

Towards a Holistic Cross-Border Environmental Governance in the European Arctic

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Structured Abstract

Article type: Research paper / Commentary

Purpose—It is the purpose of this paper to show that holistic, interdisciplinary research has a key role to play in the study of cross-border environmental governance. This will be shown by using the example of the northernmost regions of continental Europe, in particular the border regions between Norway and Finland and between Sweden and Finland, respectively. This text is meant to inspire a debate on the modalities of future research related to Arctic governance and to suggest that Arctic governance research requires a broader research philosophy that transcends the dominant views from the perspectives of law and political sciences. This paper argues that effective governance research needs to be inclusive, emphasize the needs of local communities, and be interdisciplinary by including not only political and legal sciences but also know-how in fields such as such as anthropology, geography, history, administrative science, regional studies, etc., in order to provide benefits for local communities. Hence, academic literature from different areas of social sciences will be utilized.

Design, Methodology, Approach—The authors introduce the reader to existing research on different aspects of cross-border environmental governance in the European High North and show the feasibility and potential impact of interdisciplinary research on cross-border schemes for environmental governance and biodiversity protection.

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Findings—This paper is not so much meant as a recapitulation or summary of research but rather contains a call for action by establishing the outlines for a new approach in international and interdisciplinary research into cross-border environmental governance, with a particular view to the protection of biodiversity in the Arctic. It is shown that such an approach can be developed based on already existing research.

Practical implications—Across the circumpolar Arctic, residents are highly dependent on a healthy natural environment. This protection is at the heart of international cooperative efforts to govern the region. Using the example of cross-border environmental governance in the European High North (EHN), it will be shown that it is essential to consider the needs and interests of local communities beyond political constraints, such as national borders. Such interdisciplinary research has the potential to contribute to strengthening the position of local stakeholders in the area in question. This includes rural, indigenous, and underrepresented communities. In addition, such interdisciplinary research can strengthen the capacities of relatively small cross-border institutions, such as border river commissions, by generating and sharing scientific knowledge; the generation of which would have been beyond the economic, technical, or other means of such institutions often providing public services that are disproportionately important in relation to their size or funding.

Originality, value—The paper builds on existing research through the combination of different disciplines, such as international law, political sciences, anthropology, regional studies, urban studies, marine environmental governance, and social sciences. Further, the paper outlines a vision for an additional layer of research that can be built on top of the existing scientific basis. What is more, it will provide a holistic view of multidimensional governance structures in border areas.

Keywords: anthropology, Arctic, environment, governance, indigenous rights, law, place-based regional development, research philosophy

I. Introduction

The Arctic is home to millions of people. Among the common characteristics shared by different communities across the circumpolar north is a significant dependency on an intact natural environment. Therefore, the governance of environmental spaces plays a crucial role in the governance of the Arctic. In the European High North (EHN)—defined here as the northernmost regions of continental Norway, Sweden, and Finland—environmental governance is characterized, compared to other parts of the world, by a high degree of cross-border cooperation. Since the late 1980s, the environmental cooperative spirit seen in the EHN has significantly inspired the development of international governance and legal developments in the entire circumpolar region, in particular in the context of the Arctic Environmental Protection Strategy (AEPS) and the Arctic Council (AC).

In this text, which is meant to inspire future research rather than to merely reflect its current state, it will be argued that the spirit of cooperation in the EHN can also inspire a research philosophy regarding Arctic governance. Additionally, it is argued that, in order to actually serve the people living in the region, there is a need for a specific research philosophy that is truly holistic to improve the understanding of different management schemes

for the protection of the natural environment in the Arctic. As an example, we will look at the western and northern peripheries of Finnish Lapland. The border areas of Finland, Sweden, and Norway, respectively, are uniquely suited for the design and future research on the co-management of environmental spaces that will facilitate the active involvement of local stakeholders based on existing notions of Free, Prior and Informed Consent (FPIC) and Social License to Operate (SLO). The authors in this paper seek to address the above issues using two objectives:

- a. To examine the importance of using holistic and interdisciplinary research in studying cross-border environmental governance using the example of the European Arctic.
- b. To inspire debates on future research approaches on Arctic governance, with emphasis on the necessity of a broader research philosophy that incorporates multidisciplinary to understanding cross-border environmental governance.

Lapland (Finnish: Lappi) is Finland's northernmost region. It overlaps with a wider region known as Sápmi, the homeland of the indigenous Sámi people, and part of the Barents region. Its western part is included in the Meänmaa, a region that, like Sápmi, is not defined by national boundaries but by the language spoken by the local community in the area. Meänmaa includes regions that are currently governed by Sweden and Finland and also overlaps with Sápmi, the homeland of the indigenous Sámi people, which spans Norway, Sweden, Finland, and Russia. The land borders of the Finnish province of Lappi, partially overlapping with Sápmi, can be described as a wide arc running from the northern end of the Bay of Bothnia via the coastal two-state city of Tornio/Haparanda in Finland and Sweden, and along the Tornio and Muonio river valleys. It includes the mountainous region where the borders of Norway, Sweden, and Finland meet. From there, it follows the border between Norway and Finland eastwards to the tri-border area between Russia, Norway, and Finland, only a few kilometers from the Arctic Ocean. The Eastern border of Lapland is identical to the international boundary between Finland and Russia (while Sápmi also includes parts of Russia).

The Tornio, Muonio and Teno rivers are separating the different countries and acting as natural boundaries, providing an important connection for people and wildlife. In Europe, they are among the richest rivers in salmon and other fish, but inherent tensions around nature and subsistence also exist, particularly with the forestry and extractive industries. Among the specific features of the region is the openness of borders, which play less of a role in the everyday life of local residents than for administrative purposes. What is more, this region includes multiple examples of cross-border cooperation, such as the Marine Protected Areas (MPAs) in the Bothnia Bay, the Lemmenjoki and Ovre Anárjoka National Park, as well as the Ovre Pasvik National Park. Efforts as such also reflect the Nordic countries' pioneer status in cross-border environmental governance, established through developments like the Aarhus Convention¹ and the Espoo Convention.²

Future governance research in this region will have to be based on a research philosophy that centers on the needs and rights of the people living in the region, which requires a solid understanding of the relationships between the people and their natural environment. As the Arctic is highly dependent on nature and the state of the natural environment, their status has very direct implications for the well-being and safety of local residents.

Interdisciplinary governance research has an important role to play in supporting local and national stakeholders and decision makers. In the Arctic, traditional and local

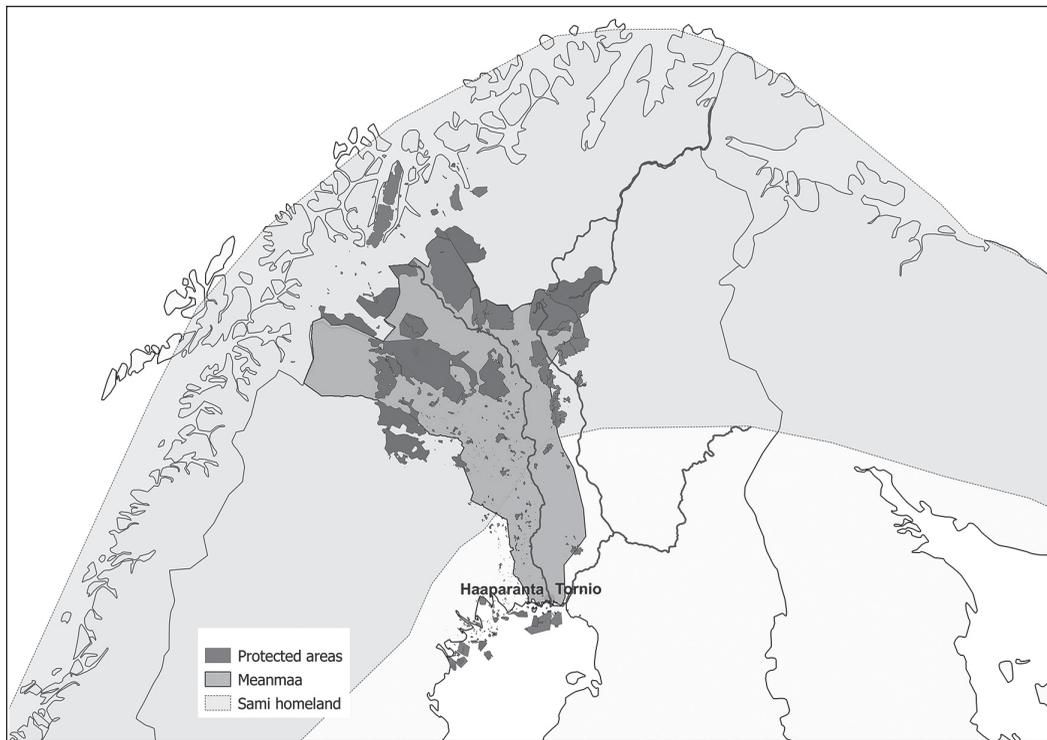


Figure 1: Map of the Research Area. Vitikka A. (2022) Arctic Centre, University of Lapland.

knowledge play an important role in supporting regional governance. The Arctic Council and its Working Groups are examples through their production and use of science to execute the Council's programs and projects.³ Local and indigenous peoples of the Arctic are closely linked with the environment, often through subsistence activities, transport and movement. Thus, interdisciplinary approaches to governance research should be undertaken in support of the co-creation of scientific knowledge⁴ and emphasize the sharing of knowledge⁵ to benefit inhabitants of the region.⁶ Arctic residents are no longer perceived as informants but are partners in research, a view which helps science to serve society. On this basis, it will be argued that such an inclusive approach to governance research in the Arctic can be a practical form of this research philosophy.⁷ Research focusing on identifying the dramatic changes that the region undergoes should be based on previous studies, including those at the level of international environmental law. Its starting point will be agreements and courses of action pertaining to the rights (and management approaches) over the use of natural resources in both terrestrial and marine environments of the Arctic, and developments surrounding regional legal basis for Arctic governance and cross-border cooperation.

II. Existing Research and Open Questions

As environmental challenges are not limited to the state borders, their governance is essential to examine also in cross-border manner. Border regions are diverse with different

national, societal, and geographical circumstances facing variety of environmental challenges, which is also visible in the fields of research. The research topics have covered, among others, climate change,^{8,9} natural resources¹⁰ and conservation of species,¹¹ as well as how the governance has been designed in these organizations. The organizations within the area of water management, such as river commissions, have also been examined and scholars have found that international river basin organizations have a role in diplomacy,¹² security,¹³ resistance and reform,¹⁴ adaptation¹⁵ and so on.

While there has been substantial research on the region's natural environment and governance, conducted in particular by researchers from institutions in the region, there is need for more research on cross-border environmental governance in the region. This requires exploring the potential for using collaborative management (co-management) as a tool addressing existing gaps in the governance of protected areas in the European Arctic. Further, the question of how cross-border environmental governance is being realized in different settings across the terrain, including northern areas of Finland, Norway, and Sweden that constitute areas governed for the protection of biodiversity both in marine and terrestrial environments.

Such a contribution to advancing research will have to look at a number of different cross-border environmental and biodiversity protection efforts. For the border areas mentioned earlier, this includes marine protected areas in the Bay of Bothnia, the work of the Finnish-Swedish Transboundary River Commission and Finnish-Norwegian Transboundary Water Commission, and regional protection efforts in National Parks. The role of the indigenous Sámi people, particularly in the management of their ancestral homelands in Finland and Norway, has been the object of legal disputes and unilateral action. In Norway, a special legal regime exists for Finnmark. Similarly, in the context of indigenous fisheries rights in the Teno River, legislation culminated in a landmark decision on the part of indigenous people by the Supreme Court of Finland on 13 April 2022.¹⁶

An existing system for cross-border cooperation can well inform future research on cross-border environmental governance, particularly with respect to protected areas in the European Arctic. Doing so should include a four-fold understanding of key actors and their roles in the region: (a) In the area of cross-border cooperation on environmental issues, Arctic States do participate in as well as exchange knowledge, and share responsibility through the Nordic Council of Ministers, the Arctic Council, and the Barents Euro-Arctic Council. (b) On matters of protecting biodiversity on indigenous land, the Sámi Parliaments of Finland, Sweden, and Norway and the Indigenous People's Secretariat have an important role of assessing developments that likely affect indigenous land. (c) Other actors shaping environmental governance at the national and municipal level include the Swedish Environmental Protection Agency, Metsähallitus of the Finnish Ministry of Environment, the Norwegian Forest Owners Association, and the Finnmark County Municipality. The entities have the capacity for assuming new responsibilities in the areas of social impact assessment and biodiversity governance in protected areas subject to a multitude of uses.

In addition, (d) a fourth area of interest concerns the role of non-state actors in cross-border environmental governance. Special attention should be given to revisiting international proceedings relevant to protecting both marine and terrestrial biodiversity in the European Arctic. The EU Commission, for example, has played an important role in the mitigation of climate change and the protection of biodiversity in the European Arctic

through the adoption of various international agreements that establish legal frameworks and regional policies.¹⁷ The 2016 UN Convention on the Law of the Sea (UNCLOS),¹⁸ the UN Convention on Biodiversity (CBD)¹⁹ and its Akwé: Kon guidelines, the Paris Agreement, and the EU Biodiversity Strategy are just a handful of examples that we can learn from if mapped for proper use in governance. Particular emphasis should be placed on multi-actor/multi-stakeholder engagement, co-creating Arctic knowledge between local, indigenous, national, and international actors in the management of biodiversity. This approach will enable future researchers to map existing regulatory frameworks, identify local knowledge needs for stakeholders and decision makers, and create practical benefits for communities that rely on biodiversity for a livelihood.

Several scholars in the field of regional development have highlighted the importance of place-sensitive and place-based approach in regional development (^{20, 21, 22, 23, 24}), where the focus lies on taking local aspects into account within regional development. The European Union has also emphasized the importance of joint effort in dealing with environmental challenges. The tools for that have been, for example, cohesion policy based cross-border cooperation programs, such as previous Interreg Nord²⁵ and ongoing Interreg Aurora (2021–2027).²⁶ Cohesion policy has a multi-level governance structure, which aims at taking the local perspective into account.²⁷

III. Co-Creating and Disseminating Arctic Knowledge

Knowledge about environmental changes in the Arctic region and the need for a combined and multi-stakeholder effort towards capacity-building is not new.²⁸ Over the past half-century, global warming has been amplified in the Arctic, with indicators of the cryosphere associated with loss of snow and sea ice becoming more frequent as well as an increase in atmospheric moisture and temperatures, with an increase in warming of the Arctic projected even under moderate mitigation scenarios.²⁹ On 20 May 2021 at the Arctic Council Ministerial in Reykjavik, Iceland, a report titled “Arctic Climate Change Update 2021: Key Trends and Impacts. Summary for Policy-Makers,” prepared by the Arctic Monitoring and Assessment Programme (AMAP), showed the Arctic annual mean surface temperature (land and ocean) between 1971 and 2019 was three times higher (a 3.1°C rise) when compared to the increase in the global average within the same period.³⁰ Further, the report indicated that the intensity of rapid sea ice loss events, melt events on the Greenland ice sheet, heavy precipitation, inland flooding, coastal erosion, and wildfires are increasing in the Arctic, in addition to a rise in extremely elevated temperatures and a fall in extremely cold temperatures.³¹ It is anticipated that these changes in climate will increase industrial access to resources like oil, gas, and minerals in the region, with the current situation already of concern.³² It is also posing negative effects on the local communities (including indigenous people) in terms of food security, health and wellbeing, livelihoods, transportation, and the availability of safe drinking water.³³

A further look into earlier research on issues linked to governance, use, and management of the Arctic environment shows several exemplary cases. For instance, calls for a more integrated, clarified, and inclusive view for better cooperation with regards to

international environmental law and securitization in the Arctic,³⁴ and the importance of the law and constitution on indigenous rights in the Arctic and how environmental changes, in turn, shape the rights of people living in the Arctic.³⁵ Previous studies also highlight China's ambition in the Arctic, which poses concerns over securitization,³⁶ as well as the ongoing changes in human population in the Arctic,³⁷ which come about with new opportunities for well-being and placemaking among residents.³⁸ Recent studies suggest a greater look into flows of knowledge,³⁹ good practices of traditional knowledge,⁴⁰ and an understanding of adaptational practices amid the changing environment in the Arctic⁴¹ as a way forward. A recently accepted paper compares co-management practices in several regions of the world suggesting that achieving effective co-management without jeopardizing the traditional norms and values of local/indigenous people requires locally based measures that engage communities at the heart of sustainable forest management.⁴²

The previous studies show that biodiversity in the Arctic region requires multi-disciplinary and multi-method approaches. Especially, when taking into consideration changes in the Arctic's human population, the growing interest of non-Arctic States in decision-making, and the contested space of cross-border cooperation in managing the Arctic's natural resources. This also means an understanding of the role of international environmental law in the Arctic and not only of regional laws. Better cooperation among stakeholders in Arctic governance also seems to be a common suggestion among the authors cited above. The aim for holistic research will further the existing literature by establishing a co-management perspective to disaster risk reduction (among other related factors) around protected areas in the Arctic with attention to policy-based alternatives and inputs of local knowledge. It does so from the stance of cross-border cooperation over the use, management, and preservation of national parks and their surroundings in the Arctic. By definition, co-management (collaborative management) can mean systems of joint authority, participation, and decision-making between local communities, state agencies, and private sector stakeholders in negotiating the governance of natural resources.⁴³ Such a system might take different forms such as community-based and participatory models of conservation and development.⁴⁴

IV. Research for Local Communities in the European High North

Such research would not happen in a vacuum as the co-creation of new knowledge can be based on existing research by local and international experts in the region. Indeed, co-creation of new knowledge might be most successful when based on research by local and international experts in the region, especially in the fields of Arctic Governance and SLO.⁴⁵ Research that results in practical benefits for local communities in the Arctic could approach SLO from two angles: as a cross-border governance tool and as an extension of the concept of FPIC.⁴⁶ While SLO is an industry tool to achieve and maintain support from local communities,⁴⁷ it is also a way to expand local community participation. True and meaningful involvement of local stakeholders must include an evolved form of what is known in the context of indigenous rights as FPIC, requiring that local stakeholders are given a chance to be informed and heard.⁴⁸ Although FPIC is generally

understood as a concept applied to indigenous peoples, in some countries the right applies to non-indigenous people as well.⁴⁹ Contemporary environmental law provides opportunities for local residents to be heard and have a voice in administrative processes, for example with regard to mining, an issue that has already been the subject of research in the region.⁵⁰ Another example for the increasing recognition of indigenous rights and local interests is sacred sites,⁵¹ such as Ukko Island in Lake Inari. Such developments, while still a work in progress, can be aided by research on the co-creation of knowledge which in turn can lead to the identification of best practices⁵² and to the increased protection of the rights of local residents. The need for such research can also be seen in the context of human-animal⁵³ and human-nature relationships, particularly in the context of research on land use, protected areas,⁵⁴ environmental governance,⁵⁵ and community participation in co-management.⁵⁶ Finally, it would also be relevant in the context of regional development in the northern border regions.⁵⁷

Beyond law and governance, there is already a considerable body of research on the region that has been created over the last decades.⁵⁸ The region is noteworthy in that there is local research in different fields of science, in particular in the social sciences, with a particular emphasis on the interests of local communities.⁵⁹ It is this concern for the rights and interests of local communities in the Arctic in regard to the natural environment,⁶⁰ in particular the concern that the voices of the local people are heard when decisions are made with regard to the region,⁶¹ that have long been an inspiration for research in the social sciences in the Arctic. This is especially the case in the new, but already established, field of International Arctic Law.

This concern and research interest leads to a growing relevance of the concept of scientific responsibility. Researchers too have a responsibility for the impact of their research. Scientific research is not always morally neutral. While it is true that in democratic societies, policy decisions are not made by scientists but, ideally, by democratically empowered representatives of the people based on the work of scientists, the democratic legitimation of the final decision-takers does not disconnect researchers from the people who are affected by their research. Research ethics deals with the question of how research is conducted. The approach proposed here goes one step further and asks that the entire impact of scientific research on local communities in the Arctic (and elsewhere) be taken into account.

V. Inclusive Research as Practiced Research Philosophy

Research is not an end in itself but it is meant to serve society, a notion that is inherent in the idea of researchers' responsibility and in the idea of co-creation of knowledge with local stakeholders. The participation of local stakeholders in decision-making in the Arctic, seen through the legal/regulatory lenses of rights and sovereignty, is one of the key future questions for Arctic governance.⁶² At the crossroads of rights and sovereignty is the rights of all peoples, including the indigenous peoples of the Arctic, to self-determination—a well-established concept of contemporary public international law.⁶³ A lot of the effects of climate change and environmental degradation that are felt in the Arctic that directly impact the people who live in the Arctic are the consequences

of decisions that have been made outside the Arctic. In recent years, the evolution of a set of international legal norms in the Arctic has contributed to the development of better protections for the natural environment. These benefits of international regulatory efforts are not limited to the Arctic. It is not a coincidence that the Arctic region is open to cross-border cooperation based on legal norms. The Arctic is often seen as exceptional⁶⁴—and in many ways, that is correct. The cooperation across borders, even between States whose governments pursue very different political courses, is a hallmark of international Arctic governance. The Nordic countries especially have a long history of cooperation and the aforementioned borders of Lapland have long lost the harshness of the past. Today, connections prevail over artificial separations between the people who live in the European High North. The borders that separate the Finnish, Swedish and Norwegian parts of Sápmi and Meänmaa re-entered public consciousness during the early stages of the ongoing COVID-19 pandemic, but their role in the everyday lives of local people is limited. Cooperation across borders is the norm between the Nordic countries and this cooperation has led to the development of international environmental law standards that inspire developments far outside the region. The Arctic, in particular the European Arctic, could well serve as a source of regulatory inspiration beyond the region in the future—although some steps will be necessary to achieve this.⁶⁵

Such governance processes can be facilitated through inclusive research practices in the social sciences. By inclusion, it will require listening to local voices and co-creating knowledge together with the people who live in the Arctic region. The inclusive research philosophy suggested here also inspired in part by Nils-Aslak Valkeapää's notion that is expressed in his book *Beaivi, áhčážan*, published in English under the title *The Sun, My Father*,⁶⁶ of the Arctic as a connection based on conversations⁶⁷ and mutual learning.⁶⁸ This process of mutual learning, which can be facilitated by the inclusion of anthropological expertise and local knowledge, is essential for the delivery of research that actually benefits the people of the Arctic. Worth taking note, in this move towards inclusive research, are the future avenues Mark Goodale suggests in his chapter on “Rights and Social Inclusion” in *The Oxford Handbook of Law and Anthropology*, published in 2022 with Oxford University Press. It contends for a better analysis of rights (human, gender, indigenous, and non-liberal), their framing and transformation in global normative landscapes, and how they shape politics, social resistance, and moral discourse in broader systems. Also, paying attention to human and collective rights that serve to ameliorate circumstances of social exclusion through jurisdictions. Rights as normative tools do carry in them nuances influenced by the political context, ideological history, and social meaning and might not be condensed into general universal principles in all cases. Incorporating the above views toward inclusive research among various stakeholders, the local and indigenous communities that all play a part in protecting the natural environment will be a constructive addition to enhancing cross-border environmental governance in the European Arctic.

VI. Conclusions and Outlook

Effective Arctic governance research that aims to provide benefits for local communities will therefore have to be inclusive and interdisciplinary in nature, including not only

political and legal sciences but also know-how in fields such as anthropology, geography, history, etc.

The Arctic is often seen in black or white terms—between protecting a unique natural environment and seeing the region as a source for the extraction of natural resources.⁶⁹ As so often, the reality on the ground is not easily described in such simplified terms.⁷⁰ A nuanced view requires understanding that is gained from sharing the life of the people who might benefit from our research: in other words, from localizing interdisciplinary research on Arctic governance.

Looking at this particular case of cross-border cooperation between Norway and Finland can be instructive for the better understanding for cooperative options elsewhere. In particular, the international treaties that have been ratified by both countries, albeit not all other Arctic countries, such as the UN Convention on Biodiversity, the International Covenant on Civil and Political Rights,⁷¹ the International Covenant on Economic, Social and Cultural Rights,⁷² the European Convention on Human Rights,⁷³ and the United Nations Framework Convention on Climate Change⁷⁴ are all crucial for the sustainability of biodiversity in the Arctic. Both countries are also members of the Arctic Council, which until its pause in meetings since early March 2022 was the Arctic's top-level medium for regional and cross-border cooperation among its eight member States. At the national level, the State-owned enterprise Metsähallitus manages most of the protected areas and forestry in Finland, although the Finnish Forest Act⁷⁵ and the Akwé: Kon guidelines⁷⁶ that are referred to in the UN Convention on Biodiversity have been vital to managing biodiversity and the inclusion of indigenous communities in this process. In Norway, the State-owned enterprise Statskog is responsible for managing state forests, but several national laws, for example on allodial rights, provide an important framework for the jurisdiction to exercise certain rights and for specifying what sort of activities are allowed in state-owned forests.

The example of Finnish Lapland presents an important case study with a substantial amount of the forest protected in national parks⁷⁷ that are essential for conserving biodiversity while ensuring appropriate ways for the use of nature. However, the region is also partly sophisticated by numerous forms of land use, such as mining, tourism, practices of hunting, fishing, and herding among local Finns and the indigenous Sámi,⁷⁸ as well as timber exploitation and transport, which have various impacts on the natural environment. These activities, coupled with sudden climatic changes in the Arctic that bring about floods and forest fires⁷⁹ all require suitable options for reducing the risk of disasters around protected areas.

In Northern Norway, the Counties of Troms (host to national parks Ånderdalen and Øvre Dividal) and Finnmark (host to national parks as Øvre Anárjohka, Øvre Pasvik, Rohkunborri, Reisa, Seiland, Stabbursdalen, and Varangerhalvøya) do share a border with Finland. An earlier report showed that, even with the introduction of decentralized decision-making, Norway had not fulfilled its international commitments to concepts of public involvement leading to its existing participatory and conflict resolution frameworks, undermining public involvement in nature conservation.⁸⁰ It has also been argued that in Norway, both the Planning and Building Act and the Nature Diversity Act—crucial for planning the use and protection of biodiversity—are still, to a degree, being performed under the umbrella of hierarchy bringing about conflicts of interest among land users.⁸¹ A collaborative basis for co-producing knowledge gives us a potential for revealing

alternatives to engaging various sectors, policymakers, scientists, and the local community (in the Northern areas of Finland and Norway). Such research can in turn be utilized toward building capacity for society and science in addressing disaster risk reduction in and around national parks in the Arctic.

Social sciences research on environmental governance in the Arctic has the potential to generate positive impacts for local communities in the region. Being an environmentally sensitive region, the Arctic is equally vulnerable to environmental disasters which pose concerns over the sustainability of biodiversity. According to the International Federation of Red Cross and Red Crescent Societies (IFRC), disasters are sudden, tragic happenings that interrupt a society or community from functioning, giving way to material, human, environmental, and economic losses that exceed a community's coping ability using its own resources.⁸² This can be the outcome of both natural and human factors, along with hazards, vulnerabilities, and an incapability to reduce the potentially damaging repercussions of risk. Disaster risk reduction is a component of cultural adaptation, established in anthropology research in the context of the knowledge people with long experience in land development through technologies, organizations, various forms of work. These experiences give local communities the ability to make use of the land for sustainability and social production based on many strategies—identifying unsafe locations, use of early warning systems, proper housing designs, and crop diversification.⁸³

Although Arctic research is often perceived as research in the natural sciences, social sciences research in the Arctic has gained greater importance in recent decades. This is particularly the case for fields such as anthropology,⁸⁴ political sciences, or law. At the intersection of environmental, local, and governance studies, there are research needs and large research potential in the European Continental (Sub-Arctic). Filling these research needs and realizing this potential will require long-term efforts across multiple disciplines and the active involvement of local stakeholders, including indigenous communities. The existing discourses on SLO and FPIC could be merged to develop SLO into a kind of “FPIC for everyone.”

Notes

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5. *Infra*, III.

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Nuccio Mazzullo is senior researcher for the Anthropology Research Team at the Arctic Centre, University of Lapland, Finland. He received his PhD in social anthropology at the University of Manchester in 2005. Since 1990 he has conducted extensive fieldwork for different research projects focusing on indigeneity, perception of space and territoriality, and oral history and narratives in Finnish Lapland, working mainly with Sámi people. Among his topical interests are human-environment relationships, reindeer herding,

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Ayonghe Akonwi Nebasifu holds a Doctor of Social Science at the University of Lapland. He is a researcher in the Anthropology Research Team at the Arctic Centre, University of Lapland, where he shares topical interest on qualitative methods, people-nature relations, policy research, ecosystem governance, and agency/resilience theory. His recent publication highlights 6 years of anthropological research at Mount Cameroon National Park in sub-Saharan West Africa, where he studied knowledge integration in co-management systems. His book illustrates the agency of indigenous residents and their persistence of knowing the land in a national park. He currently coordinates the MaxiPAC.EU Project at the Arctic Centre, focusing on migration in the Arctic.

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