



Economic Brief 3

*Non-Energy Resource Extraction:
Governance, Justice and Sustainability*



What effects do fisheries and mining have on ecosystems?

What governance gaps exist in fisheries?

How should the enhancement of economic diversification be utilized?



ECONOMIC BRIEFS in the Series

JUSTNORTH Economic Brief 1:

ENERGY TRANSITION IN THE ARCTIC: GOVERNANCE AND JUSTICE IMPLICATIONS

JUSTNORTH Economic Brief 2:

ARCTIC TRANSPORT: ENVIRONMENTAL, SOCIAL AND GEOPOLITICAL CONCERNS

JUSTNORTH Economic Brief 3:

NON-ENERGY RESOURCE EXTRACTION(MINING AND FISHERIES): GOVERNANCE, JUSTICE AND SUSTAINABILITY

JUSTNORTH Economic Brief 4:

RECREATION & TOURISM

JUSTNORTH Economic Brief 5:

SOCIAL SERVICES, SOCIAL WELFARE AND COMMUNITY DEVELOPMENT IN THE ARCTIC



JUSTNORTH

Economic Brief 3

Non-Energy Resource Extraction: Governance, Justice and Sustainability

January 2023

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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

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About the Economic Briefs

JUSTNORTH economic 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 forms of justice and of the idea of ecosystem services (Work Package 1). The objective is to assess the sustainability of the regulatory frameworks supporting the main economic activities and sectors 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, the core concept upon which JUSTNORTH relies.

With the aim to reach a wide audience and to disseminate the previous work developed by JUSTNORTH work packages 1-4, the economic briefs constitute short and accessible analyses 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 the EU Policy Analysis Report and Recommendations.

Beyond the personal contributions made by the authors in their economic briefs, they all share a common outline. Each brief opens with the main key messages on the topic under consideration. They continue by outlining relevant findings of the JUSTNORTH case studies, highlighting issues identified by researchers and research participants as problematic, challenging or having implications for the actors' perception of justice. Third, the economic

briefs analyse the governance regulatory mechanisms and gaps and policy frameworks related to the earlier identified findings. 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? Fourth, we consider the justice implications derived from the economic sectors and their governance regulatory frameworks. The procedural, distributive, recognition and restorative forms of justice are considered, 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. Fifth, the relevance of discussed policies and regulations is analysed from the perspective of the Sustainable Development Goals and of ecosystem services – regulating services, provisioning services, cultural services and supporting services – that is, the varied benefits obtained by humans from healthy environments.

Finally, we provide initial thoughts on recommendations or areas where recommendations could be proposed – these will become subjects for discussion with Arctic stakeholders and rightsholders leading towards proposing recommendations at the end of JUSTNORTH project.

The briefs build on the findings of the case studies, written outputs of which have not been made public at the time of publication of these briefs. The ideas included in the briefs originate from these written outputs as well as discussions between case study leaders and the drafters of the briefs. However, for reasons of scope, the briefs consider only some aspects of the economic sectors analysed here and do not cover the entirety of said sectors.

I. ENERGY TRANSITION IN THE ARCTIC: GOVERNANCE AND JUSTICE IMPLICATIONS

This brief focuses on the governance and justice implications of the energy sector in (Sub-)Arctic in the context of ongoing energy transition. It presents case study-derived insights into: (1) energy demand and energy services; (2) renewable energy and energy storage; and (3) oil and gas extraction. Energy, particularly oil and gas, has played a critical role in the economic development of the Arctic while contributing to the narrative of the region as an extractive frontier. The ambition of the relevant JUSTNORTH case studies and this brief is to contribute to ending this narrative. The brief takes a critical view of the current governance mechanisms and identifies vertical and horizontal fragmentation problems. Placing justice-based conditions as part of permitting and licensing (leasing), wide implementation of strategic energy planning, accounting for equity and justice in rate and tariff-making, and incorporating collective and individual capabilities into environmental and social assessments are identified as

possible solutions for the shortcomings.

The brief also criticises the current supply-centric approach and proposes incorporating the concepts of energy justice and services into energy decision making. This approach is linked to the current energy crisis that poses a challenge for winding down the ongoing hydrocarbon projects in the Arctic and not launching new ones. The issue of a post-extraction development looms large for policymakers, but it also presents opportunities for sustainable redeveloping of post-industrial spaces. The brief also notes conflicts and opposition to energy development are not unique to the O&G sector and that it is not necessary the technology or energy type but the approach to project development that matters. Therefore, renewable energy development cannot be solely justified by the decarbonisation effort and SDG7 considerations must be carefully balanced with complementary sustainable development goals.

2. ARCTIC TRANSPORT: ENVIRONMENTAL, SOCIAL AND GEOPOLITICAL CONCERNS

As the second largest contributor to greenhouse gas emissions, the transport sector significantly contributes to environmental degradation. Given this context, this JUSTNORTH Economic Brief considers how Arctic countries have taken different paths towards energy transition in line with European climate change goals. In particular, we consider private transport electrification

and the opening of new railway networks in the region. Special attention has been given to justice issues that have emerged during the research process, as well as to the impact of these initiatives on the Sustainable Development Goals and on ecosystem services. Considerations must be carefully balanced with complementary sustainable development goals.

3. NON-ENERGY RESOURCE EXTRACTION (MINING AND FISHERIES): GOVERNANCE, JUSTICE, AND SUSTAINABILITY

The brief provides an overview of the governance of (Sub-)Arctic fisheries and mining – two key economic sectors in the Arctic. Justice, sustainability and ecosystem services are discussed building on the findings of the JUSTNORTH case studies. Fisheries and mining are governed by a patchwork of policies, regulations, resource ownership frameworks, and standards. Governance shapes the distribution of benefits and burdens, and affects sustainability potential and justice outcomes. Justice and sustainability in mining and fisheries needs to be analyzed at different spatial scales, as global sustainability benefits may be intertwined with unsustainable practices when considered from the local perspective. Contrast between

the distribution of positive socio-economic impacts and the distribution of environmental impacts remains a central concern. In fact, extractive industries can exacerbate existing inequalities. The process, timing and stakeholder/rightsholder composition of consultations are the key issues for procedural justice. opposition to energy development are not unique to the O&G sector and that it is not necessary the technology or energy type but the approach to project development that matters. Therefore, renewable energy development cannot be solely justified by the decarbonisation effort and SDG7 considerations must be carefully balanced with complementary sustainable development goals.

4. ECONOMIC BRIEF: RECREATION & TOURISM

This report presents findings from across several case studies of the JUSTNORTH project as they relate to tourism in the Arctic.

The Arctic features a landscape and ecosystem that exert a strong pull for visitors. However, climate change is threatening the long-term viability of the region in its current biogeochemical form and, therefore, the socio-economic foundations of Arctic societies as well. Barriers to sustainability in the economic sector of tourism arise from structural problems associated with the industry, including differential bargaining powers of employment contracts and the broader lack of capacity

for stakeholders to engage in consultation processes at national and international contexts. In addition, the lack of overarching regulatory mechanisms or frameworks beyond consumer rights and safety measures means that a number of UN Sustainable Development Goals (SDGs) are adversely affected.

This report sketches distributive, regulatory and procedural issues of justice as well as different dimensions of ecosystem services as they relate to the SDGs. The report closes with a list of potential regulatory recommendations, including a certification scheme, approaches for employment, and integrated spatial planning.

5. SOCIAL SERVICES, SOCIAL WELFARE AND COMMUNITY DEVELOPMENT IN THE ARCTIC

This JUSTNORTH Economic Brief explores the relations between some economic sectors (transport, resources extraction, search and rescue activities) and the social development of Arctic countries and communities. Special attention has been given to how these different economic activities can potentially contribute to or hinder “community viability” in the region. The current governance and regulation

of public transport, of welfare state provisions, of corporate social responsibility, and of search and rescue activities have all been analysed under the light of justice considerations and in relation to environmental sustainability. While progress in Arctic social welfare is clearly observable, major challenges remain. for employment, and integrated spatial planning.

JUSTNORTH Case Studies informing JUSTNORTH Economic BRIEFS

Transport 1

Opportunities For Sustainable Mobility and Addressing Transport Poverty in Iceland

Lead researchers:

Benjamin Sovacool, Sussex University
Paul Upham, Sussex University

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

Fisheries 7

Changing coastal communities, fisheries governance and equity issues in Iceland

Lead researchers:

Níels Einarsson, Stefansson Arctic Institute
Catherine Chambers, Stefansson Arctic Institute

Research Stations 10

Field Research Stations, Sustainable Development, and Knowledge Production in the North

Lead researchers:

Hele Kiimann, Uppsala University
Susan Millar, Uppsala University

Railway 13

Transportation Links and Power Disparities: the Arctic Railway Plans in Finland

Lead researchers:

Soili Nystén-Haarala, University of Lapland
Pigga Keskitalo, University of Lapland
Juha Kähkönen, University of Lapland

WindFIN 16

Balancing Sustainable Opportunities in the Arctic: Wind Power & Reindeer Herding in Northern Finland

Lead researchers:

Tanja Joonas, University of Lapland
Soili Nystén-Haarala, University of Lapland

DataCentres 2

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

Lead researchers:

Benjamin Sovacool, Sussex University
Chukwuka Monyei, Sussex 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
Anna Badya, Sussex University

Tourism 8

Communities, Globalisation and Marine Tourism in Northern Iceland

Lead researchers:

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

SAR 11

Northern Seas, Global Connections: Shipping, Search & Rescue and Small Communities in Canada & Norway

Lead researchers:

Corine Wood-Donnelly, Nord University
Hannes Hansen-Magnusson, Cardiff University

Mining 14

Mining in the Finnish Arctic

Lead researchers:

Jukka Similä, University of Lapland
Henri Wallen, University of Lapland

IndEntr 18

Empowering Equitable and Robust Indigenous Economy through Indigenous Entrepreneurship in the Swedish & Russian Arctic

Lead researchers:

Elena Bogdanova, Northern Arctic Federal University
Ildikó sztalos-Morrell, Swedish University of Agricultural Sciences

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

Energy 6

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

Mining 9

Socio-economic Development, Self-determination and Global Change Impacts in Greenland

Lead researchers:

Joan Nymand Larsen, Stefansson Arctic Institute
Jon Ingimundarson, Stefansson Arctic Institute

Cruise Tourism 12

Polar Tourism, Cruise Ships and Northern Communities: Competing Interests and Resource Use

Lead researchers:

Hannes Hansen-Magnusson, Cardiff University
Charlotte Gehrke, Cardiff University
Corine Wood-Donnelly, Nord University

Livelihoods 15

The Power and Perish of Multiple Land-Use for Indigenous and Traditional Livelihoods in Northern Finland

Lead researchers:

Mia Landauer, University of Lapland
Juha Joonas, University of Lapland



Forms of Justice

Distributive Justice: “to give everybody their due shares in benefits and costs” (Deplazes-Zemp 2019); equitable distribution of social and economic benefits and burdens within and across different generations and geographies.

Procedural Justice: “to give everybody their due voice and participation in decision-making processes” (Deplazes-Zemp 2019); adherence to due process and fair treatment of individuals under the law; justness of procedures that are used to determine how benefits and burdens of various kinds are allocated to people; not necessarily determining the substantive justice.

Recognition Justice: “respecting identities and cultural differences; the extent to which different

agents, ideas and cultures are respected and valued in intrapersonal encounters and in public discourse and practice.” (Martin et al. 2016); Inclusion of the vulnerable, marginalised, poor, or otherwise under-represented or misinterpreted populations and demographic groups.

Restorative Justice: acknowledging past harms and possibly finding pathways for compensation and reconciliation, as well as ensuring that past conflicts, injustices and harms are not repeated; it should not be confused by the purely “retributive” form of justice, which is primarily concerned with punishment of wrongful acts (e.g. polluter pays principle).

Ecosystem Services

Ecosystem services¹

Cultural Services

Intangible benefits derived from interactions with nature that contribute to the cultural or spiritual development of people, including the aesthetic appreciation and inspiration for culture; spiritual experience and cultural identity; tourism and recreation, etc.

Provisioning Services

Provision of natural resources by ecosystems that are subsequently used by human communities for their survival and development. Examples: food, water, medicine, raw materials, etc.

Regulating Services

Benefits provided by ecosystems through their regulation of environmental processes. Examples: carbon sequestration; erosion and flood control, climate regulation and pollination, etc.

Supporting Services

Fundamental ecosystem processes and functions that support and enable the other types of services, such as photosynthesis, nutrient cycling, the creation of soils, and the water cycle.

¹For more on ecosystem services, see: <https://www.nwf.org/Educational-Resources/WildlifeGuide/Understanding-Conservation/Ecosystem-Services> and http://aboutvalues.net/ecosystem_services/.

JUSTNORTH Economic Brief 3

Non-Energy Resource Extraction: Governance, Justice and Sustainability

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OVERVIEW AND KEY MESSAGES

This brief focuses on the governance of (Sub-)Arctic fisheries and mining. Justice, sustainability and ecosystem services are discussed. Rather than a comprehensive overview, this paper is a snapshot based on the JUSTNORTH case studies. Mining and fisheries have very different characteristics but share many justice issues. The key takeaways may prove relevant for emerging extractive activities, such as seaweed harvesting.

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- Fisheries and mining are governed by a complex patchwork of policies, regulations, resource ownership structures, standards as well as economic and social dynamics, which in turn shape the distribution of benefits and burdens, and affect sustainability potential and justice outcomes.
 - Justice and sustainability in mining and fisheries needs to be analyzed at different spatial scales, as global sustainability benefits (e.g. efficient seafood provision for enhanced food security, and minerals extraction for transition to low-carbon economy) may contrast with locally unsustainable practices and outcomes (including social and economic dimensions),
 - Key governance gaps in mining sector concern: water management, taxation, company liability, biodiversity compensation, unresolved Indigenous land claims, and unregulated rights of people engaged in subsistence activities.
 - Governance gaps in fisheries include: little support for small-scale fisheries and local processing, limited participatory approach to fisheries management, limited local economic benefits.
 - Arctic inhabitants' perceptions of injustice in relation to mining and fisheries developments is often related to the contrast between the distribution of positive socio-economic impacts and the distribution of environmental impacts.
 - Extractive industries can exacerbate inequalities within Arctic communities and regions.
 - Participation (process, timing, those involved) remains the central concern from the point of view of procedural justice. The excessive length of decision-making processes can lead to stress and uncertainty, thus affective justice outcomes.
 - Both fisheries and mining affect the capacity of ecosystems to provide different services to humans, including cultural ecosystem services.
 - Possible recommendations include: Providing a stronger voice to representative organizations with limited capacities; Starting public consultations and planning earlier; Enhancing economic diversification; Enhancing sustainable local fisheries; Addressing the role of women and migrant workers; Utilizing taxation for a more just distribution of benefits and Enhancing biodiversity compensation regime.

Mining and Fisheries through the lens of JUSTNORTH Case Studies

Fisheries constitute a key livelihoods for many Arctic (sub-Arctic) coastal and river communities, and sub-Arctic fish stocks are an important global source of seafood.² Mining has a long history in the North and Arctic extraction is of global relevance, today increasingly due to resource demand connected to the transition to low-carbon economy.³ Within the JUSTNORTH project, mining developments were considered in CS14-Mining dealing with mining concerns in the Finnish Arctic, as well as in CS9-SouthGreenland, where it is a key element of the South Greenlandic economic landscape. Mining legacy is also central for the CS4-PostIndustrial, addressing the repurposing of old industrial sites, focusing on Kiruna mine. Fisheries industry in Iceland is tackled in CS7-Fisheries. Fisheries and whaling are also part of the CS8 on developments in Northern Iceland and of CS9-SouthGreenland in Greenland. The CS15-Livelihoods considers river fisheries (especially in a border Tornio river) as part of a broader socio-economic landscape.

These case studies, among other issues, showed that:

There is a perception that a big part of benefits generated through resource extraction does not stay in the North. Distribution of power within Arctic nations, regions and even within municipalities also plays a role in how benefits are distributed.

Mining for critical minerals may lead to tensions between national, European and global interests (such as sustainability, green transition, resource security) and local interests.

The distribution of natural resources stands out as a key question in Icelandic fisheries (within the individual transferable quota, ITQ, system), including between large-scale and small-scale fisheries, between the national and local interests. Large owners of quota who benefit from the current system are also those who have most power.

Young people often are not being proactively involved or desire to be involved in resource extraction management and decision-making.

Local processing of resources and economic diversification are seen as important goals for policy-making in remote regions/communities.

Reusing the mining sites for new purposes is overwhelmingly supported by all stakeholders, but there are concerns/disagreements about the details.

² Adam Vaughan, 'Global demand for fish expected to almost double by 2050' [2021, September 15] NewScientist, URL: <https://www.newscientist.com/article/2290082-global-demand-for-fish-expected-to-almost-double-by-2050>.

³ Carrara S., Alves Dias P., Plazzotta B. & Pavel C. Raw materials demand for wind and solar PV technologies in the transition towards a decarbonised energy system (Publication Office of the European Union, Luxembourg, 2020) EUR 30095 EN.



Mining and Fisheries Governance in the Arctic: Key Mechanisms and Gaps

Mining: governance framework

Governing mining through national, EU and international regulations and policies:

National policies and regulations are a primary source of mining governance. This includes: resource ownership, environmental assessment and permitting, public participation,⁴ taxation, safety and labour regulations, trade in certain resources (e.g. uranium)⁵.

Three broad systems for mineral ownership regime are applied around the globe: claim system (right to exploit following discovery of a deposit, used e.g. in Finland), concession system and land ownership system. Each Arctic jurisdiction has a different taxation system.

Mining in protected areas is generally prohibited, although a derogation can be granted. In Finnish and Swedish areas protected under the EU's Natura 2000 network, mining is not prohibited, providing safeguards and biodiversity compensation are in place. Assessment and mitigation of environmental impacts are key

features of permitting processes, while the framework for assessing social impacts is relatively weak in the European Arctic, with the exception of Greenland⁶.

European Union's strategies encourage domestic minerals extraction of critical minerals, and there is an ongoing effort to streamline the decision-making for mining developments, while maintaining sustainability standards. The EU is also a legislator in the realm of environmental policies for Finland, Sweden and Norway (via the European Economic Area Agreement)⁷.

International/global regulatory frameworks for mining are limited. The international framework for Indigenous Peoples' rights⁸ has been shaping national governance, especially with regard to Indigenous land rights and the impacts of mining on Indigenous communities. Furthermore, various environmental conventions – ranging from the Convention on Biological Diversity⁹ to the Espoo Convention¹⁰ provide standards and procedures for environmental governance.

⁴ See JUSTNORTH policy briefs: Justice in Environmental and Social Impact Assessments; Arctic Governance Institutions as Enablers and Barriers for Justice (September 2022). URL: <https://justnorth.eu/outcome/policy-briefs/>.

⁵ For example, in Finland, the regulatory landscape includes: The Mining Act, Nature Conservation Act, Land Use and Building Act, and the Act on the Sami Parliament.

⁶ JUSTNORTH policy briefs: Justice in Environmental and Social Impact Assessments, fn, 3 above.

⁷ Agreement on the European Economic Area - Final Act, 1994, EU OJ L 1, 3.1.1994, p. 3–522.

⁸ The UN Declaration on the Rights of Indigenous Peoples (UNGA 2007), the ILO Convention no. 169 on Indigenous and Tribal Peoples (27 June 1989, 1650 U.N.T.S. 383), as well as a vast array of human rights treaties (e.g. International Covenant on Civil and Political Rights, 1966, 99 U.N.T.S. 171).

⁹ Convention on Biological Diversity, 5 June 1992 1760 UNTS 79, 31 ILM 818.

¹⁰ Convention on Environmental Impact Assessment in a Transboundary Context, UN Economic Commission for Europe, 25 February 1991, 1989 UNTS 309, 30 ILM 800 (1991).

Governing mining through the operation of markets:

Mining is a global industry, with developments (exploration, mine construction, operation and the level of production, and closure) driven to a large extent by resource prices and global demand. The demand is, in turn, linked to growth in major manufacturing regions of East and South Asia, BRIC, North America and Europe. The demand for resources is also shaped by technological developments and policies: low-carbon transition, digitalization as well as states' infrastructural choices and investments. Many mining projects in the Arctic are currently developed by multinational companies.

Governing mining through networks: Partly due to criticism targeting mining industry for deficient environmental and social performance, various industry standards and guidelines have been developed and coalitions with environment and social non-governmental organizations (NGOs) were established. For instance, the Finnish Network for Sustainable Mining has adopted industry-specific sustainability standards,¹¹ which have created a framework for annual self-assessment, so far with mixed results. Another example of a networked mode of governance is the establishment of collaborative monitoring programmes with local rightsholders and stakeholders for the construction, operation, closure and reclaiming of the mine.¹² In Canada and the US, such arrangements are often a part of broader impact and benefits agreements (IBAs) - private contracts between a company and a community. In Europe, the social license to operate (SLO) is discussed. This refers to a set of principles for companies if they wish to maintain local, national and international acceptance for their extractive activities.



¹¹ Finnish Toward Sustainable Mining Standards, at Kaivosvastuu website, URL: https://www.kaivosvastuu.fi/app/uploads/2017/03/Kaivosvastuujarjestelma_EN_13-03-17.pdf.

¹² Frode Bjørge, 'Metagoverning the Interdependence of Municipalities and Mining Companies in the Scandinavian Arctic', In: Dale, Larsen and Skorstad (eds) *The Will to Drill - Mining in Arctic Communities* (Springer International Publishing, 2018, pp. 81-102). 9



Mining: governance gaps identified in JUSTNORTH case studies

1. Water management: Water pollution from mine effluents and tailings, extending beyond mine closure, as well as overall management of water in mining remains one of the key issues and challenges despite developments in the national and EU legislation.

2. Taxation: There is criticism that benefits from extraction of minerals exploitation are not being distributed equitably among rightsholders and stakeholders via fiscal regimes.

3. Liability: While national regulations require companies to secure resources for responding to environmental risks, the public sector sometimes still needs to cover clean-up costs.

4. Biodiversity compensation: EU (including Natura 2000 areas) and national legislation requires compensation when biodiversity loss is caused by a mining project.

However, the specific manner of ecosystem compensation often remains problematic.

5. Unresolved Indigenous land claims: The question of Indigenous land rights is a legacy of past injustices of colonization and settlement of Arctic areas. Over the last half a century, Indigenous land claims have been addressed in many Arctic regions, in particular in North America. In the European Arctic, however, the resolution of Indigenous land rights remains a major, ongoing challenge.

6. Unclear rights for people engaged in subsistence activities: The rights of the users of land (reindeer herders, fishermen, hunters) with regard to mining developments remain a challenge for permitting and participatory processes in all jurisdictions examined in JUSTNORTH case studies. Herding and harvesting livelihoods may be affected while the rights of such land users are unclear.



Fisheries: government and regulation

Governing fisheries at international, regional and national level:

In the oceans, the UN Convention on the Law of the Sea (UNCLOS) specifies the extent of the coastal state sovereign rights to resources in Exclusive Economic Zones (EEZs) of up to 200 nautical miles. Within EEZs, coastal states are responsible for the management of their marine living resources, while in many seas bilateral or multilateral regulatory arrangements are in place. In international waters, there is a network of regional fisheries management organizations (RFMOs, such as the North East Atlantic Fisheries Commission), which distribute among their members fishing quotas. There is also a patchwork of bilateral agreements (e.g. between Greenland, Iceland and the EU). Further North in the international waters, an effective moratorium on large-scale commercial fisheries has been recently introduced among Arctic Ocean coastal states, major fishing nations and the EU.¹³ Importantly, ocean governance is fragmented with regional marine environmental governance (e.g. OSPAR Commission for the North Atlantic) being separated from fisheries organizations. In Iceland, the industry is regulated primarily by the Icelandic Fisheries Management Act. The act includes a provision for allocating special quota for community development, but legal interpretations lack reference to the value of local livelihoods, small-scale fisheries or future generations.

Governing fisheries via markets: As with the mining industry, the global demand for fish products shapes prices and affects the way fishing is conducted across the planet, including in the North Atlantic. These global market dynamics contribute to the shift towards large-scale fisheries owned and operated by multinational companies and offshore processing, frequently in locations far from the waters where fishing takes place. The consumers' demand for products originating from fisheries where the sustainability of marine living resources is safeguarded has led to the emergence of various certification schemes (see next section).

Governing fisheries via networks: Certification frameworks are important non-governmental processes shaping the way how fish products are sourced. Marine Stewardship Council (MSC)¹⁴ is one of the largest and well-known ecolabeling certifications for capture fisheries, with mixed impact depending on the type of the fishery. While larger companies can invest in the certification process, for smaller-scale fisheries, it tends to be too expensive and may be considered discriminatory. Moreover, MSC has no social component, so sustainability metrics are mostly environmental.

Industry associations play diverse set of roles in fisheries governance. organizations have varying structures and purposes. In Iceland, for instance, the NASBO (National Association of Small Boat Owners) – one of JUSTNORTH research participants – acts as a lobbying body with the government.

¹³ International Agreement to Prevent Unregulated High Seas Fisheries in the central Arctic Ocean, 3 October 2018.

¹⁴ E.g. Marine Stewardship Council (MSC): Fisheries Standard. URL: <https://www.msc.org/standards-and-certification/fisheries-standard>.

Fisheries: governance gaps identified in JUSTNORTH Case Studies

1. Small-scale fisheries and local processing incentives:

While a number of policies across the North Atlantic promote local processing of fish products and there is support for the maintenance and development of small-scale fisheries alongside industrial-scale activities, the results have been mixed. Much of processing for the EU market takes place in Central-Eastern Europe. In Iceland, there are policy and regulatory developments supporting small-scale fisheries with supplementary quota for rural communities, extra quota for long-liners who bait hooks on land, and a separate summer quota-free fishery, but the overall ITQ framework resulting in concentration of quota access remains in place.

2. Adaptive and participatory governance: In Iceland, fisheries governance does not include adaptive governance elements such as multiple and open rounds of stakeholder consultation.

3. Limited macro-economic benefits at the local level: The flow of economic benefit from fisheries constitutes one of the largest gaps in fisheries governance. Large capital-intensive industrial fisheries create export value, but this wealth distribution is often seen as not distributed equitably among all sections of society. Many fisheries governance structures have hitherto seemingly failed to create a blend of wealth generation and maintenance of local fisheries livelihoods and economic benefits.

Justice Implications of Mining and Fisheries Governance in the Arctic

Justice concerns related to the discussed above elements of extractive sectors governance are considered here from the lens of distributive, procedural, recognition and restoration justice.

FORMS OF JUSTICE

Distributive Justice: “to give everybody their due shares in benefits and costs” (Deplazes-Zemp 2019); equitable distribution of social and economic benefits and burdens within and across different generations and geographies.

Procedural Justice: “to give everybody their due voice and participation in decision-making processes” (Deplazes-Zemp 2019); adherence to due process and fair treatment of individuals under the law; justness of procedures that are used to determine how benefits and burdens of various kinds are allocated to people; not necessarily determining the substantive justice.

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Restorative Justice: acknowledging past harms and possibly finding pathways for compensation and reconciliation; ensuring that past conflicts and injustices are not repeated; it should not be confused by the purely “retributive” form of justice, which is primarily concerned with punishment of wrongful acts (e.g. polluter pays principle). SSF Guidelines UNCLOS part V EEZ.

Distributive justice:

The distribution of benefits and negative impacts is one of the most visible justice issues with respect to extractive activities. While there have been efforts to better distribute benefits and address harms, a common perception remains that companies and national budgets benefit the most. At the same time, majority of environmental social harms tend to be experienced locally. Alongside pre-development EIA, SIA and permitting processes, taxation emerges as one of the main instruments of governance for facilitating distribution of benefits and redressing social impacts: between municipal, local and national level, as well as the public redistribution of tax income and public investments in Arctic regions.

Extractive industries can potentially introduce inequalities within communities and regions, by exacerbating asymmetries within communities. Those owning, controlling or managing resources may gain greater economic benefits. In addition, the interests of migrant workers are often not discussed in the context of fair distribution of benefits and burdens.

Extractive activities share the same space (landscape) with other livelihoods. When the rights and responsibilities of stakeholders/rightsholders with regard to the use of natural resources are unclear, the distribution of risks, costs and benefits is more likely to be unjust.

Arctic mining activities are currently linked to the global perspective on sustainability (via critical minerals needed for global low-carbon transition ¹⁵) means that distributive justice questions need to be considered beyond local context. Locally, mining is a depletive activity, but it can generate benefits for global climate and lower pollution. Negative sustainability outcomes occur earlier and are more local, placing higher burden of environmental and livelihood impacts on local communities. It is therefore necessary to consider the distribution of harms and benefits at different spatial and temporal scales. For fisheries, these multiple scales become visible when the industry is considered at the same time from the point of view of national interest, prevention of overfishing, providing healthy food to the rising global population, and from the interests, benefits and impacts at local/community level.

¹⁵ International Energy Agency (IEA), The Role of Critical World Energy Outlook Special Report Minerals in Clean Energy Transitions (IEA, 2021, revised 2022).

Procedural justice:

Meaningful participation – a precondition for fair and inclusive decision-making processes – is a central aspect of procedural justice with respect to extractive industries. In the last decades, regulatory requirements, guidelines and procedures for engagement have been developed across Arctic jurisdictions. Yet, the JUSTNORTH case studies show that major shortcomings remain. These include the timing of public engagement in the decision-making process, how consultations are carried out, who conducts public participation processes, who is included in these processes and with what outcomes.

Participation in fisheries management in Iceland appears to be neither transparent nor inclusive. The authorities receive no structured socio-economic advice when legislating on fisheries management or deciding on the total allowable catch. There is informal lobbying from the industrial fisheries industry.

For mining project, the timing of public engagement is a key challenge. Many stakeholders stress that consultations usually happen when significant resources and efforts have been invested by a company and/or public authorities, limiting public influence on decision-making. In some cases, public consultation becomes a 'tick box' exercise. First social and economic impacts occur when proposals for mining developments emerge in public debate, even before formal procedures commence.¹⁶ Emphasis should be put on land use planning and strategic economic work and public consultation in these processes.

The length of decision-making processes is also a justice issue. As the project planning and permitting can take many years or even decades, stakeholders and rightsholders are exposed to long-term uncertainty and emotional stress. Economic interests and long-term planning/investments of other land users are also affected, as they do not know whether a given project eventually becomes a reality.

¹⁶ Leena Suopajarvi, Ejdemo, T., Klyuchnikova, E. et al. 'Social impacts of the "glocal" mining business: case studies from Northern Europe' [2017] *Miner Econ* 30, 31–39.

Recognition and restorative justice

A key issue for both recognition and restorative justice with respect to extractive activities is the acknowledgement of ownership, control and usufruct rights to lands, waters and resources of Indigenous rightsholders and certain local land users. Industrial developments in areas where land rights are not resolved in a just manner, can easily exacerbate injustices. On the other hand, major industrial developments can trigger processes of reconciliation and land claims resolution.¹⁷

As Arctic extractive activities have been traditionally dominated by men, the role of women in mining and fisheries is often unrecognized. Identifying gender differences in terms of impacts is crucial. There is also a shortcoming in terms of recognition of migrant workers' specific issues and rights, as well as clarifying the character of their participation in the decision-making with regard to these industries.

Polluter-pays principle is an important aspect of restorative justice, especially for mining. However, environmental restoration is not always possible and economic compensation is not necessarily suitable for mitigating harms to culture, identity or fragile biodiversity. Liability caps for companies mean that in case of extremely impactful environmental accidents, the public may end up paying part of the bill.

¹⁷ As was the case in Canada, Alaska and Norwegian Finnmark: Mackenzie Delta and Mackenzie River developments, Alaska oil developments and pipeline/highway construction, conflicts over hydropower in North Norway.



Arctic Mining and Fisheries Governance and Ecosystem Services

There is little consideration of mining and fisheries through the lens of affected ecosystem services (monetized or not) in the public discourse. That is even more visible for cultural ecosystem services.

Provisioning: Sub-Arctic fish stocks and marine ecosystems provide food for both fishing communities (directly in the form of nutrients and as a cash-generating livelihood), as well as in the global context. In Iceland, a very small percentage of fish is consumed locally, as 95% of commercial catch is exported. Ecosystems within which mining activities take place are spaces for reindeer herding and traditional harvesting. Mining infrastructure may affect reindeer pastures and reindeer migratory routes, while mining developments have potentially significant impacts on rivers and lakes.

Regulating and supporting: Ocean, including its biome, provides human systems with natural carbon capture and storage. An increased uptake of carbon leads to ocean acidification, affecting fish stocks.

Furthermore, water and nutrient cycling takes place in sub-Arctic marine ecosystems. Similarly, mining developments affect ecosystems such as mires that play an important role in carbon sequestration.

Cultural ecosystem services: In Iceland, fishing constitutes a core element of national identity and culture, with small-scale fisheries being particularly valuable for small coastal communities. This has connections to language, emotions, arts and creativity, with small fisheries seen as an idealized form of relation between humans and marine environment. Mining affects ecosystems that are important for cultures and identities of both Indigenous and non-Indigenous Northerners, including for example reindeer herding and traditional harvesting. The governance of fisheries is organized around economic principles (including long-term economic sustainability of stocks), with very limited attention given to other services provided by marine ecosystems.



Mining and Fisheries from the point of view of Sustainable Development Goals

Most relevant SDGs and Targets

Relevance for mining and fisheries

SDG 14 (Life in Water)

Target 14.4: Sustainable fishing and Target 14.6: End subsidies

Sustainability of fish stocks is a key concern for global and national fisheries governance. Icelandic government considers the ITQ to be the central instrument for sustainable fisheries management.

Target 14.1: Reduce marine pollution.

The ingestion (and long-term accumulation) of macro- and micro-plastics by fish and other marine organisms, affects the safety and quality of fish products. Fisheries, in turn, are an important source of marine litter.

Target 14.2: Protect and restore ecosystems;
Target 14.5: Conserve coastal & marine areas.

A call for ecosystem-based management, integrating fisheries with other industries and with ocean governance. JUSTNORT CS7 is directly relevant.

Target 14.7: Increase economic benefits from sustainable use of marine resources and **Target 14.B:** Support small scale fishers.

The aim is to promote access rights of small-scale fishermen with regard to their livelihoods as well as considering the sustainability of the fishing industry. These targets are not fully acknowledged in Icelandic fisheries governance.

SDG 15 (Life on Land)

Target 15.1: Conserve and restore terrestrial and freshwater ecosystems,
Target 15.2: End deforestation and restore degraded forests,
Target 15.4: Ensure conservation of mountain ecosystems and **Target 15.5:** Protect biodiversity and natural habitats.

Call for sustainable use of ecosystems, which in principle is also the goal of the more recent developments in mining regulations, including with respect to mining in - or affecting - protected areas.



15.9: Integrate ecosystem and biodiversity in governmental planning.

Relevant for mining regulations and spatial planning in relation to biodiversity protection.

SDG8: Decent work and economic growth.

Exploitation of natural resources can both facilitate and hinder: economic growth (Target 8.1), diversification of economy and higher value-added (Target 8.2), decent jobs, youth unemployment, gender equality in employment (Targets 8.3, 8.5, 8.6), global resource efficiency (Target 8.4), labour rights and safe environment for workers, including migrants (Target 8.8).

SDG10: Reduce inequality within and among countries.

The extraction of natural resources may influence equality within Arctic regions. This may be a possible source or multiplier of discrimination.



Charting a Way Forward towards Just and Sustainable Mining and Fisheries

1. Providing a stronger voice to actors with limited capacities: Smaller organizations representing rightsholders/stakeholders affected by mining and fisheries sectors should be supported with financial and human resources to facilitate their involvement in complex processes. There are, however, structural limitations for such capacity-building. Decision-making processes should be simpler and more accessible. Excessive length of planning and decision-making entails long-term and often uncompensated involvement of stakeholders and rightsholders. It should be addressed.

2. Starting public consultation and planning earlier: Early social impacts may occur before formal procedures commence and many issues cannot be tackled for a single project. Therefore, spatial and economic planning may be key for justice outcomes. Project proponents and authorities need to find ways to engage stakeholders and rightsholders much earlier than currently and assess first impacts. Social impact management

plan¹⁸ is one of the tools utilized in this context.

3. Further enhancing policies for economic diversification: The high level of dependence on fisheries or mining is a characteristic feature of many Arctic communities. The resilience and capacity to pursue sustainable development can be strengthened in a more diverse economic environment. Diversified economies allow people and communities a broader space to negotiate with the industry.

4. Enhancing sustainable local fisheries: Icelandic (and to some extent Greenlandic) legislation could be enhanced by putting greater emphasis on quotas for local community development and even establishing small reserved quotas for youth or women. Loans for starting or expanding small-scale activities could be provided. The quota system could promote operators who pursue energy transition and sustainability in their fishing and fish processing.

¹⁸ Leena Suopajärvi and A. Kantola. 'The social impact management plan as a tool for local planning. Case study: Mining in Northern Finland' [2020] Land Use Policy 93: 10404.

5. Addressing the role of women and migrant workers in Arctic extractive industries: There is a need for better understanding of the role of women and migrant workers in extractive industries from the justice perspective, including varying calculation of benefits and harms for these groups. Public consultations should proactively engage women and migrant workers. JUSTSCORE negotiation tool – under development in JUSTNORTH – has potential to facilitate such mechanisms.

6. Utilizing taxation for a more just distribution of benefits: Taxation may prove one of the most powerful tools for facilitating distributive justice. Resource extraction taxation regimes linked with public investments in resource-

producing regions should take into account the harms and risks for difference groups and localities arising from mining or fisheries.

7. Enhancing biodiversity compensation regime and ensuring public involvement: Compensating for biodiversity loss or disturbance remains a key challenge for public authorities, project developers and the public. All parties should invest more time and resources in establishing the most appropriate ways for compensating for biodiversity loss, which should include strong engagement with the public.





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Arctic Economies, Environments and Societies



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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

