civil societies to take the lead. Nevertheless, what was done nationally in Modernism, is done internationally, even globally, in the Age of Globalism. Here, Arctic Indigenous Peoples, having increasing recognition of Indigenous and human rights frameworks, such as UNDRIP, are playing an important role. Transdisciplinarity is discussed and applied more often, and Western science leans on Indigenous knowledge. The role might become bigger and the application of transdisciplinarity may be accelerated, especially if the Arctic states and governments are neither capable nor willing to differentiate their policy on sanctions against the Russian Federation by allowing joint pan-Arctic scientific projects, including

Russians, to be continued or restarted. Alternative ways and procedures based on individuals, which is already happening (see, Arctic Yearbook 2022), would include Indigenous Knowledge and its methods.

Indigenous Knowledge and Western Science

Science, together with technology, has been seen as the most efficient means for development and progress – the combination has been the motor behind “western” modernization. Before “western” science, which, excluding Philosophy as a rather young phenomenon, there was traditional and Indigenous Knowledge by, and for, Indigenous Peoples. It has, since time immemorial, been mutually beneficial, and often the way to survive and thrive for peoples and societies. In the same way, science is a part of the common heritage of humankind, and at the same time it is about people: for those who do research, and for those whom research is done for, western science has had a social relevance as well. Equally important is the freedom of (western) science and the independence of the scientific community whereby policy-makers do not have repressive control over science or the scientific community. It is important to encourage new innovations, or solutions for the problems that society faces today (see the Knowledge and Science section in this volume).

Under the pressure of ecological catastrophe, Indigenous Knowledge is becoming increasingly recognized for its ability to help tackle climate change and biodiversity loss. Western science is often handicapped due to gaps in knowledge and data on climate and other ecosystems. Indigenous Knowledge, however, can lean on traditions, practices, spirituality and human memories, as well as narratives and stories held and shared by elders. As a concrete example, the Calotte Academy organized a town hall meeting, “Understanding the impacts of global changes in the Barents region”, in June 1998 in Inari. Saami fishermen, hunters and reindeer herders were invited to share their experiences and knowledge on environmental changes in the region within the last 50 years or so. The meeting brought new data and information for scientists of an international research project on global changes, who were running out of proper data, though scientists did not have patience enough to listen carefully to all the experiences.

Indigenous Knowledge and methodologies have been shifting the goals and priorities of Arctic related research, as well as how research is initiated, and this is bringing diverse worldviews together to help solve issues that have both local and global consequences. Bridging western and Indigenous knowledge has the ability to generate various decolonial-colonial tensions that are important to work through (Kovach, 2009), and centering Indigenous knowledges, experiences, and perspectives is critical for 'flipping the script' on framings of Arctic peoples as victims, or as peripheral factors for consideration in Arctic-related research.

Over the twenty-seven years of its existence, there have been many debates and decisions on the full inclusion of Indigenous Knowledge in the work of the Arctic Council. Since its establishment by the Ottawa Declaration (1996), the Council recognized Indigenous Peoples traditional knowledge, later refined to be called Indigenous Knowledge, and of “its importance and that of Arctic science and research to the collective understanding of the circumpolar Arctic”. The Arctic Council further committed itself to this through in 2015 with its adoption of the Sustainable Development Working Group’s “Recommendations for the Integration of Traditional and Local Knowledge into the Work of the Arctic Council”. The Arctic Council’s Permanent Participant

organizations also jointly created the “Ottawa Traditional Knowledge Principles” which provides guidance for the use of Indigenous Peoples’ Knowledge.

In 2022, the ICC addressed the inequity in Arctic knowledge production when publishing the Circumpolar Inuit Protocols for Equitable and Ethical Engagement. The protocols call for scientists and academia to ensure engagement with Indigenous Peoples, to recognize Indigenous Knowledge in its own right, to practice good governance and comply with i.a., the UN Declaration on the Rights of Indigenous Peoples, principles that are founded in internationally recognized principles built through negotiations with and by Indigenous Peoples. The protocols call for communicating with intent and exercising accountability, including in the use and sharing of data, addressing ownership and permissions in relations to knowledge production and re-production. Finally, the protocols offer a definition of Indigenous Knowledge, closely based on the definition accepted by the Arctic Council:

“Indigenous Knowledge is a systematic way of thinking applied to phenomena across biological, physical, cultural, and spiritual systems. It includes insights based on evidence and acquired through direct and long-term experiences and extensive and multigenerational observation, lessons, and skills. It has developed over millennia and is still developing in a living process, including knowledge acquired today and in the future, and it is passed on from generation to generation.”

Development like this forges new thinking in Arctic academia, among members of the scientific community and other professionals worldwide, as well as Indigenous researchers and experts. It also requires deliberateness from research institutions and publicists to create and support Indigenous Knowledge holders and researchers to be fully and equally represented in academia and publications. By applying transdisciplinarity and recognizing Indigenous Knowledge equally to western science and defining the Arctic as a global environmental linchpin and workshop for climate and environmental sciences, as well as building bridges that connect Indigenous Knowledge, local knowledge and interdisciplinarity (of science), a new role of Arctic knowledge has been emerging in policy-shaping and -making.

All in all, there is much at stake in the Arctic, and much to lose if we cannot continue pan-Arctic cooperation, in particular on environmental protection and climate change mitigation. Specifically, this is true in relation to scientific research needed to study, monitor and assess a state of Arctic ecosystems, that of well-being of Northern inhabitants, and resilience of their cultures and societies, as well as a changing state of governance, geopolitics and security. Finally, and even more importantly, we should continue knowledge-building, though transdisciplinarity by Indigenous Knowledge and western science, in the circumpolar North and deepen our understanding of needed local, regional and global governance mechanisms, procedures and methods.

Arctic Yearbook 2023

The 2023 edition of the Arctic Yearbook consists of 19 peer-reviewed articles and 12 commentaries and briefing notes across five thematic sections: (1) Climate change and the green transition; (2) Food, health, and labour; (3) Governance and economy; (4) Knowledge and science; and (5) Cooperation and conflict.

Section I: Climate change and the green transition

Lill Rastad Bjørst, Sigríður Kristjánsdóttir, Christopher Clarke-McQueen, Jaime DeSimone, Andrea Kraj & Anna Krook-Riekkola highlight key tensions between climate change, the need for a green transition to renewable energy technologies, and the extraction of resources needed to develop these emerging technologies. They point out that many of these resources may be found in the Arctic, and this could have a deep influence on Arctic communities. The authors argue that the voices of Arctic Indigenous Peoples and others living in the North need to be prioritized, and provide five key findings of their research related to this.

Jeevan Toor and Tagaaq Evaluardjuk-Palmer discuss the impacts that colonialism has had on Inuit social and cultural fabric within the context of climate change. Toor and Evaluardjuk-Palmer approach this issue through lenses of anthropology, geography and Inuit Qaujimagatutqangit (Inuit knowledge), and argue a holistic approach to health in the Arctic is required. The authors explore the Canadian government's approach, and argue that future research related to climate change and health needs to be located in qanuinnngitsiarutiksait, Inuit knowledge, Inuit methodologies and be Inuit-led.

Luke Laframboise engages with the events that led to protests in Oslo over Norway's Supreme Court rulings regarding the Fosen wind farm project. Laframboise compares this case to the Alta conflict in the 1970's and early 1980's – a period of significance in recent Sámi-state relations in Norway – and argues that while the material conditions are different between the Fosen and Alta cases, both are potentially important pivot points in Norway's political and legal history. According to Laframboise, the ongoing Fosen case highlights the growing conflict between a well-established Indigenous rights regime and green energy policies in Norway.

In relation to climate change and the threats it poses to the existence and survival of Arctic Indigenous Peoples, Dave-Inder Comar makes the argument for an “existence and survival” dimension of the self-determination of Indigenous Peoples in international law. Comar argues that this dimension is supported by the United Nations Declaration on the Rights of Indigenous Peoples, as well as international and regional human rights law. Through an analysis on the self-determination of Indigenous Peoples under international law, Comar underlines the obligations Arctic and non-Arctic states have to address the causes of climate change and its impacts on Indigenous Peoples.

Marlene Payva Almonte argues that in the context of global climate change, it is crucial that we consider our most basic notions of nature and the relationship humanity has with the natural world, particularly in terms of how they are represented in Western law. Payva Almonte discusses the tensions between Western legal systems and the responses needed to address our current climate and ecological crises, and argues that the colonial legacies of Western legal systems do not provide the ontological framework for dealing with these challenges. Payva Almonte makes this argument through a case study of the legal dispute regarding the Fosen windfarm in Norway and the conflicting perspectives of Sámi Indigenous Peoples, state authorities and companies regarding the use of lands related to the case.

The section is concluded by a commentary by Chuan Chen focused on the role of China within Arctic climate governance and a briefing note by Giuseppe Amatulli and Jamie Jenkins that provides highlights of the 2022 and 2023 editions of the Arctic Academy for Sustainability.

Section II: Food, Health and Labour

Anne Lise Kappel, Peter Hasle, Søren Vøxted, and Katharina Jeschke discuss the various changes Greenland's labour market has experienced and current legislation related to occupational safety and health. The authors present the findings of a cross-sectoral survey of private Greenlandic companies and highlight the difficult challenges Greenlandic companies have in meeting the basic requirements related to work environment legislation.

Fang Fang provides a different perspective on the labour environment in Greenland through their case study of the experiences of Chinese workers in the Maniitsoq fish factory. Labour shortages in Greenland has led to an increase in foreign immigration in recent years, and this article provides the perspectives of Chinese workers in relation to "positive organization factors", and highlight the positive factors as well as the challenges related to multicultural interactions in these labour spaces.

Gao Tianming and Vasili Erokhin provide an in-depth overview regarding the food security of Indigenous communities in the Russian Arctic and the policy environment influencing it. Tianming and Erokhin discuss the context of nine territories in the Russian Arctic and conceptualize an approach to assessing the level of food and nutritional security by considering the different environmental, economic, and social factors that affect Indigenous communities in the region. They conclude by providing a series of recommendations, including how to mitigate adverse effects of food insecurity on public health, boost self-sufficiency in food, and promote the use of traditional foods and related products in diets.

In their commentary on the Ainu language and Indigenous psychological well-being in Hokkaido in northern Japan, Seira Duncan provides an interesting case regarding the importance of supporting, maintaining, and practicing Indigenous languages for, and by, Indigenous communities.

Section III: Governance and economy

Rikke Østergaard and Javier L. Arnaut argue through a decoloniality perspective that the Inuit myth and its related alternative view of sovereignty has had important implications on the nation-building process in Greenland due to its departure from Western notions of state formation. Østergaard and Arnaut analyze the legacy of colonialism in Greenland and the role of the Inuit Circumpolar Council in promoting an alternative model of political legitimacy against the conventional approach of nation-building, and argue that state formation must be revised to incorporate the historical experiences and knowledge of Indigenous Peoples.

Alexandra Middleton discusses the potential for integrating Environmental, Social, and Governance (ESG) principles with Indigenous Sustainable Finance principles to shape Arctic economic development. Middleton argues that a paradigm shift is needed that provides space for the collaboration of diverse perspectives for sustainable solutions, and where Arctic Indigenous Peoples' Knowledges are a core element of economic development.

Célestine Rabouam discusses the challenges that Nunavut, Canada's largest and northernmost territory, has faced in developing its telecommunications infrastructure and the implications of this for the territory's 25 communities. Rabouam examines previous and current approaches to connecting these communities, and presents new policy complications related to emerging options such as Starlink's low earth orbit satellite constellations.

Anna Karlsdóttir, Jean-Michel Huctin, Jeanne Gherardi & Tanguy Sandré share experiences from the Belmont Arctic II program's project "Sense Making, Place attachment, and Extended networks, as sources of Resilience in the Arctic" (SeMPER-Arctic, 2019-2023), and share the development of a narrative-centred, locally rooted, and place-based understanding of resilience. The authors consider the impacts of their research, the importance of reflexivity and relationship building, important ethical considerations, and their reflections on decolonizing research in the Arctic.

Martin Mohr Olsen shares the findings of their research investigating how smaller Arctic institutions of higher learning employ sustainability in their operations. The article pursues the question how smaller higher education institutions in the Arctic implement sustainability, and discusses the complexity of the concept of sustainability in this context.

In their briefing note that concludes the section, Yang Jian discusses their perspective on the role that expert communities play in Arctic governance, and highlights how different types of expertise can influence different phases of Arctic Governance.

Section IV: Knowledge and science

Caoimhe Isha Beulé and Pierre De Coninck consider the successful elements that emerge in research projects when Indigenous and non-Indigenous Peoples come together to address issues related to Arctic communities. Beulé and Coninck argue that trust is a crucial part of any collaborative project, and present their findings related the two-year Dialogues and Encounters in the Arctic (DEA) project that took place in an Indigenous Sámi context. The authors share what influenced the trust dynamic in the context of their research, and how this weaved itself into the fabric of the project.

Michaela Louise Coote provides a historical and conceptual analysis of interdisciplinary environmental decision-shaping research in the Arctic context. Coote argues that while interdisciplinary research has had a variety of important influences in the Arctic, its use is impacted by geopolitical factors, past and present practices, and epistemologies and ontologies including power hierarchies and colonialism.

Korinna Korsström-Magga highlights their approach to a research project that is using an art-based action research strategy. Korsström-Magga describes how their research is implementing a Photovoice-method as a means to collect data and bring forward the daily life of Five Sámi reindeer herder families from the region around Lake Inari in northern Finland. The author argues that art-based actions can emphasize the decolonial potency of participative action research and co-research, and shares their unique experience as an art-educator-researcher that is also directly involved in reindeer herding herself.

Section four concludes with four briefing notes and commentaries that discuss the networks and events that have contributed to Arctic knowledge and science production in recent years, and includes a special section of "Knowledge for governance and diplomacy: Expertise & Dialogue" based on presentations at Arctic Circle Japan Forum on March 4-6, 2023, in Tokyo, co-organized by the Thematic Network on Geopolitics and Security, and the Arctic Yearbook. Merje Kuus provides a two-pronged argument about Arctic networks and their participants: that these networks benefit from in-person interaction and that these networks bridge scientific, diplomatic, business, and civil society realms, and are the medium of Arctic expertise. Lassi Heininen provides their reflections on the development of the Calotte Academy and the Northern Research Forum, and

the important influences they have had on Arctic researchers and Arctic dialogues. Alexandra Middleton, Andrey Mineev, Paul Arthur Berkman, Anton Vasiliev, Halldór Jóhannsson, Ekaterina Uryupova and Lassi Heininen discuss the recently launched “Arctic Expert-to-Expert” initiative, and the challenges it seeks to address in terms of scientific and Indigenous Knowledge exchange in the current Arctic political context. Zhanna Anshukova and Tom Gabriel Royer conclude the section by providing a report on Calotte Academy 2023, which convened 30 travelling participants and local guest lecturers at each location, and share the key themes discussed in the Academy’s 32nd year.

Section V: Cooperation and conflict

Jennifer Spence, Edward Alexander, Rolf Rødven and Sara Harriger challenge the conventional narrative of Arctic Exceptionalism by ultimately going beyond it. The authors consider a broader range of characteristics and features that make the Arctic unique, and consider how this expanded view alters perceptions of the region’s governance. The authors share three stories of the Arctic as defined through geopolitics, environment, and Gwitch’in homelands, and highlight the key insights these perspectives provide about the past, present and future of the Arctic and Arctic governance.

Ekaterina Zmyvalova considers the experiences of Indigenous Peoples in Russia in the current context of Russia’s invasion of Ukraine. Zmyvalova explores the legal changes which have been taking place in Russia since the start of the full-scale war in Ukraine in February 2022, and discusses the impact of these changes on the human rights of Indigenous Peoples in Russia.

Marco Volpe explores the evolution of domestic debate in China regarding its role in the Arctic, and the influence of this debate on domestic-decision making. Volpe sheds light on how the Chinese domestic academic debate between 2014–2021 addressed the Central Arctic Ocean, and offers a reflection on future actions that Chinese leadership might consider.

This section is concluded by four briefing notes and commentaries. Paul Działkowiec discusses in their commentary the implications of Russia’s invasion of Ukraine on Arctic science and the purpose of the Switzerland-based Geneva Centre for Security Policy’s launch of a discreet dialogue process (the ‘High North Talks’) to address some of the gaps that have emerged. Natsuhiko Otsuka, Yuji Kodama, Minsu Kim and Yang Jian’s commentary presents a concise history of the North Pacific Arctic Community (NPARC), an initiative born out of the growing interest in Arctic affairs among non-Arctic nations, particularly those from Asian three countries namely, China, Japan, and Korea. Egill Thor Nielsson provides an overview of the China-Nordic Arctic Research Center and an update on its work after a decade of operation. Finally, Eda Ayaydin provides a report on the launch of their book *Uluslararası İlişkilerde Arktik* (The Arctic in International Relations), and discusses key perspectives of Turkish academic discourse about the Arctic.

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