



Policy Brief 3

Owning and Managing Living and Renewable Natural Resources and Biodiversity



Economic and cultural dependencies on living and renewable natural resources in the Arctic

How do the systems and dynamics of natural resource rents work?

'Top-down' management as a cause of resource conflict and the solution of participatory governance

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 869327



POLICY BRIEFS in the Series

JUSTNORTH Policy Brief 1:
DECISION-MAKING FOR A SUSTAINABLE ECONOMIC DEVELOPMENT IN THE ARCTIC

JUSTNORTH Policy Brief 2:
JUSTICE IN ENVIRONMENTAL AND SOCIAL IMPACTS ASSESSMENTS

JUSTNORTH Policy Brief 3:
OWNING AND MANAGING LIVING AND RENEWABLE NATURAL RESOURCES AND BIODIVERSITY

JUSTNORTH Policy Brief 4:
THE PLANNING OF ARCTIC LANDSCAPES AND SEASCAPES AND ITS IMPACT ON SUSTAINABILITY

JUSTNORTH Policy Brief 5:
CLIMATE CHANGE FACTORS IN MULTI-REGULATORY RESPONSES IN THE NORTH

JUSTNORTH Policy Brief 6:
GOVERNANCE INSTITUTIONS FOR THE ARCTIC



About these briefs

JUSTNORTH policy briefs are topical outputs drawing upon research previously conducted in the JUSTNORTH project, an undertaking funded by the European Union under Horizon 2020 programme. In these briefs, we build on the findings of the research conducted in 17 case studies (Work Packages 2-4), and underpinned by the comprehensive overview of various concepts, schools and forms of justice (Work Package 1).

The objective is to assess the sustainability of the regulatory frameworks influencing the sustainability of the economic activities developed in the Arctic. Sustainability, understood here as the responsible use and management of spaces, common goods and shared resources with the aim of guaranteeing a fair use and enjoyment of them by future generations, is intrinsically linked to the idea of justice.

With the aim to reach to a wider audience, the policy briefs constitute short analysis on different aspects of regulatory, policy and governance frameworks in the Arctic. As such, they are knowledge resources for policymakers, scholars and stakeholders/rightsholders. They will also serve as background papers in the process of co-producing an EU Policy Analysis Report and Recommendations (D6.4).

Beyond the valuable contributions made by the authors in their policy briefs, each brief opens with outlining relevant findings of the JUSTNORTH case studies, highlighting issues identified by researchers and

research participants as problematic, challenging or having implications on the actors' perceptions of justice. Second, we provide an overview of the regulatory and policy frameworks related to the earlier identified findings. We asked: Which frameworks correspond to or address these problematic issues? What public goods are to be promoted and harms mitigated? Are future generations considered? What is the spatial scale of these policies and regulations?

Third, we consider the outlined governance frameworks from the point of view of justice. The procedural, distribute, recognition and restorative forms of justice are highlighted, alongside the rights, balance of different values and interests and opportunities for participation. We ask if the governance frameworks themselves can be sources of social ills and injustices.

Fourth, the relevance of discussed policies and regulations from the perspective of the Sustainable Development Goals is captured. Finally, we provide initial thoughts on recommendations or areas where recommendations could be proposed and developed – these will become subjects for discussion with Arctic stakeholders and rightsholders leading towards proposing recommendations at the end of JUSTNORTH project.

JUSTNORTH Case Studies informing JUSTNORTH POLICY BRIEFS

Transport 1

Opportunities For Sustainable Mobility and Addressing Transport Poverty in Iceland

Lead researchers:

Benjamin Sovacool, Sussex University
Paul Upham, Sussex University

DataCentres 2

Sustainable Digitisation & Resilient Communities: Low Carbon Data Centres in Greenland, Iceland & Norway

Lead researchers:

Benjamin Sovacool, Sussex University
Chukwuka Monyei, Sussex University

WindNO 3

Renewable and Ethical?: Motivation for Wind Power Resistance in Sápmi & the Norwegian Arctic

Lead researchers:

Ragnhild Freng Dale, Western Norway Research Institute
Halvor Dannevig, Western Norway Research Institute

Post Industrial 4

Liabilities into Assets — Reviving Post-Industrial Communities Through Repurposing Industrial Infrastructures in the Swedish Arctic

Lead researchers:

Roman Sidortsov, Sussex University,
Timothy Scarlett, Michigan Technological University

OilGas 5

Stranded Assets, Path Dependencies & Carbon Lock-in: Short/Medium/Long Term Implications of Oil & Gas Development in the Russian, Norwegian and U.S. Arctic

Lead researchers:

Roman Sidortsov, Sussex University
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Corporate Cultures & Geopolitical Aspirations: Exploring Socio-Political Barriers to the Energy Transition in Russia & Norway'

Lead researchers:

Darren McCauley, Erasmus University Rotterdam
Ryan Holmes, Erasmus University Rotterdam

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Lead researchers:

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Lead researchers:

Niels Einarsson, Stefansson Arctic Institute,
Edward Huijbens, Wageningen University,
Edward Ariza, Universidad Autonoma Barcelona
Silvia Gomez, Universidad Autonoma Barcelona

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Lead researchers:

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August 2022

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EXECUTIVE SUMMARY

OWNING AND MANAGING LIVING AND RENEWABLE NATURAL RESOURCES AND BIODIVERSITY

The policy brief assesses issues of justice and sustainable development related to owning and managing resources in the North. JUSTNORTH case studies focused on sustainable development that relies on living and non-living resources such as fish, reindeer, and landscape are highlighted in this brief. Policy recommendations for a more sustainable Arctic future based on living and non-living resources are presented.

KEY MESSAGES

- The overall focus of the brief is the economic and cultural dependencies on living and renewable natural resources in the Arctic and the governance of those resources. Governance involves the decision-making processes that assign ownership and control over natural resources. These decision-making processes also often follow a complex set of inter-related regulatory frameworks that govern specific areas of natural resource management.
- With Arctic economies highly dependent on natural resource extraction, it is very important that the general public and policy-makers understand systems and dynamics of natural resource rents: whether or how these are collected for the public benefit, who has ownership, control and access to resources. Issues related to resource ownership, control, management and benefit sharing can be a major source of conflict creating grounds for injustice.
- These economic systems of natural resource extraction and usage can often be at odds with non-economic values attached to the same “resource” and situational landscape. This also correlates with differing concepts of resource and land ownership. Many natural resources are thought of as private property but in practice this may be in contrast with the cultural notions of access and ownership, and is not in alignment with protection of cultural ecosystem services.
- One strong driver of conflicts related to natural resources is ‘top-down’ management. Lack of consideration of potential cumulative and intergenerational impacts in land-use governance is a frequently-mentioned shortcoming in spatial and developmental planning, resulting in the lack of a holistic overview. The injustice claims of natural resource users are centrally rooted in value conflicts concerning issues of (dis)respect to traditional knowledge and access to traditional resources which are not valued in top-down management systems - this undermines human rights, especially of Arctic Indigenous Peoples.
- Resource conflicts cannot be solved only with legislative and regulatory methods. Values of stakeholder groups are so different, they essentially represent differing worldviews. There are varying preferences on how and by whom land-use planning and resource use and conservation measures should be carried out. To assess these, participatory governance is needed because contemporary top-down governance is considered unequal, old-fashioned and inefficient in regulating and reconciling economic development or traditional livelihood practices.
- Often, for local people in the North, nature relations begin as part of living and being in the Arctic. Nature connections, which may be self-evident for local people, are essential learning for non-Arctic people to understand the interconnectedness of the values given to natural and human systems. Often locals feel that decision-makers outside the region assert values based on urban lifestyles, positioned as normal or desirable in contemporary society, rather than focusing on the values of the northern communities.



RELEVANT FINDINGS

Because of the overlapping nature of biodiversity management and natural resource use and governance, this focus here is on three areas from JUSTNORTH case studies: impacts of wind energy on reindeer herding, nature-based tourism (where the landscape is a natural resource), and fisheries.

Wind Energy Development

Renewable energy infrastructure (CS3-WindNO, CS16-WindFIN) can potentially interfere with traditional livelihoods and impact the local environment, especially with regard to livelihoods customarily practiced by Indigenous populations such as reindeer husbandry or fishing. This shows a conflict where a renewable resource development directly negatively impacts natural resources, in this case reindeer pastures and migratory routes.

Some local residents, NGOs, Indigenous rightsholders, and reindeer herders oppose the development. Local stakeholders and rights-holders associate wind power plans with negative environmental impacts, such as the disappearance and splitting up of grazing land and migration routes on which reindeer herding depends, and the risk of permanently damaging the ecosystems in the area. If reindeer herders lose grazing areas, some will be forced to quit herding, which could negatively affect an important element of municipalities' economy and the cultural traditions of the Indigenous and local community. Indigenous populations therefore consider some projects facilitating green transitions as a way of perpetuating colonialism. Residents along the route of the proposed transmission lines also expect the infrastructure to negatively impact nature and human well-being.

Sweden's current carnivore compensation process (CS18-IndEntr) reiterates and reinforces an asymmetrical and nonreciprocal form of participation and lacks recognition of reindeer herders. The prioritisation of carnivore conservation over reindeer and the interest of hunters and wildlife protection groups over reindeer herders take precedence in carnivore governance, following colonial conservation patterns. These structures and conservation ideals are reinforced by not adequately including the perspectives of reindeer herders in the biodiversity management, planning or decision-making processes. The current framework for carnivore compensation reinforces inequality within reindeer herding cooperatives. Compensation is considered low and inadequate, administratively cumbersome and it does not address the overall wellbeing of reindeer herds related also to impacts from other land uses. Focusing solely on compensation increases the monetization of herding but undermines its cultural value and the socio-ecological basis of this livelihood. Furthermore, without looking holistically into the conditions shaping reindeer husbandry's viability and sustainable development, compensation will not help in the long term with financial reimbursement unable to fully compensate for the loss of breeding animals. ³



Nature-based Tourism

This sector uses the natural landscape as a resource base (CS8-Tourism; CS15-Livelihoods). Compared to large-scale industries, nature-based livelihoods are practiced by local businesses and entrepreneurs and are highly interconnected with the environment, local culture, and the local way of life. In addition to positive impacts on local economies, nature-based livelihoods represent age-old traditions such as reindeer herding and salmon fishing with high cultural value. While nature-based livelihoods and nature-based tourism's negative impacts on natural systems are mostly minor, the positive impacts on the human systems are significant.

In Lapland, wind power development is seen to potentially conflict with tourism (CS16-WindFIN), both because of the adverse implications for the image of pristine Arctic nature and landscape, valuable for tourism, and the impacts on reindeer husbandry, which is an important part of regional identity utilized in destination promotion. Moreover, reindeer husbandry and small-scale tourism entrepreneurship often complementarily contribute to northerners' income. In Skjálfandi Bay, Iceland, whale watching attracts thousands of international tourists, yet many other marine activities take place in and around the bay. Thus, many stakeholders, industries and activities

compete for spatial and temporal access to the resources of the ocean, while at the same time endangering the biodiversity of marine life.

River and Marine Fisheries

In both river and marine fisheries, these natural resources contribute to not only economic development, but represent cultural connections to the surrounding environment.

In Lapland (CS15-Livelihoods) salmon fisheries are an important component of the nature-based tourism but also an important local traditional food item. In the case of River Teno, which is part of the border between Norway and Finland, part of the river basin belongs to the state, part to the private owners of the watershed. As a border river, fishing regulations are agreed jointly via the Teno Fisheries Agreement between Finland and Norway, with the aim to protect the genetically unique and threatened salmon. The Finnish government decided to ban salmon fishing in Teno River in 2021 and 2022, based on the current Agreement.

This agreement should guarantee the local population's right to fish salmon. However, according to the interviewed stakeholders, the constitutional legal basis of the agreement is lacking. A number of problems appear in conflicting uses between different stakeholders.



This includes competition for percentages of salmon fishing, which plays out between traditional fishing and recreational fishing by tourists. Many stakeholders and rightsholders believe that the Agreement has caused significant negative economic and cultural impacts on the area's traditional fishing and nature-based tourism and the issue of the access to fishing rights in Teno river and salmon as a natural resource is also a question of Indigenous peoples' rights to traditionally used resources, rights which have been confirmed in national supreme courts¹.

In Iceland (CS7-Fisheries), marine fisheries rely on natural resource management with due consideration given to environmental protection and climate action, as well as to the economic and cultural connections to ocean-based livelihoods. The Icelandic fisheries management system is prohibitive to certain groups of stakeholders by preventing the realization and protection of cultural values associated with fisheries. The current system reinforces non-transparent and unequal power distribution in decision-making and unequal allocation of culturally important fisheries access rights. It has little potential for transformations or systematic change because of the strong lobby by the powerful quota-holding companies.

¹KKO:2022:25, R2019/424, 13.4.2022

RELEVANT REGULATORY/ POLICY FRAMEWORK FOR RESOURCE & BIODIVERSITY GOVERNANCE

Land Rights of Arctic Indigenous Peoples

In the Arctic context Indigenous Peoples' land rights are of particular importance for the regulatory and governance frameworks applicable to Arctic resources management, a characteristic generally absent in European non-Arctic counties. There is a strong presence of Indigenous communities within Arctic societies elevating the position of traditional livelihoods in Arctic economies and their central importance for Indigenous cultures and identities and the legacies of settlement, colonization, discrimination and dispossession. Indigenous land and resource rights have led to tensions when, Indigenous rights are in dissonance with the interests of non-Indigenous land uses, in particular, the access of state and private sector to natural resources. Indigenous relationship to lands, waters and resources may also stand in dissonance with western or liberal concepts of ownership and access, enshrined in the Arctic states' legal systems.

Indigenous land rights are also part of the international human rights framework. The ILO Convention 169 has been ratified only by Norway and Denmark among the Arctic states, while Finland has considered ratification. The Convention recognizes the "rights of ownership and possession of the peoples concerned over the lands which they traditionally occupy" and safeguarding "the right of the peoples concerned to use lands not exclusively occupied by them"². States are obliged to identify the lands in question and establish adequate procedures for resolving land claims³. The Convention also places special safeguard on the rights to natural resources pertaining to these lands, including by setting up appropriate consultation procedures, facilitating Indigenous communities' participation in benefits of resource use and providing compensation for damages⁴.

Non-legally-binding UN Declaration on the Rights of Indigenous Peoples (UNDRIP) outlines similar



principles for Indigenous ownership and usufruct rights and the right to be involved in decision-making on resource extraction⁵. In addition, UNDRIP establishes the principle of Free, Prior and Informed Consent (FPIC) in cases of particular significant impact of economic developments on Indigenous lands, livelihoods and cultures. The rights to land in connection to the protection of minority cultures have been also addressed in connection to the International Covenant on Civil and Political Rights (ICCPR)⁶.

The Arctic states address Indigenous land rights in different ways. In the US and Canada, a network of land claims agreements covering vast areas of the Arctic has gradually emerged, including the 1971 Alaska Native Claims Settlement Act, the 1984 Inuvialuit Final Agreement and the 1993 Nunavut Land Claims Agreement, amongst several others. These agreements define parts of the Arctic as directly owned by Indigenous communities or corporations and set up complex co-management systems for the governance of resources.

²Art. 14

³Art. 14

⁴Art. 15

⁵Art. 26

⁶Art. 27

In Fennoscandia, the Sámi rights to land are a complex picture. In Norwegian Finnmark county, the 2005 Finnmark Act facilitates the management of land and natural resources in the Norway's northernmost county, with particular respect for the land rights of the Sámi people⁷. The Act has transferred all state-owned land in Finnmark to the people of Finnmark represented by the Finnmark Estate, where each half of the board is respectively elected by the Norway's Sámi Parliament and by the county council. A separate body, the Finnmark Commission, is tasked with gradually resolving the ownership and usufruct rights to specific areas. In Sweden, reindeer cooperatives have relatively strong rights to access lands for reindeer herding, and a recent court decisions strengthened the special rights to traditional lands⁸.

In Finland, as in other Nordic states, the status of the Sámi as an Indigenous People is protected constitutionally, including their traditional livelihoods (i.e. reindeer husbandry, fishing, hunting). The Act on Sámi Parliament gives cultural autonomy to the Indigenous Sami⁹, with this autonomy governed by the Sámi Parliament, with negotiations required when any industrial activity may affect Sámi cultural rights¹⁰. The powers of the Sámi Parliament with regard to influencing land use are largely restricted to the Sami Homeland Area, and thus such protections do not cover traditional land use (especially reindeer herding) performed by Indigenous and non-Indigenous persons outside of that area.

Rules for the control and management of living marine resources

The Icelandic Fisheries Management Act is the primary legal realm governing Icelandic

fisheries. In comparing the Icelandic Fisheries Management Act to the EU Common Fisheries Policy, or the FAO Voluntary Small-scale Fisheries Guidelines, Section One Article 3 of the Fisheries management act which states that the Marine Research Institution is the primary advisory body is faulty because there is a lack of socio-economic advice. This could be amended by updating the act to include a socio-economic advisory body similar to, or within, the Marine Research Institute (MRI). Furthermore, the law describes the process of decision-making, where the MRI gives sole advice based on total allowable catch (TAC) and informal lobbying by the industry is seen to be not transparent. The Fisheries Management Act¹¹ allocates special quota for community development.

The introduction of private property rights into a formerly common property context has transformed local fishing grounds from open access to enclosed private property. The ruling of the UN Human Rights Committee in 2007 stating that the Icelandic ITQ system discriminated and violated the human rights of those who wished to enter fishing without catch rights was a landmark event in confirming the lack of legal and moral basis for Icelandic fisheries policy.

In Finland, the right to fish belongs to the owner of the water area with the exception of salmon and trout in the rivers flowing to the Baltic Sea. The management of salmon stocks in border rivers is subject to cross-border agreements and river commissions. In Teno river, the recent revision of the bilateral agreement and the rules for access to salmon as a resource have led to legal battles, which thus far ended with the courts supporting the Sami rights to traditional livelihoods.

⁷ Currently a part of Troms og Finnmark county, a separate county before 2021 and after 2024.

⁸ Girja case, Högsta domstolen [Supreme Court] (2020) Mål T 853-18 Girjasdomen NJA 2020 s. 3

⁹ 974/1995

¹⁰ Art. 9

¹¹ Section Two, arts. 10 and 11

Managing the Arctic environment and landscapes



Everyman's Right in Nordic countries provides a principle for public access to public and private lands for certain purposes (non-motorized movement, berry-picking, short camping) while respecting nature conservation and specific rights of land owners. The rules between different countries and regions slightly differ. Moreover, reindeer can freely move across pastures (within a given reindeer herding cooperative). In Finland, Act on Reindeer Husbandry¹² allows reindeer to graze free in the reindeer herding area, which covers about 40 percent of Finland's territory.

In Norway, Sweden and Finland, members of reindeer herding cooperatives also have hunting, fishing and forest use rights, albeit the specific regulations differ. Other uses of land - using motor vehicles, fishing, or hunting, certain commercial tourism activities - may require specific permits in order to acquire access to lands (and landscape as a resource). In 2017, the Finnish government revised the national land-use targets to ensure that questions of national importance, emission reduction targets, biodiversity values of cultural environments and climate adaptation needs are taken into account.



RELEVANT SUSTAINABLE DEVELOPMENT GOALS

SDG 5: Gender Equality. Women are often not equally included in political matters when it comes to fisheries and marine planning and management of natural resources, particularly mineral resources.. While they are present as whale watching guides and biologists, they are expected to also handle most of household management and childcare, whereas men are more prominent in sea-going professions and politics.

SDG 7: Ensure access to affordable, reliable, sustainable and modern energy for all. Wind power development represents increasing the share of renewable energy in the global energy mix (sub-target 7.2). However, the energy production should be also socially and (locally) environmentally sustainable, highlighting the need to tackle any negative impacts in the Arctic, and deal with related to land use conflicts caused by the expansion of renewable energy.

SDG 8: Decent Work and Economic Growth. Across the JUSTNORTH case studies, the emphasis on decent work was to be sustained by local natural resources and entrepreneurship. A key consideration is in having a voice and an opportunity to participate in decision-making at the local level. This constitutes a key determinant of local economic outcomes and equitable distributions of benefits and costs related to development that affect people's lives and the natural resource use.

SDG 10: Reduced Inequalities. The cumulative impact of legacies of past injustice emerges as a strong barrier to Arctic sustainability. Wind farms, new mines and other investments are the latest additions to accumulating pressures on the Arctic local environments and livelihoods and are perceived as resource colonialism (related to centre-periphery relations) by some local communities. New developments that impact traditional livelihoods could be considered an issue of generational inequality, where future generations have reduced access to culturally important natural resources and landscapes.

In the context of the Arctic, the idea of a city or community should be decolonized from practices accepted elsewhere that may emphasize economic growth, consumerism and gendered roles at home and work, and be conscientious of Indigenous traditional ways of life. From an ecosystem services perspective, however, providing opportunities for jobs, mobility and social support can be at odds with the need for provisioning for e.g. reindeer herding, fishing and hunting. Sustainable communities depend on equitable access, and control (over the management) of natural resources.

SDG 12: Responsible Consumption and Production. Policies tend to mention the harvest and use of resources sustainably, but do not specifically aim to improve local food cycles or biodiversity in the long run. In tourism management, the certification of services and a more tightly controlled stream of tourists would overall lead to a more satisfactory provision of services. In this context, problems around exclusion, corruption, nepotism and clientelism in Arctic societies need addressing, where the absolute small number of inhabitants can pose challenges. Icelandic political culture stands out for clientelism compared to other Nordic political cultures.

SDG 14: Life Below Water. In management and national policies, marine life is predominantly perceived as a resource for sustaining livelihoods, but to some degree valued in terms of its aesthetic qualities and benefits to health, both mental and physical. Sustaining the biodiversity of the marine ecosystems becomes increasingly important, and constitutes a prerequisite for a healthy society. In the context of the Arctic, many Indigenous and local marine communities require marine life to sustain livelihood, which goes far beyond aesthetic qualities. Local economies and wellbeing can crash or boom depending on the state of marine environments, and

should not be understated. This is also crucial for youth who look to connect with their cultures by getting out to the sea, which can be an important element of individual and community identity.

SDG 15: Life on Land. Mines, wind farms, and railways cause considerable local environmental impacts and landscape changes and environmental treatment is subverted to national interests. Nature-based livelihoods impacted by these developments are faced with top-down governance mechanisms and regulatory barriers. Overall, the responsibility of the states to regulate land use and industrial infrastructure projects plays a significant role in halting biodiversity loss and protecting fragile Arctic ecosystem services, including cultural ecosystem services.

SDG 16: Peace, Justice and Strong Institutions. The necessity to foster a culture of open dialogue emerges local, and nationally, to governmental decision-makers and scientists. Stakeholder engagement seems to be selective in most development processes and decision-making, with power concentrated in municipal planning offices, national capitals and beyond, which has created a strong sense of local disempowerment.





DISCUSSION ON PATHWAYS TOWARDS FUTURE RECOMMENDATIONS

Reindeer husbandry

The case of resistance to wind power in the Norwegian part of Sápmi (i.e. land of the Sámi) (CS3), is highly contentious and it is not clear that a reconciliation pathway could meaningfully satisfy both proponents and opponents of development. Any such pathway will need to recognise Sámi rights, particularly the right to have livelihoods protected and the land areas left intact. Also for other Arctic residents, there is a need for recognition of their rights with regard to where and how they practice recreational activities, cultural practices, harvesting, reindeer husbandry, fishing and hunting. There will need to be transparency around development plans, prompt land use planning decision-making, and agreement on the use of expertise. Based on experience to date, reconciliation will require significant attitudinal change on the part of either wind power proponents or opponents.

In the case of reindeer husbandry in Finland, the **state compensation** of weather-related losses is usually paid to herding cooperatives, not to individual herders directly, which means not necessarily to those herders affected by the impacts the most. Furthermore, the government process for compensation decisions is considered very slow among the herders (CS15). This circumvents implementing proactive and immediate actions, such as supplementary feeding of reindeer, which is costly and work intensive. Regarding climate change impacts on reindeer husbandry, such

as sudden rain-on-snow events that increase reindeer mortality, the herders argue that compensations should be paid right after the damages occur, as has been done in Norway.

In Sweden, the negative issues are related to the current ways reindeer owners participate in the carnivore **governance process** in which they need to spend time and resources in negotiating policy goals that they do not even desire). It appears there are no transformative processes in the carnivore compensation system in Sweden that would lead to systemic changes enhancing justice. This illustrates that the current carnivore compensation system is not able to accomplish the desired outcome to significantly reduce the impact felt by carnivore damage on reindeer husbandry. The carnivore governance system lacks inclusivity as it does not acknowledge reindeer herders' views and assessment on carnivore damage, grounded in their traditional knowledge, thus failing to provide peaceful and inclusive societies for sustainable development. Carnivore governance needs to build on Indigenous rights of **consultation and self-governance**. Indigenous claims on carnivore damage are not currently classifiable by data collection legitimized by authorities, but efforts should be put on building a traditional knowledge base and strengthening consideration of Indigenous insight on how carnivore damage and presence could be managed.

Nature-based tourism

To ensure sustainability, there is need for innovative thinking. The reindeer herders reflected during research in case studies that more attention should be paid to nature conservation in **tourism management**. Regarding sustainable and respectful nature-based tourism management, the growth of nature-based tourism and outdoor recreation requires usage **restrictions and guidance on resource use** to protect recreational areas and avoid conflicts with traditional livelihoods such as reindeer husbandry. This has been considered in the service concept and taken seriously within the national park management by preparing management plans, including rules of order, and providing information along the recreational routes. Environmental values are reflected by the current nature-based tourism and outdoor recreation behaviour trends and demand for learning from culture and traditions, and learning and experiencing nature, and understanding the well-being value of its silence and peace.

River and sea fisheries

In the case of salmon fishing in Finland, legislation and binding international agreements are based on the premise that the fishing of migratory fish must be on a sustainable basis, regardless of who owns the right to fish. The basis for salmon fishing rights is that the right to fish belongs to the owner of the water area and while **co-production of knowledge between scientists and local fishermen** exists, but it has not become a regular practice. However, this kind of co-produced data would be needed to gain more holistic knowledge for decision-makers on such restrictions' environmental, socio-cultural, and economic impacts.

In the fisheries management in Iceland, there is a stark absence of the values of livelihoods, community,

or heritage in the Icelandic Fisheries Management Act, which can be seen as a source of harm and injustice towards future generations, small-scale actors, and rural communities. Regulatory pathways to correct this injustice rest in the Icelandic constitution and amending of the Fisheries Management Act to include aspects of justice.

First, participation in fisheries management is not transparent and inclusive. The decision-making process could be devolved to include regional councils, or formal advisory bodies from different sections of the fisheries industry.

Second, Section Two Article 10 and 11 of the Fisheries Management Act which allocates special quota for **community development** is a good basis for future changes in regulations to better support rural communities and create better job security and access to fisheries. In this section could also be a special support for newcomers, which can come in the form of a youth quota, women's quota or a special loan system. Changes could also be made to allow for more allocation to the quota-free summer fishery and the small-boat quota systems.

Third, the values of stewardship of marine resources and climate action could be made stronger in the regulatory frameworks. Changes can be made to the system to more intensely monitor discarding and high grading on larger boats would adequately reflect the source of the problem (rather than monitoring only the small boats, now increasingly by drone). A **special energy transition quota** could be established, much like the youth quota described previously. A small boat owner could be awarded extra quota if they adopted alternative fuels, battery-operated boats or even sails. Now incentives to lowering environmental and climate impact of fisheries are almost non-existent.

Annex: Relevant regulations related to natural resource management and biodiversity

Reindeer husbandry (CS3, CS16, CS18)

ILO Indigenous and Tribal Peoples Convention (international)

Finnish Wilderness Law 62/1991

Finnish Nature Conservation Act

Finnish Environmental Protection Act

Finnish Reindeer Husbandry Act (848/1990)

Environmental Code (1998) Sweden

Reindeer Husbandry Act Sweden/ Reindeer Use Plan

Nature-based tourism (CS8, CS15) Icelandic Law 88/2018 on Planning for the Coastal and Marine Areas

Icelandic Nature Protection Law Icelandic Environmental Liability Act

Finnish Law on Metsähallitus (234/2016) principles of sustainable tourism

River and sea fisheries (CS7, CS15) Icelandic Fisheries Management Act EU CFP No 1380/2013 FAO



Annex: Arctic's mineral resources: Ownership and access

Mineral resources, (on land on seabed) are usually owned by the state. The US, along with Canada belong to a small group of states that allow for non-sovereign ownership of mineral rights.¹³ While private ownership of mineral rights is much more prevalent in the US compared to other jurisdictions and states have strong role in management of resources vis-a-vis the federal government, in Alaska, the state retained the subsurface rights when becoming a US state, while the rest of the state's territory was subject to aboriginal (native) title. Pursuant to the 1971 Alaska Native Claims Settlement Act (ANCSA), in exchange for waiving their land claims, 40 million acres (16 million hectares) and nearly US\$ 1 billion were conveyed to native-owned corporations that were formed as private and not sovereign entities.¹⁴

In the oceans, the UN Convention on the Law of the Sea specifies the extent of the coastal state sovereign rights to national resources, with full ownership in the states' Exclusive Economic Zones of up to 200 nm. Coastal states have special rights to explore and use marine resources in the states' Exclusive Economic Zones extending up to 200 nautical miles (nm) from the coastal baseline. In addition, they have the right to access, explore, and exploit mineral resources located on their Continental Shelf that also extends to 200 nm from the coastal baseline, with the possibility to extend to 350nm in some circumstances.

With regard to mining, three broad systems for mineral ownership regime are applied around the globe: claim system, concession system and land ownership system. In Finland (CSI 4-Mining), claim system is used, granting the company that discovers a subsurface mineral deposit a legal right to exploit it, notwithstanding the will of landowners, providing that legal requirements, e.g. environmental conditions, are met. Landowners' economic losses, however, need to be fully compensated and a small exploration fee is normally paid. A mining permit and an exploration permit for exploration activities (with exceptions) are still required, and these permits are valuable and transferable assets. In Finland, there is currently no special mining tax or mining royalties as in many other countries, but the reform of taxation system is currently being discussed. Mining in protected areas is generally prohibited, although a derogation can be granted. In Finland and Sweden large areas are protected as a part of the Natura 2000 network of protected areas,¹⁵ but the EU law does in principle prohibit resource extraction in Natura sites, providing safeguards and biodiversity compensation is in place.

¹³ G Lewis and L-A Baptiste (2011). Mineral Rights in Trinidad and Tobago: Issues, Challenges and Recommendations (Land Conference, 2011)

¹⁴ J Linxwiler, The Alaska Native Claims Settlement Act: the first 20 years (Proceedings of the Rocky Mountain Mineral Law Thirty-Eighth Annual Institute, 38(2), 1992).

¹⁵ Within the framework established by Habitats and Birds Directives (92/43/EEC and 2009/147/EC).



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This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 869327

