

Climate change as key component for understanding the current threats to sustainability

How can climate change mitigation and adaptation policies create economic opportunities?

The new challenges of infrastructure led by changing ecosystems and landscapes



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.

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,weconsidertheoutlinedgovernanceframeworks 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

Opportunities For Sustainable Mobility and Addressing Transport Poverty in Iceland

Lead researchers:

Benjamin Sovacool, Sussex University Paul Upham, Sussex University

Post Industrial

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

Changing coastal communities, fisheries governance and equity issues in Iceland

Lead researchers:

Níels Einarsson, Stefansson Arctic Institute Catherine Chambers, Stefansson Arctic Institute Edward Huijbens , Wageningen University,

Research Stations 10

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

Lead researchers:

Hele Kiimann, Uppsala University Susan Millar, Uppsala University

Railway

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

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

Lead researchers:

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

DataCentres

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

Lead researchers:

Benjamin Sovacool, Sussex University Chukwuka Monyei, Sussex University

OilGas

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 Badyna, Sussex University

Tourism

R

Communities, Globalisation and Marine Tourism in Northern **Iceland**

Lead researchers:

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

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

Mining in the Finnish Arctic

Lead researchers:

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

IndEntr

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

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

Q

Socio-economic Development, Self-determina tion 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

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

Lead researchers:

Mia Landauer, University of Lapland Juha Joona, University of Lapland



JUSTNORTH Policy Brief 5

Climate Change Factors in Multi-Regulatory Responses in the North

August 2022

Author

Sandra Cassotta, Aalborg University



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

Table of contents

EXECUTIVE SUMMARY	
KEY MESSAGES	2
RELEVANT FINDINGS	3
RELEVANT REGULATORY/POLICY FRAMWORK	4
Justice Perspectives on Arctic Climate Governance	7
SUSTAINABLE DEVELOPMENT GOALS AND CLIMATE	10
IDEAS TOWARD RECOMMENDATIONS	11

EXECUTIVE SUMMARY

CLIMATE CHANGE FACTORS IN MULTI-REGULATORY RESPONSES IN THE NORTH

This policy brief is based on the case studies illustrated in the previous work carried out in the Deliverables of the JUSTNORTH Project on "Toward Just, Ethical and Sustainable Arctic Economies, Environmental and Societies" and aims to add knowledge that considers the climate change factor as a key component to understanding the current anthropogenic threats to environmental sustainability in the Arctic and the way economic sector activities in the Arctic are, or should be, regulated.

KEY MESSAGES

- This brief considers climate change as a key component for understanding the current anthropogenic threats to environmental sustainability in the Arctic, and at the same time influencing the way economic activities in the Arctic are, or should be, regulated. There are two broad ways through which climate change shapes the landscape of Arctic governance: via mitigation policies and adaptation efforts. Mitigation seeks to protect the natural system against human anthropogenic interference by limiting the emissions and expanding climate sinks or carbon capture, while adaptation seeks to protect humans against the consequences of changing natural systems and refers to the process of adjusting to climate change and its impacts.
- The implementation of climate change mitigation and adaptation policies can create economic opportunities in Arctic regions. Conversely, the developments contributing to low carbon transition, may also adversely affect other economic sectors and livelihoods and may result in local environmental impacts (for example, the expansion of renewable energy and mining for critical minerals required for the 'green' transition). This, in turn, affects the social and cultural development of Northern, including Indigenous, communities.
- Arctic ecosystems are going through unprecedented changes, as the climate will continue to warm for many years due to climate inertia and positive feedbacks, such as albedo loss, the thawing of the permafrost and frequent wildfires. Changes caused by climate change may facilitate the exploitation and exploration of natural resources, new maritime shipping routes, and building new sustainable infrastructures. However, at the same time changing ecosystems and landscapes lead to new challenges for infrastructure maintenance and to increased human exposure to natural hazards.



RELEVANT FINDINGS

Several case studies in JUSTNORTH included studies of economic activities closely, and frequently coupled with climate change from both negative and positive positions. Sectoral activities, such as fossil fuel extraction are seen as contributors to climate change, shipping is seen as a benefiter of climate change, while mining for renewable energy is seen as the answer to moving away from the negative impact of dirty energy. These activities are conducted in the context of current climate threats in the Arctic, but they can also aggravate these threats as they increase the negative environmental and social impacts.

Research carried out in JUSTNORTH case studies finds that the economic developments ordinarily considered in a positive relationship to the pursuit of climate mitigation objectives, are often met with resistance across the circumpolar North. Stakeholders' and rightsholders' resistance to these projects is usually based on local social and environmental impacts caused by new developments, and rendering of the Arctic as area for large- scale projects contributing to the low-carbon transition (CS3-WindNO, CS16-WindFIN).

On the other hand, other activities analysed in the case studies aim to preserve the natural environment and its non-material benefits as cultural ecosystem services (CSI5-Livelihoods). It also includes concerns for the protection of the cultural traditions of Indigenous peoples and desires to promote sustainable job creation and community well-being in the Arctic.¹

For example:

Datacenters can add incentives for increasing renewable energy production, as they increase demand. Data centers may consume around 20% of the world's power supply by 2025, according to the International Energy Agency. Therefore, an argument is made that it may be more reasonable to locate power-hungry economic activities in areas where large amounts of renewable electricity are available, such as in the Nordic Arctic. This, however, further increases economic pressure on renewable energy developments in the North, with implications for land use, traditional livelihoods and local environment (CS2-DataCentres).

Transport research reveals that electrification of transport does not necessarily benefit equally all members of society, e.g. elderly or persons with disabilities, as it increases reliance on private means of transport, potentially at the expense of public transport investments. This has in fact led to transport poverty and reduced opportunities for Arctic communities (CSI-Transport).

¹ These activities are those related to the renewable energy sector, such as, for example, offshore wind power, or transportation and mobility with the case of Electric Vehicles (EVs) (CS1-Transport), or other activities related to research stations (CS10-Research), fisheries (CS7-Fisheries), shipping (CS8-Tourism, CS12-Cruises), search and rescue (CS11-SAR), and tourism (CS8-Tourism, CS12-Cruises) (the latter including whale watching, for example) that are expected to increase due to climate impacts and ice melting.



RELEVANT REGULATORY/POLICY FRAMEWORK

The global climate mitigation and adaptation framework is set out in the United Nations Framework Convention on Climate Change (UNFCCC), and particularly in the 2015 Paris Agreement (and formerly the Kyoto Protocol). The Paris Agreement has stronger emphasis on the adaptation actions in the Global North, which is an issue of particular importance for the Arctic regions. The global climate regime influences the ambitions and policies at the national level, which eventually affect developments taking place in the Arctic.

At the level of Arctic international cooperation, the Arctic Council has sponsored assessment of climate impacts in the region, took limited action towards reducing Short-Lived Climate Pollutants (SLCPs), in particular black carbon and methane, as well as attempted to facilitate good practices sharing with regard to renewable energy developments in Arctic communities, among others.

Since the 1990s, the EU has adopted a variety of policies to limit its emissions, and consequently, as a side effect, to limit its Arctic environmental footprint. The EU air quality policies also indirectly affect the amount of black carbon reaching the Arctic, as the EU's policy

framework includes PM₁₀ targets for air pollution, which also include soot/black carbon. However, to date, the EU policy framework does not seek to specifically limit environmental or social impact on the Arctic.

The EU mitigation action revolves around climate action objectives, which have implications for the developments in the Arctic:

Emission targets - climate neutrality by I) 2050 with a 2030 target of 55% emission reduction (including removals). Recently made legally binding by the virtue of European Climate Law Regulation.² Thus far, the EU has reached its emission targets, although this was partially enabled by the relocation of industries to outside the EU. The sum result is a limited gross impact on global climate emissions, with emission contributions existing via consumption of imported products, with the transport sector also failing in emissions reductions. In the European Arctic, the EU ambitions affect energy pricing, transport, and the pursuit of emissions reduction across all sectors, from heavy industry and resource extraction, to northern small and medium-sized companies.

² Regulation (EU) 2021/1119 of the European Parliament and of the Council of 30 June 2021 establishing the framework for achieving climate neutrality and amending Regulations (EC) No 401/2009 and (EU) 2018/1999 ('European Climate Law'), PE/27/2021/REV/I, OJ L 243, 9.7.2021, p. I–17



Ambitious renewable energy targets-- - in its 2) overall energy mix and increasing share of renewable energy. The Current Renewable Energy Directive targets a 32% share by 2030. However, the REPower EU plan - a response to the necessity of ending EU dependence on Russian energy - proposes a new goal of 45% renewable energy share in the EU energy portfolio by 2030. The plan proposes to simplify the preparatory and permitting processes for deployment of renewable energy installations which is likely to increase the incentives and pressures to develop wind parks and hydropower, also in the European Arctic... The plan recognises the need to facilitate the EU's access to the critical minerals necessary for green technologies (i.e. wind power, solar installations, batteries, power lines). Many deposits of these raw materials are located in the European Arctic, and the 2008 EU Raw Materials Initiative and the most recent Critical Raw Materials communication³ situate domestic (i.e. European) sourcing of critical minerals as a key pillar.

While climate targets and energy security are critical to climate mitigation and adaptation, policymakers acknowledge that the renewable energy projects do have negative environmental and social impacts. This brings into focus questions of justice related to distribution of environmental hazards and access to participation in decision-making. One instrument that has been proposed to respond to the concerns raised is the Taxonomy Regulation⁴, identifying the conditions for considering a given investment sustainable. However, while the new sustainability taxonomy advances thinking and practices around economic sustainability related to some environmental parameters, it fails to fully take into account social sustainability and the values of stakeholders, which has also been identified as a critical factor in achieving climate mitigation and adaptation.⁵ In failing to recognise the perspectives and values of Arctic communities in the decision-making process, questions of recognition justice and power asymmetries emerge.

In the EU's 2021 Arctic policy statement, the EU policymakers put forward an ambitious proposal to 'keep it in the ground' and to ban - by the EU or multilaterally - the import of Arctic fossil fuels from new extractive activities. The initiative was criticised around the Circumpolar Arctic, including in Russia and Norway, likely due to these countries' economic dependence on fossil fuels extraction. EU policymakers recently more openly acknowledged the unequal distribution of burdens related to climate mitigation and especially the need to support the workers and communities affected by the decline emerging in the transition away from fossil fuel extraction and related industrial production. The Just Transition Mechanism was established, including a new funding instrument, the Just Transition Fund (JTF) (e.g. in Finland, it will support transition away from peat as energy source)., However, it is suggested this "design is questionable, with a unidimensional focus on skills and jobs replacements" with insufficient focus on the justice for distributional, recognitional and procedural factors.6

³ COM/2020/474 final

⁴Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment, and amending Regulation (EU) 2019/2088 (Text with EEA relevance) PE/20/2020/INIT, OJ L 198, 22.6.2020

⁵ O'Brien, K., M. Pelling, A. Patwardhan, S. Hallegatte, A. Maskrey, T. Oki, U. Oswald-Spring, T. Wilbanks, and P.Z. Yanda, Toward a sustainable and resilient future. In: Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation [Field, C.B., V. Barros, T.F. Stocker, D. Qin, D.J. Dokken, K.L. Ebi, M.D. Mastrandrea, K.J. Mach, G.-K. Plattner, S.K. Allen, M. Tignor, and P.M. Midgley (eds.)]. A Special Report of Working Groups I and II of the Intergovernmental Panel on Climate Change (IPCC). (Cambridge University Press, Cambridge, UK, and New York, NY, USA, 2012, pp. 437-486).

⁶ Darren McCauley et al., Which states will lead a just transition for the Arctic? A DeePeR analysis of global data on Arctic states and formal 5 observer states (Global Environmental Change 73, 2022)



An example of an instrument that does not concerns climate change specifically, but affects climate change mitigation and adaptation in the Arctic is the International Labour Organization's (ILO) Convention No. 169 on the Rights of Indigenous and Tribal Peoples. It protects Indigenous rights and traditional cultures, as well as provides for rights to ownership and use of lands, waters and resources. The convention is, therefore, relevant to oil and gas exploration and exploitation, mining, and is also applicable to the renewable energy sector's activities. It has been ratified by Norway and Denmark, and ratification is the subject of continuous discussion in Finland.

As Arctic states are among major greenhouse gas (GHG) emitters, and are formally committed to the global climate regime objectives, the national governments need to consider policies to reduce emissions in energy sectors and across their economies. In this process, new and more low-carbon technologies and activities aiming to achieve objectives articulated by law and policy need to be implemented at all levels of governance.

At national level, some examples of climate strategies responding to the climate crisis emerge in JUSTNORTH's empirical studies (e.g., CS1-Transport; CS3-WindNO; CS4-PostIndustrial; CS13-Railway; CS-16WindFIN), attempting to strike a balance between fossil fuel activities, environmental protection and the enabling of the energy transition process while trying at the same time to tackle climate impacts.

For Iceland, the strategy is to work on the implementation of the UNFCCC objectives and

achieve the mitigation and adaptation commitments under the Paris Agreement, as well as to follow the SDGs, with focus on the further expansion and better use of country's vast renewable energy production and potential. Hydropower and geothermal energy in Iceland and the development of intensive industry based on the availability of renewable energy are examples of a unique strategy available for northern regions, although the expansion of hydropower has been a highly controversial topic over the last decades.

Norway's strategy emphasizes the intention to reduce emissions through the Barents Cooperation Forum and focuses on climate modelling predictions and approaches that entail both mitigation and adaptation measures, including mobility and transportation This strategy can be defined as the greenest in Europe, while at the same time presenting paradox with a goal to incentivize the economy of the mining sectors and also opening the Arctic to more oil drilling and the announcements of more licencing awards. Empirical findings of the JUSTNORTH case studies (CS3-WindNO) note that the development of the large-scale infrastructure necessary to support climate mitigation will transform the Arctic landscape and impact on the seasonal migrations of reindeer. They also show that Norway takes into account the role of energy in financing the welfare system and consideration for how investment should result in the development of strong communities and not only industrial infrastructure.



Sweden has an updated strategy for the Arctic regions, which was released by the Swedish Government in 2020. Amongst Swedish priorities in terms of response to climate impacts are environmental and biodiversity protection by increasing renewable energy, especially wind power, electric storage and hydropower and at the same time trying to reach a balance between commercial green opportunities and traditional extractive industries. JUSTNORTH's empirical research (CS4-PostIndustrial) finds there is potential to convert and repurpose stranded industrial infrastructures for contemporary and future regional and local community needs.

Justice Perspectives on Arctic Climate Governance

The interactions with stakeholders across various case studies showed that the impacts of climate change are felt across the Arctic in ways that haven't been as obvious elsewhere. The concerns include unpredictable weather, increased intensity and frequency of storms, less sea ice, changing snow conditions and increased flooding risk, sometimes accompanied by landslides. There are some possibly positive developments associated with climate change, such as an increase in agricultural opportunities, but these are uncertain and bring their own impacts. The effects also encompass traditional cultures

and livelihoods, as well as affecting accessibility and creating volatility in some livelihoods. One aspect raised by participants relates to food security in the light of changing climate, especially with respect to accessing traditionally harvested food which is dependent on access to ice or issues with moving marine species. In the far north, there is lack of adaptive capacity to manage these changes in isolation, with responses through policy coming slowly or late. While aware of the costs of climate impacts and adaptation, Arctic communities lack financial resources to meet challenges related to infrastructure damage or economic adaptation. The general perception was that measures and support for adaptive responses to climate change are weak or non-existent, with the green transition acting as a front for economic opportunities.

From a climate justice perspective, there are a number of considerations related to the sustainability and ethics of economic development and the green transition.

The evaluation of the impact of a particular policy or economic development project on the climate and in relation to commitments made in climate governance. This ranges from immediate and long-term effects, as well as both direct and indirect consequences. Another consideration relates to whether the policy or infrastructure can itself be affected by climate

Where is the distribution of costs associated with a policy or development project's climate impacts, and who benefits? While understanding the distribution of environmental hazards or the economic benefits is important for the short and medium term, an analysis should take into account the long-term effects on future generations or the impact on different parts of society within proximity to the decision.

How should the costs of the effects of the policy or economic development's impact on climate change be redistributed and who pays for the cost of measures taken (i.e.ability to pay, polluter pays, beneficiaries pay)?

Evaluating the fairness of the processes that have been used to arrive at the decision related to the policy or economic development and its climate effects. Is this a top-down (paternalistic) process?

Have those who will be most affected been included in the process and when have they been included?

Distributive justice: The regulatory frameworks for just transition are related to the fair distribution of resources within society. Certain industries, and thus workers and communities associated with these industries, are bound to lose out on the economic transformation (e.g., CS6-Energy). From the perspective of distributive justice, we need to

consider how significant the support for transitioning away from the fossil-fuels industries should be and who and how should bear the cost of this support. This potentially applies also to inhabitants of sparsely populated areas with large distances and cold climate, i.e. typical characteristics of Arctic regions, as well as the distribution of adverse impacts related to critical minerals extraction and renewable energy production across countries and globally.

The changes in the promoted forms of transport (e.g. due to the higher costs of fuel or taxation on air transport for communities not connected by road) or high electricity prices for households dependent on electric heating may result in higher burden for Arctic populations compared to the people living in major urban centres, where there is a better access to public transport and multiple heating options (CSI-Transport). Also raised, is the concern for the concentration of wind power installations, hydropower developments and critical raw materials extraction in the European Arctic, where geography and sparse population are conducive to such investments. This is combined with the perception of Arctic spaces as vast, uninhabited and unproductive, while these Arctic territories are already spaces where various activities, including traditional livelihoods, take place and which have intrinsic cultural landscape value (CS3-WindNO; CS13-Railway; CS14-Mining; CS16-WindFIN).

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 across 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." (Martinetal.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; 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).



Procedural justice: The regulatory frameworks related to promoting investments in renewable energy or the extraction of raw materials critical for low-carbon transition can cause harm and adverse local environmental and social impacts and often fall short of adequate participation for local communities. The principles of transparency, respect, equality and inclusiveness should be realized in all processes related to activities contributing to climate mitigation, as well as to actions ensuring adaptation to climate impacts. A key question is how to consider fairly the interaction between the global, national sustainability and climate goals, and local environmental and social sustainability in the light of project that contribute to the former (CS3-WindNO; CS14-Mining; CS16-WindFIN). There is also a question of how to transparently discuss the issue of potentially stranded assets (CS5-OilGas).

Restorative and recognition justice:

The pressure on the Arctic lands related to the pursuit of climate mitigation objectives is seen as a new incarnation of colonial ("green colonialism") or centre-periphery relations due to the unresolved legacies of past harms and injustices at worst and the using of the Arctic as a sacrifice zone at best. The ongoing lack of resolution of Indigenous Peoples' land rights, history of dispossession discrimination, ongoing economic inequalities and discriminatory perception contribute to the opposition to new developments, even if their overall goal (i.e. climate mitigation) is seen as positive (CS3-WindNO, CS13-Railway, CS16-WindFIN).





SUSTAINABLE DEVELOPMENT GOALS AND CLIMATE

- I The economic activities undertaken in the Arctic in the light of climate change (as well as climate change mitigation and climate adaptation actions) are inseparable from the Sustainable Development Goals (SDGs)⁷, encompassing economic growth, social inclusion, preservation, and improvement of livelihoods, while at the same time ensuring environmental sustainability and cooperation among states in line with the Paris Agreement goals.
- 2 Without transformative adaptation and mitigation actions, climate change could undermine progress towards achieving the 2030 SDGs and make it more difficult to implement climate resilient development pathways in the longer term.⁸ Reducing global warming (mitigation) provides the best possibility to limit the speed and extent of changes in ocean and cryosphere, and give more options for effective adaptation and sustainable development.
- 3 From a climate environmental justice perspective, progress on SDG 4 (Quality Education), SDG 5 (Gender Equality) and SDG 10 (Reduced Inequalities) refers to moderating the vulnerabilities that shape people's risk arising from ocean and cryosphere change, while SDG 12 (Responsible Consumption and Production), SDG 16 (Peace, Justice and Institutions) and SDG 17 (Partnerships for the Goals), if effectively promoted and achieved, will facilitate the scales of adaptation and mitigation responses required to achieve sustainable development. The JUSTNORTH case studies shows that investments in social and physical infrastructures that supports mitigation and adaptation actions are enabling people to participate more strongly in initiatives contributing to the achievement of the SDGs and demonstrate the relevance of the role of citizens and civil society in what is defined as "bottom-up" approach in pursuing the objectives of the Paris Agreement and the climate and justice ethical approach contained in the latest Glasgow Climate Pact (GCP).

⁷The Sustainable Development Goals (SDGs) were adopted by the United Nations in 2015 to support action for people, planet, and prosperity. The 17 goals and their 169 targets strive to end poverty and hunger, protect the planet and reduce gender, social and economic iniquities by 2030. Sustainable Development Goals (SDGs) as Adopted by the United Nations https://sdgs.un.org/goals accessed I July 2022, 2022

⁸ Intergovernmental Panel on Climate Change (IPCC) (2019). Special Report on the Ocean and Cryosphere in a Changing Climate, Chapter I., page 50, IPCC.

⁹ Glasgow Climate Pact of 13 Nov. 2021 Decision-/CP.26.

IDEAS TOWARD RECOMMENDATIONS

- Considering global, and national climate change mitigation objectives, and in light of the spectrum of climate change impacts in the Arctic, all economic activities should gradually move toward full decarbonization. That needs to be supported by ambitious EU and national policies and international cooperation, while taking stock of other developments such as digitalization, and taking account of just transition concerns in the Arctic.
- Future policy pathways need to point out concrete ways regarding establishing new mitigation and adaptation plans and strategies in future economic development.
- Mitigation and adaptation strategies should be drafted and implemented with
 the respect of the different interests within society. Engaging stakeholders
 and rightsholders is key to consider properly the cultural, environmental
 and economic significance of livelihoods of Indigenous communities. For
 the EU, a key element in its goal to be an actor promoting sustainable
 development in the Arctic, is increasing engagement at a regional level and in
 domestic policy frameworks (i.e., energy transition, climate change mitigation,
 stakeholders' engagement in climate change adaptation and mitigation policies).
- In a more distant future, there may be a need for a more comprehensive multilevel and cross-sectoral Arctic climate mitigation and adaptation strategy, which would have climate justice as a guiding principle. It would link different levels of governance (global, regional, national and local) and different actors (such as stakeholders, NGOs, groups of interests) with a redline that links climate factors stakeholders and rightsholders. Activities across different sectors need to be conducted with the aim of safeguarding the interests of future generations. Research on how to tackle climate change in the Arctic in a comprehensive and just manner is needed, and JUSTNORTH contributes to this objective.
- It is recommended that the EU, in its pursuit of new Arctic infrastructure, extraction and energy projects, consider not only economic and climate mitigation values but engages with stakeholders and rightsholders to broaden the understanding of their concerns. New actions should be based on scientific and traditional knowledge. New regulatory instruments and policy tools should be also "climate change proof".
- The EU is encouraged to include Arctic concerns more strongly in its future climate strategies. One of the goals could be to facilitate partnerships between Arctic communities and Indigenous Peoples and resource and industrial developers, which in turn will open the path for new business practices, new regulatory tools or strategies. Such tools could include Corporate Social Responsibility (CSR), Impact Benefit Agreements (IBA), adjustments to the Environmental Impact Assessments (EIAs) or Social Impact Assessments (SIAs) frameworks, or considering new social, environmental and economic assessment tool, such as the JUSTscore system emerging as an outcome of JUSTNORTH.



JUSTNORTH

Toward Just, Ethical and Sustainable Arctic Economies, Environments and Societies















































