Justice in Scale and Distribution: A Comparative Integrated Report

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

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Executive Summary

This report assesses the status of the economic sectors under consideration in case studies 7-12 of JUSTNORTH, giving a rich overview of the existing context of the economic activities through analyses of justice. The report discusses evaluations of the ethical conditions of economic activities, the risks to stakeholders and ecosystem services and finally, barriers and pathways to sustainable development under the theme of justice in scale and distribution. This consolidated report integrates the research findings of three reports (1: Contextual Case Study Papers for Justice in Scale and Distribution; 2: Set of Case Study Value Indicators for Justice in Scale & Distributions; 3: Set of Case Study Discussion Papers on Stakeholder Ethical Perspectives and Barriers to Sustainable Development) and provides a comparative analysis of the findings on human and natural systems, mechanisms for reconciling multiple ethics systems, potential national or subnational regulatory solutions and finally, the ethics of sustainability. Through perspectives of value and analyses of justice, these reports conceptualise the relationship between the existing economic activity and stakeholders' ethical perspectives and criteria of sustainable development goals to make recommendations on legal and regulatory pathways towards just and ethical sustainable development in the Arctic.

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1.Summary of the findings

This report assesses the status of the economic sectors under consideration in Justice in Scale and Distribution, giving a summary overview of the existing context of the economic activities, evaluating their ethical condition, the risks to stakeholders and ecosystem services and finally, barriers and pathways to sustainable development. This report will be used by the JUSTNORTH principle investigators in the case studies 13 to 18 to produce the final reports of the project, meeting its ultimate aims.

This report has through three separate reports (1: Contextual Case Study Papers for Justice in Scale and Distribution; 2: Set of Case Study Value Indicators for Justice in Scale & Distributions; 3: Set of Case Study Discussion Papers on Stakeholder Ethical Perspectives and Barriers to Sustainable Development) contributed empirical data necessary to underpin the JUSTscore framework which will enhance the governance capacity of the EU to incentivising just transitions toward sustainable development. Based on standardised methods across the three empirical reports, the Justice in Scale and Distribution report explored and co-produced with stakeholders in six case studies the various ethics and value systems underpinning the Arctic economic activities of tourism, fisheries, mining, shipping, search & rescue and research infrastructure.

The strategically selected cases representing these sectors to a different degree were analysed in relation to the impact of economic activities on the relationship between economic development and ecosystem services, especially cultural ecosystem services. The resulting detailed empirical descriptions contribute to understanding community viability in relation to the studied economic activities as detailed in reports 2 (Case Study Value Indicators for Justice in Scale & Distributions) and report 3 (Case Study Discussion Papers on Stakeholder Ethical Perspectives and Barriers to Sustainable Development) on which this summary report builds. The key findings from these include:

The need to recognise diversity and multiple interests in developing economic activity and alloying these differences into meaningful inclusive strategy.

A variety of opinions exists across stakeholders when it comes to the different economic activities making it challenging to establishing a unified voice regarding issues of justice.

Regarding the Sustainable Development Goals (SDGs), an articulated critique is the enormous scale discontinuity between perceptions of SDGs as global targets and their translation into meaningful action in local settings.

The complex mixture of justice conceptualisations emergent from the cases is due to the simultaneity of issues that arise in the context of environmental questions broadly but also to individ al situations. The latter may vary widely depending on the position, training, country of origin, gender, ethnicity and other intersectional aspects

Concerning the social circumstances of justice, Indigenous perspectives remind us that past and present developments have an impact on the future. And various schools of justice, such as feminism and postcolonialism, remind us that oppression is structural. Postcolonial schools for instance demonstrate the relation between remote regions and the more central, industrialised locations. Both postcolonial and Indigenous schools relate to principles of justice, e.g. the right to have rights. Aspects of knowledge co-production relate in particular to the need to educate visitors to make them aware of the situation and "bind them in". Here, the question of who gets to produce and relate arises once more. Particularly from a postcolonial perspective of justice, the importance of creating means to express the interests of those previously or currently oppressed takes centre stage.

The case studies cover a number of transcending themes present in Arctic economies including the rural and urban divide, gendered barriers to market entry, the role of local practices in the development of the knowledge economy, and the problems posed by economic path dependence. The list below the case studies covered in the justice in Scale and Destribution report, their title, and their respective principal investigator.

Casestudies 7-12

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CS7-Fisheries: Case Study 7: Changing coastal communities, fisheries governance and equity issues in Iceland
Researchers: Níels Einarsson, Steffansson Arcitic Institute
Catherine Chambers, Steffansson Arcitic Institute

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CS8-Tourism: Communities, Globalisation and Marine Tourism in Northern Iceland
Researchers: Níels Einarsson, Steffansson Arcitic Institute
Edward Huijbens, Wageingen
Eduard Aríza, Universidad Autonoma Barcelona
Silvia Gómez , Universidad Autonoma Barcelona

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CS9-Mining: Case Study 9: Socio-economic Development, Self-determination and Global Change Impacts in Greenland
Researchers: Joan Nymand Larsen, Steffansson Arcitic Institute
Jon Ingimundarson, Steffansson Arcitic Institute

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CS10-Research Stations: Case Study 10: Field Research Stations, Sustainable Development, and Knowledge Production in the North
Researchers: Hele Kiimann, Uppsala University
Susan Millar, Uppsala University

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CS11-SAR: Case Study 11: Northern Seas, Global Connections: Shipping, Search & Rescue and Small Communities in Canada & Norway
Researchers: Corine Wood-Donnelly, Nord University
Hannes Hansen- Magnusson, Cardiff University

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CS12-CruiseTourism: Case Study 12: Polar Tourism, Cruise Ships and Northern Communities: Competing Interests and Resource Use
Researchers: Hannes Hansen-Magnusson, Cardiff University
Charlotte Gehrke, Cardiff University
Corine Wood-Donnelly, Nord University

2. Overarching Methodology

All cases studied in the justice in Scale and Destribution report,) conducted their fieldwork and data collection in the period from March 2021 to March 2022, which coincided with travel and work complications stemming from different degrees and extents of national COVID measures. Data gathering was mostly impacted in terms of complicating, delaying and/or cancelling travel and forcing many interviews to be online rather than face-to-face. Regardless, cases report confidence that these complications did not have a strong bearing on findings, as many key in-person activities took place and the nature of the interview questions lend themselves to online engagements.

Co-production and data collection activities involved ethnographic fieldwork including interviews (approx. 170 across the six case studies), informal conversations, newspaper interview comments, participant observation activities, and workshops/focus groups (a total of 10). After analysis of interviews, focus group, and participant observation data, value indicator data was grouped into major values with a range of indicators for each value. While some of the interviews took place via Zoom and online, in some cases, in-person semi-structured interviews were guided by a pile-sort exercise as interview prompts. In the pile-sort interviews, which were applied in CS7, 8, and 11, the informants were given physical cards which had values important to small scale fisheries (CS7), marine resource use (CS8) and search and rescue (CS11) printed upon them.

Data collection and analysis in each case was prefaced with the extensive reviewing of normative and narrative literature and statistical data sets. Moreover, international legal agreements as well as national policy and regulatory instruments were collected and analysed as appropriate and relevant.

Analysis of interview transcripts and complementary analysis of legal texts followed the excel template provided by JUSTNORTH and was coded using NVivo, using a coding tree developed from the list of values identified in D8.5. This included root values based on substantive and procedural values, as well as values related to ecosystem services and the SDGs. Legal text analysis consisted of reviewing major parliamentary acts and planning documents chosen for their relevance to the case study in report 1 (Contextual Case Study Papers for Justice in Scale and Distribution) and in light of the codes and findings of major values and indicators found in the interviews. By way of content and thematic analyses, all the original interview data was coded according to the Value Indicator Groups of Ecosystem Services Indicators (cultural, provisioning, regulating, supporting); Procedural Value Indicators (equality, freedom, rights, transparency); SDG Value Indicators (conservation, environmental protection, sustainability); Substantive Value Indicators (human security, belonging, flourishing, respect), all reported in Case Study Value Indicators for Justice in Scale & Distribution.

The collected data was then evaluated in terms of the ethical condition of the economic activity involved, the risks to stakeholders and ecosystem services and finally, barriers and pathways to sustainable development. These findings are reported in the Discussion Papers on Stakeholder Ethical Perspectives and Barriers to Sustainable development.

3. Human and natural systems: the perceived and desired positive and negative impacts, risks, and benefits across the economic sectors and studied regions

3.1 Comparative summary organized by key actor (stakeholder) type

Table 1 summarises findings from each of the case studies as gleaned from the Discussion Papers on Stakeholder Ethical Perspectives and Barriers to Sustainable Development. Codes in Table 1 summarise the perception of stakeholders in different cases regarding positive and negative impacts, risks and benefits of the economic activity in the region. Human systems are labelled H, with positive impacts marked with + and negative impacts with a -. In a similar ways natural systems are labelled with N+/-. If perceived a 'p' will follow, otherwise 'd' for desired.

Economic activity/ Stakeholder type	Fisheries in IS (Iceland)	Fisheries in GL (Greenland)	Mining GL	Research stations	Cruise tourism	Search and Rescue	Marine spatial planning
Residents	H+p	H-p/+d	N-p	H-p	H+p/N-p	H+-p	H-p/N-p
Decision makers	H+p						
Women	H-p						H-p
Indigenous communities				H-p	H-p		
Young	H-p		N-p				N-p
Old	H+p						
NGOs			H-p/N-p			H+-p	
Rural communities	H-p						
Small scale business	H-p	H-p		H+p		H+-p	H+p/N+p
Large scale business	H+p	H-p			N-p	H+-p	H+p
National government	N+p					H+-p	
Local government	N+p	H-p		H+p		H+-p	
Immigrants	H-p				H-p		H-p
Researchers				H+p			
Tourists				H+p	H+p		H+p/N+p

As Table 1 shows the variety of opinions across stakeholders regarding the different economic activities and underscores that establishing a unified voice concerning issues of justice can be challenging. This suggests that policy should focus on the associative bonds people form and maintain in the places where their activities unfold rather than apply one-size-fits-all approaches. Possibilities lie therefore on thinking and acting together, opening up to difference and honouring divergence. The complexity of perceived impacts calls for policy to occupy a middle ground of thought, i.e. consider what is proportionate in relation to the environment in which decisions are made (Stengers, 2015, p. 121).

3.2 Comparative summary organized by the applicable SDG

The SDGs identified as applicable to this report are 4, 5, 8, 9, 10, 11, 12, 13, 14 and 16. The discussion below outlines key concerns surrounding each across the six case studies. Overall, a critique articulated by participants concerns the enormous scale discontinuity between perceptions of SDGs as global targets and their translation into meaningful action in a local setting.

SDG 4: Quality Education

Across stakeholder groups there is a gap between what is defined as quality education in national curricula and the current epistemic marginalisation of traditional knowledge. This directly influences the ability to follow through with "Climate Action". Theoretical and abstract types of knowledge tend to be valued as superior to the experiential knowledge of those living their lives in the Arctic. This results in the erosion of indigenous culture and language. Moreover, and to be highlighted, is how vocational and professional education in construction, transportation, nursing, teaching is very important. This type of education offers good, stable job opportunities for perhaps especially young men, who struggle in Arctic educational systems. Arctic societies suffer from a lack of a stable, local workforce in, for instance, nursing and teaching.

SDG 5: Gender Equality

Women especially are not equally included in political matters when it comes to fisheries and marine planning and while they are present as whale watching guides and biologists, they are expected to handle most of the household and childcare whereas men are more prominent in fisheries and sea-going professions as well as in politics. A closer look at vocational and professional education concerning gender will – also – be valuable concerning Arctic societies.

SDG 8: Decent Work and Economic Growth

Across case studies the emphasis on decent work was to be sustained by local resources. A key consideration was what activities income from jobs could sustain, such as leisure, time for family, cultivating bonding and community cohesion. Having a voice and an opportunity to participate in decision-making at the local level is a key determinant of local economic outcomes and more equitable distributions of benefits and costs related to development that affect people's lives and the natural resource use. There is a call for strategies that promote inclusive and sustainable economic growth, full and productive employment and economic opportunities, and decent and stable work. This entails employment creation (that does not infringe on the environment) and involves better dialogue, transparency, and inclusiveness.

The perceived power imbalance and lack of inclusion is expressed as the root to much of the economic stagnation, decline and social challenges. An explicit look at human capital formation in Arctic societies is imperative. Therein the access of local and indigenous communities to different kinds of education for their own and societal benefits matters. A greater supply of local vocational and professional human capital would probably have significant positive effects on decent work.

SDG 9: Industry Innovation and Infrastructure

In the context of SDG 9 and industry, innovation and infrastructure, there are issues with crosscultural accessibility for recruitment, training programmes and materials for local residents and immigrants. References made point to cross-cultural and multi-lingual accessibility for materials and training in languages that community members are proficient in. This lack of available multilingual training prevents community members with skills and knowledge in demand from participating. A second issue emerging related to SDG 9 relates to difficulties with having adequate equipment for the job within reasonable geographic proximity.

SDG 10: Reduced Inequalities

Issues and challenges of food security was addressed in terms of access to both store-bought food and country food. Residents expressed a desire for a higher level of food security in terms of access, availability, and quality of local food. Many locals feel that they are insufficiently included in decision-making processes affecting their lives also regarding food production and living off the land.

Moreover, local students who have had their cultural identity and knowledge devalued, struggle to attain positions in administrative, educational, or research arenas in the Arctic. Their expertise and understanding of the nuances of temporal and spatial environmental processes is therefore not incorporated in the "expert knowledge" applied for environmental decision-making.

SDG11: Sustainable Cities and Communities

A sustainable community relies on opportunities for jobs, social mobility, and social support. Moreover, in the context of the Arctic, the idea of a city or community should be decolonized 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. Many locals expressed concern over possible pollution of hunting and fishing grounds, and agricultural areas for sheep and cattle farming and horticulture in areas nearby extractive industry sites. The differing value and role of community representatives must be reconciled. Moreover, activities in a small community that lacks housing and services to support permanent employees are an issue as well as lack of funding support and investment from national governments.

Mostly in Canada, Indigenous groups consider that their culture and language are not sustainable due to marginalization by government institutions and the dominant western culture. This development is mirrored in the Canadian hesitation initially to endorse and ratify the United Nations Declarations of the Rights of Indigenous Peoples. Further, indigenous groups often lack the capacity to take advantage of development initiatives. This was expressed in both Sweden and Canada as a lack of training or understanding of the rules of play, an emphasis on western knowledge as "facts" informing decisions at the expense of local and traditional knowledge, and a lack of personnel resources to take on the burden of participation sought or required. This lack of representation further erodes their cultural identity and sustainability.

SDG 12: Responsible Consumption and Production

Policies in Iceland tend to mention the harvest and use of resources sustainably, but do not specifically aim to improve local food cycles or land-sea-integration. On the other hand, critique was sometimes voiced towards the enforcement of compliance with existing regulations, which seemed to be undercut by non-local service providers or those not integrated into the local communities, described as "wild west", "cowboys" or "pirates". There seemed to be a consensus that certification of services and a more tightly controlled stream of tourists would overall lead to a more satisfactory provision of services. In some locations the dialogue seems to work well between local stakeholders, which appears to be a positive result of localised policies. In this context what needs to be addressed are problems around exclusion, corruption, nepotism and clientelism in Arctic societies, where the absolute small number of inhabitants can pose challenges. Icelandic political culture stands out for clientelism from other Nordic political cultures.

SDG 13: Climate Action

Considerable research at the field stations directly addresses how climate change impacts ecosystems. Despite this, the knowledge produced is only partially returned to the local community. The lived experience and detailed temporal and geographic knowledge of those who directly experience climate change could provide a more detailed picture of the local impacts and help reveal adaptation strategies. SIKU (https://siku.org/) and other related distributive and community owned Indigenous knowledge initiatives could be highlighted in this context as ways to democratize information.

SDG 14: Life Below Water

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. The importance of sustaining biodiversity of the marine ecosystems emerges as important, and a prerequisite for a healthy society. In the context of the Arctic, many Indigenous marine communities, in particular the Inuit, require marine life to sustain livelihood, which goes far beyond aesthetic qualities. Local economies and wellbeing can crash or boon 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 on the land (or in this case, the sea).

SDG 16: Peace, Justice and Strong Institutions

The necessity to foster a culture of open dialogue emerges from the cases, both locally, and nationally, to governmental decision-makers and scientists. Stakeholder engagement seems to be selective for most development processes and decision-making. Same goes for municipal amalgamation and power concentrated in national capitals and beyond, which has created a strong sense of local disempowerment.

4. The ethics condition of the economic sectors: comparative outline

Drawing on the Analytical Handbook for Justice Research produced in the context of JUSTNORTH, the ethics conditions of the economic sectors can be framed as "prohibitive", referring to a process, initiative, exercise of power, or set of social or institutional relations which are positively or negatively prohibitive when these are likely to undermine the potential, capabilities, life chances, dignity, and/or cultural values of peoples or communities. Sectors can be "affirmative", referring to a process, initiative, development plan, etc. which can be positively or negatively affirmative when these are likely to reaffirm and reinforce the social relations and institutions of an un/just status quo. Lastly the sectors can be framed as "transformative", referring to a process, set of relations, initiative, etc. which are positively or negatively transformative when these are likely to lead to systemic change that increases in/justice.

The Icelandic fisheries management system detailed in CS7 is negatively prohibitive in that it prevents the realization and protection of cultural values associated with fisheries. This negatively affirmative system reinforces un-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. Arctic societies are usually natural resource-based economies with challenges of natural resource curse, efficient and sustainable harvesting of natural resources with fair sharing of natural resource rents. The Icelandic political system, for example, succeeds in efficient and profitable fisheries, but fails in the fair distribution of the fishing rent. It is important to keep this fisheries economics in mind and be clear about sustainability, efficiency, profitability, and rents. The issue is to combine sustainability, efficiency, profitability with a legitimate and fair distribution of the fishing rent, most likely through taxation of the fishing quotas. Diminishing the efficiency and profitability of fisheries to ensure fairness is likely to reduce efficiency and profitability, and not lead to fairness.

Whale watching is perhaps the most visible activity conducted in Skjálfandi Bay, and attracts thousands of international tourists to Húsavík (CS8). 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, thereby endangering the biodiversity of marine life. Other negatively prohibitive aspects include the lack of inclusion in decision-making of groups of people in CS8. Moreover, some governance and decision-making processes are indications of a negatively affirmative system, continuing to give power to a few individuals or industries, reaffirming the status quo of power hierarchies and social justice. At the same time there are clear signs of transformative change as individuals who are not traditionally asked to get involved in marine decision-making have started acting and demanding a voice in the process.

From the case focused on the socio-economic development, self-determination and global change impacts in Greenland (CS9) significant issues related to socio-economic development, internal resilience and sustainability, and global change impacts are identified. These can be analysed within relevant justice frameworks including landscape justice, environmental justice, intergenerational justice, a nd climate justice. Analysing the issues and challenges within these frameworks provide results that highlight the existence of inequalities and power imbalances, that hinder progress for local communities and thereby the ethics conditions are seen as negatively prohibitive.

In the case of field research stations, sustainable development, and knowledge production in the North (Case Study 10), three processes for positive change were identified. First, the negative prohibitive characteristics of knowledge production are the exclusion of other ways of knowing especially indigenous ways of knowing compounded by structural constraints, such as educational resources and capacity, administrative demarcation, and institutional culture. Second, positive affirmative qualities of field stations could be enhanced by returning knowledge to the local communities, possibly countering the perception of a colonial institution eroding trust with the local community. Third, field stations and their research offer transformative possibilities, particularly through a research methodology that advances the desire to generate research with local benefit (co-production). Its implementation is limited through lack of training in outreach for research, lack of local capacity, and lack of local compensation for the necessary time of participants involved in the co-production. The historical legacy of Western knowledge production has led to its dominance and lack of recognition of other ways of knowing. This reduces the ability for indigenous peoples to participate in knowledge production and decision-making, undermining their dignity and heritage. The development of co-production as a goal for the process of Arctic research in sustainable development offers transformative opportunities. The incorporation of community members into search and rescue (SAR) activities (Case Study 11), including looking for lost persons, helping travellers in trouble and voluntarily supporting community members in a range of tasks, provides a meaningful way for members of civil society to give to their community, or for new residents to become integrated into a community. In terms of transformative ethics conditions, a strong divide is observed between state/non-state actors and operators in SAR provision, both in policy and in practice. There is an imbalance in cooperation in the sharing of resources (i.e. intelligence, software platforms, equipment) between state-based actors (from national to local agencies) with the volunteer/NGO/industry sectors, limiting the efficiency of missions and resulting in reduced preparedness and capability. There are also negative impacts on the non-material aspects of SAR related to cultural ecosystems services where mental health and well-being can become compromised. There are challenges in the intergenerational sustainability of SAR because it is increasingly difficult to be able for older, experienced SAR participants to pass training to younger crew, because the new generation has more financial barriers to participation in SAR and competition for their time. On the flip side there is a strong commitment to the mission of saving lives by the SAR community when barriers to participation are removed.

In terms of Polar Tourism, Cruise Ships and Northern Communities (Case Study 12), both global and local domains of justice can be identified. Globally, the origins of climate change; locally, the importance of ensuring compliance with (national) legislation to maintain working standards as well as ensuring the quality of products, e.g. by managing the flow of visitors. It is difficult to assess the justice implications as they occur at different scales and reinforce each other, to an extent. Global developments (climate change) trigger some of the interest in the region. Positive transformations may be possible through educating visitors of the plight of local and Indigenous communities if this translates into behavioural change in other regions, e.g. in terms of renewable energy consumption. Such increased eco-consciousness could potentially help bring about systemic changes without which the long-term viability of Arctic communities is severely threatened (while climatic feedback loops will also impact the well-being of visitors' homes). The cruise sector may be considered as negatively prohibitive, as the protection of ecosystem services and local communities often cannot be guaranteed or is actively threatened by cruise operations, e.g. through interference with local ways of life and pollution at the local or at the global level. Additionally, the sector may be perceived as negatively prohibitive in preventing the realization of values by providing overpowering economic incentives preventing cruise and tourism workers and communities to realize values, such as cleanliness, fair decent work, and cultural identity.

5. Comparative analysis of the value indicators across economic sectors

There are four "Value Indicator Groups" of JUSTNORTH: Ecosystem Services Indicators (cultural, provisioning, regulating, supporting); Procedural Value Indicators (equality, freedom, rights, transparency); SDG Value Indicators (conservation, environmental protection, sustainability) and Substantive Value Indicators (human security, belonging, flourishing, respect). These are outlined in terms of each case herein. More details on each case are provided under the Value Indicators for Justice in Scale & Distributions report.

From the case focused on changing coastal communities, fisheries governance, and equity issues in Iceland (CS7), several major values emerged as important for stakeholders. While values such as participation of youth and newcomers are not surprising given the guiding questions of the case study, other values, such as environmental protection and climate action, appeared to be more strongly linked with the case study than first expected. Similarly, some values were held in the same way by a large range of stakeholders, while others differed by stakeholder groups, such as women's involvement and values of local food.

From the case focused on communities, globalisation and marine tourism in Northern Iceland (CS8), the substantive values that stood out include belonging and food security. Procedural values include freedom and peace related to a conflict-free space, and rights related to inclusivity in decision-making processes. SDG values such as women's involvement and environmental protection were present throughout the interviews in varying ways. Ecosystem Service values related to the provisioning services of the bay under study to support multiple economic activities. Support for local business was a common thread as were means to support regional development. Another ecosystem service value was the cultural service related to beauty and pleasure derived from the bay. From the case focused on the socio-economic development, self-determination and global change impacts in Greenland (CS9), values related to substantive indicators were centrally important. In particular, the importance of belonging with a clear connection to a sense of inclusivity and community. Showing respect was another important value indicator, and this was often linked to a sense of disempowerment as the connection to regional and national government felt removed. Interviews with businesses, official representatives, and young people, revealed values relating to flourishing, in particular capability, achievement, and well-being. Human security issues and challenges were also noted. Procedural value indicators pointed towards transparency, especially as it related to values of reliability and accountability. Equality is another important value indicator, especially in terms of opportunities for participation and the show of tolerance as a critical factor for peaceful coexistence in smaller more remote communities. Rights with respect to responsibility and justice emerged. Freedom, and a focus on values related to autonomy and peace were also important. Finally, in discussions of SDGs the values highlighted were mainly innovation, and intergenerational equity. And for environmental protection most important were responsible production and prosperity.

From the case focused on field research stations, sustainable development, and knowledge production in the North (CS10), substantive values emphasised community, inclusivity, heritage, well-being, and empowerment. Rights and legislation (responsibility, justice, and legality) were mentioned with respect to procedural values. Participation and integrity were also mentioned suggesting that the act of negotiating legislation should be a democratic, participatory process with full disclosure of facts and information. SDG values were expressed in a variety of ways but intergenerational equity emerged as the essence of sustainability. Likewise, ecosystem services values separated between research station participants and government and industry representatives, and indigenous and non-indigenous community members. The former group expressed values representing provisioning and regulation, whereas the latter group were drawn to values representing supporting and cultural aspects of ecosystem services.

From the case focused on shipping, search & rescue and small communities in Canada and Norway (CS11) a strong emphasis on values related to ecosystem services, substantive, SDGrelated and procedural indicators respectively emerged. Within these overarching categories, there is a strong emphasis on values related to provisioning, connectivity, responsiveness, capability and responsibility. Provisioning emerges as the strongest value. Within the indicators emerging from legal documents related to SAR, responsibility, provisioning, efficiency and cooperation prevail as the dominant values. Within the four main categories of indicators considered in JUSTNORTH, provisioning dominates the values of ecosystem services while in the values related to SDGs; innovation, efficiency and benevolence appear in relatively equal measures. In the substantive category of values, capability and human security emerge as prominent values, while diversity and responsibility are central in the procedural values.

From the case focused on polar tourism, cruise ships and Northern communities (CS12), legal value indicators predominantly emphasise (physical) health and well-being. Substantive value indicators underscore building of capabilities in order to let businesses and communities flourish. Procedural value indicators emphasise equality, esp. chances of people and businesses to participate in the economic sector and the importance to make for a level playing field through accountability mechanisms and transparency. SDG related indicators highlight conservation as a means through which long-term viability of the sector could be supported. Ecosystem services value indicators focus on cleanliness as the means to provide cultural identity but also as a product to tourists visiting the region. Being explicitly critical of the political economy underlying this industry and effects on Arctic societies is imperative. The cruise ship industry touches on questions of international ship registries, flags of convenience, tax avoidance/optimisation of companies, national and working conditions of crews. For instance, the Norwegian Coastal Express (Hurtigruten) gives a Norwegian impression, but is owned by an investment fund in London using foreign crews under foreign working conditions at odds with the Norwegian image.

6. Comparative analysis of the economic activities through the lens of barriers and/or opportunities for sustainable development

It is clear from all cases presented in the Justice in Scale and Distribution report, that foreign controlled extractive industries, either government or private led, are cause for concern and friction and form barriers to the ideals of sustainable development. At the same time, smaller scale activities led and controlled locally are no less complex in terms of competing aspirations and interests, but with these the opportunities for adaptive participation in decision-making are more ripe. The pathway to sustainable development is thereby via governance understood as a social function, centred on steering collective behaviour toward desired outcomes and away from undesirable outcomes from the ground up, and focused on the values highlighted by people immediately attached to the socio-ecological impacts of the proposed activities. This includes cognitive, cultural, and technological elements as well. Drawing these together and providing a way forward Young (2017) sees;

> A key question confronting us today centers on the prospects for coming to terms with far-reaching problems like climate change in the absence of anything resembling a world government. In effect, we need to determine the conditions under which it is possible to meet needs for governance on a large scale without resorting to the establishment of at least a rudimentary form of world government. (p. 87)

In that context "[d]ecision-making under uncertainty will remain the order of the day, …" (ibid, p. 91). From this he draws the conclusion that;

> One obvious implication of this situation [decision making under uncertainty] centers on the need to create governance systems that are nimble and agile in the sense that they can adapt easily to changing circumstances, without losing their capacity to steer humanenvironment interactions effectively. (Young, 2017, p. 7)

So in order to allow for the opportunities of sustainable development and the multiplicity of practices that will animates these, there is a need for cultivating the art of paying attention to the ossible, honouring divergence and alloy differences based on what people make matter.

7. Comparative analysis of the mechanisms for reconciling multiple ethics systems for aligning ethical grounds for sustainability-centric economic decision-making with the desired positive impacts and benefits and acceptable negative impacts and risks

The following discussion will reconcile the multiple ethics systems evoked in the context of the six cases researched and analysed in the Justice in Scale and Distribution report,. The overview will proceed with a focus on the aspects of who, what, where, when and how followed by a synthesis of the forms of justice across the cases. The aspects focused on are the tools provided from D1.4 for evaluating the actual or potential 'justness' and ethical defensibility of existing and proposed sustainable development projects. At the same time each aspect is not equally applicable to all cases and therefore sections wary in length and each case cannot be reflected in each framing.

7.1 Who - The Subjects of Justice

In terms of questions of recognition, liberal and socialist approaches might emphasise the rights of individuals vis-a-vis the powerful (employers and large companies). Indigenous and postcolonial approaches take into account the views of those at the margins - such as foreign fish processing workers, youth, seasonal workers, and international inhabitants, as well as non-humans (mostly marine mammals) – and ensure that they might be empowered, as do feminist approaches who seek to bolster the perspective of women and other marginalised groups like the youth. This also concerns the cosmopolitan view that considers the perspective of future generations. In small communities across the Arctic, individuals play a key role in shaping the identity and governance of the whole community. A desire for individual freedom and liberty as according to liberalism, needs to be understood in the context of companies having strong economic power and thus influence over any proposed developments.

The subject, or who, of justice are also individuals and groups, both directly involved and included in the production of knowledge, and those excluded by it. Scientists/researchers consider themselves the expert knowledge holders. Their grasp of the nuances and details of research extends well beyond the policymakers' pragmatic approach and desire for clear answers. They also see themselves as spokespeople for the voiceless: Natural scientists consider themselves representatives of nature, the environment, and climate; social scientists are often ambassadors for the oppressed and vulnerable; and humanities scholars are representatives of past cultural knowledge, both written and unwritten. The public are recipients of the scientific endeavour in the sense that much of the science trickles down to their everyday existence through national and local legislation. Holders of traditional knowledge have long been marginalized and discounted as voices of applicable knowledge, labelled epistemic violence by critics.

7.2 What - The Object of Justice

The objects of justice follow from the subjects. For one, there is the general awareness of the well-being of the region, which affects the people who live there and their livelihoods. Another object of justice refers to working conditions and modes of operation of industry operations. Both global and local objects of justice can be identified. Globally, for instance the origins of climate change. Locally, for instance the importance of ensuring compliance with (national) legislation to maintain working standards as well as ensuring the quality of products.

According to the liberalist mindset, the fair distribution of goods, or lack thereof, is an object of justice. Hospitality to foreigners as well as visitors as considered in the cosmopolitan school of justice plays a significant role as well as in the underlying beliefs of many local people on which they built a thriving tourism industry. At the same time, non-citizen residents tend to criticise the right of access, especially to decision-making processes in the same community. Multi-level governance issues are at the heart of many cases, not least those that arise from a perceived lack of input from locals, lacking municipal jurisdiction. From a feminist perspective, even though laws on equality officially award both men and women the same opportunities, ongoing societal expectation of women is to take on most of the household and childcare responsibilities as well as work.

The objects of justice are also the institutions of knowledge production. It is towards these institutions that justice claims can be made against the process or mode of production, and the substance of that knowledge, seeking justice on the basis of historical injustices through mechanisms such as repealing discriminatory legislation and resource redistribution to ensure that indigenous cultures can flourish. Again, this object of justice operates at scales ranging from the community level, to territorial, national, and supranational. Financial capacity frequently reappears as an object of justice. Intergenerational capabilities appear to be stressed in the intergenerational transfer of knowledge and local geographic knowledge and the ability for all members of the community to play a meaningful role regardless of disability, gender, education attainment or age.

7.3 Where - The Domain of Justice

The national government is often seen as the centre of power far removed from the community, and local inhabitants doubt that their interests are represented there. As a domain of justice, the multiple scales of governance and community interests need to be negotiated and reconciled. Several entities operating along the continuum of these scales include NGOs, private and public funding bodies, community leaders and associations thereof, foundations and advisors and policy makers, which make up the multiple domains of justice emerging in the six cases. Skills and training capabilities emerge in either the geographic, regulatory or institutional limitations. Training incapacities were revealed in the lack of institutional ability to provide adequate training opportunities, due to their own limitations with finances or personnel. Finally, there is a lack of training and materials available in language relevant to the local population. Training and operational challenges to capabilities emerge at an institutional level where there is control of information and lack of willingness to share experiences and knowledge of and from communication or mapping platforms.

7.4 When - The Social Circumstances of Justice

Concerning the social circumstances of justice, Indigenous perspectives remind us that past and present developments have an impact on the future. And various schools of justice, such as feminism, remind us that oppression is structural. Postcolonial schools demonstrate the relation between remote regions and the more central, industrialised locations. As exemplified in liberal justice thought, the principles of justice come to the forefront of discussion and governance when difficult decisions, often as a trade-off between environmental and human welfare, must be taken. Questions of just processes or outcomes arise when actors disagree with or doubt a proposed development, or when an environmental impact assessment or degraded ecosystem points towards an injustice.

7.5 How - The Principles of Justice

The market is shaped by political decision and made and maintained in particular contexts by particular actors. These processes making for the market at each instance do not fully govern the procedures and outcomes of justice, but have a significant impact on what decisions are taken, especially when small communities are far away from political centres of power. The municipality is interested in diverse businesses investing in the town as well as creating jobs and combatting depopulation. Some actors aim at structural change (in line with feminist justice principles) to make the underlying principles more just for all groups of people (and non-humans) countering market hegemony. This needs to be supported. There should also be more space for a cosmopolitan approach insofar as when decisions concerning future developments are taken, these decisions can be made inclusively and collectively.

Knowledge production is considered to benefit the "public good", but tensions emerge regarding what constitutes "public goods". Liberal institutions are implicated in knowledge production and therefore are primarily responsible for framing this question. The ideals of liberalism promote the individual, though s/he is morally obliged to not impinge on the rights and freedoms of others. Established national legislation and laws, then, are the tools of political authority to ensure this equality through equal distribution. Liberal principles should address many of the injustices experienced the local communities and their perceptions of knowledge production. However, the very structure of liberal justice is founded on historically established power, and therefore primarily benefits men of European descent. There is thus a need to de-westernize and give greater value (power) to not just traditional knowledge but also local knowledge of social and environmental processes, as well as greater participation and inclusion that allows for an equal voice to indigenous expertise and pays attention to local needs. Injustices also arise due to a perceived lack of local capacity to participate. These can be experienced as researcher fatigue from the perspective of the local and indigenous communities where the demand to participate exceeds time and resources. It is also considered an injustice due to the need to conform to the rules of the game that are drawn by the institutions of liberal democracies.

Many of these critiques and perceived injustices are a plea for recognition and rights from institutions at all scales. Central is the recognition of individuals, groups, more-than/non-humans and states as claimants on justice, but also the multi-scale, multi-temporal sets of relationships between humans and their environment. Human rights, indigenous identity, climate justice, among other concerns are international and therefore require organs of global justice, beyond the state. In a feminist context, this means that local residents (both indigenous and non-indigenous) are in fact recognized as subjects of justice. In Canada, a concern or barrier to this equal recognition is the lack of capacity due to educational failings and lack of teaching of the indigenous language. These can be addressed through a fair distribution of the benefits and burdens of participating in a cooperative enterprise. Local concerns about environmental contamination and infrastructural damage by climate change and industrial development similarly must be addressed at the national or international level. For the researcher enacting the principles of justice the claims for justice need to be placed at multiple levels. First, the institutional, national and international yardstick for merit is one-dimensional and focuses on quantitative measures. Second, the responsibility to engage in meaningful ways with local communities is entirely placed on the scientist in terms of both time and resources. These two aspects are in direct opposition. Therefore, through the feminist ideal of fair distribution of benefits and burdens one can begin to identify affirmative and transformative opportunities.

7.6 Forms of Justice

Cases show how the subjects of justice overlap. For instance, intergenerational justice shares some common considerations with cosmopolitan forms of justice, while another brand of cosmopolitan justice, decolonial cosmopolitanism, overlaps with some notions of recognitional, postcolonial, and Indigenous justice. Therefore, it is of value to pluck apart the forms and map the cases upon them.

Substantive Justice. Substantive justice deals with justice of outcomes and ends. Therefore, it considers the rules, legal texts, laws and policies and investigates if they are just. Substantive equality strives for just outcomes for all, striving to minimize inequalities, such as women's involvement, diversification and indigenous empowerment. This form of justice crosses all cases.

Procedural Justice. Justice of the procedure, or means that have to be in place for a just decision to be arrived at. It includes the means to enforce substantive justice i.e., actions of lawyers and courts to uphold laws but also the institutions of local governance and the processes of decision making. As many interviewees have stated, procedures of decision-making are often obscure and exclusive and are therefore deemed unjust by those who are excluded from them.

Distributive Justice. Distributive justice is concerned with the socially just allocation of resources. It relates to Indigenous and postcolonial approaches as present developments are often the result from past inequalities. Distributive justice also refers to untaxed externalities associated with industrial production in non-Arctic regions. In a cosmopolitan sense, these actions have led to a global burdening of costs which most directly affect inhabitants of the Arctic. However, due to climatic feedback, developments in the Arctic also affect weather patterns elsewhere, meaning that the development is not an isolated phenomenon. Further aspects of distributive justice highlight the rights of workers that need to be ensured, and also the economic plight of small businesses who see the foundations of their business eroding over time.

Due to the multiple use of ocean space, not everybody, and not every industry and stakeholder has the same kind of access to ocean space, harbour space and marine resources. This points to spatial and temporal distributive issues which impact on the community and the make-up of the local economy, as well as the environment. Another aspect is the allocation and sourcing of food: On the one hand, much of the food consumed in Arctic communities is imported and not much local food is consumed locally. On the other hand, there is food production locally, but the products (mainly fish) are exported internationally, shifting both the consumption and the income from local food production away from its source.

Retributive Justice. Retributive Justice is concerned with the idea that those who break the law should suffer from the proportionate consequences. It also includes the idea that the innocent should not be punished for the wrongdoings of others, and that no disproportionate punishment should be administered. Thereby, this theory supports the polluter pays principle, and would welcome payments as "punishments" from industries that are negatively impacting the environment around them. However, strategies like this might not be as straightforward as punishment, or payment itself, might not rectify the initial wrong, or reverse its consequences. For example, daily boat trips of the whale watching industry might disturb the feeding behaviour of whales, thus negatively impacting the welfare of the whales with potentially harmful consequences to their breeding and return in future years. Obviously, simply "paying off" a fee to an environmental board or conservation society would not in itself rectify the wrong that the whales had suffered.

Recognitional Justice. Women continue to not be heard or listened to due to patriarchal societal structures.They do not equally contribute to governance due to expectations of work, childcare and household duties. Their professionalism continues to be questioned. They are established as researchers and in the tourism sector but have very little involvement in fisheries or other vocational activities. Recognition of indigenous values and knowledges remains a challange.

Although community viability is closely linked to ownership, access, and control over natural and productive resources, the trend in the Arctic remains one of an overwhelming level of control and decision making from outside the local level, either by national or regional governments, or large corporations involved in extractive industry. While these corporations often help fill critical gaps in savings and investments, entrepreneurship, and specialized skills, and contribute with the transfer of various capital to capital-poor regions, they have substantial bargaining power that can help them negotiate deals that leave fewer net benefits in local hands. Without a stronger bargaining stance, locals may lose out on opportunities for value added, especially when intermediate products and services are imported rather than produced by local entrepreneurs.

Spatial Justice: Economic activities have spatial justice implications as potential benefits will accrue at the local, regional, and national levels. Net-benefits from activities are often lower at the local level due to ownership and control resting outside the region, and due to a concentration of power in the municipal or national centres. The focus on the multi-scale domain of justice is apparent and crucial. The scales determining what activities are conducted range from the individual, their institutions to the multi-level decision making bodies. Interviews revealed a perceived sense of being left at the margin, while support and opportunities are increasing in more central locations. These weaknesses add fuel to the already high rate of out-migration.

Landscape Justice: Landscape justice allows for the questioning of who owns and who is excluded from building the landscape. Economic development is impacting the local landscape in places across the Arctic. The landscape holds important cultural meaning and economic value to locals, both in terms of peoples' participation in cultural activities, enjoying nature, and engaging in alternative economic activities where local or Indigenous people engage in multiple professions on a daily basis (rather than in a single profession in a traditional Western sense). Throughout the Arctic, locals do not always feel they are being properly consulted, or have their voices sufficiently heard in matters that affect issues of landscape, and they often articulate the reasons in terms of ownership and control issues combined with the perceived power concentration away from their communities. Landscape justice might provide a means for incorporating traditional knowledge, but economic benefits often take precedence in this place of limited economic and income earning opportunities.

Climate Justice: The impacts of climate change are felt across the Arctic and expressed in terms of concerns about more unpredictable weather, more storms, and less sea ice. These climatic changes affect local culture and traditions, access to country food, and access to places by sea and air along with access to resources for mining or other exploitation. These challenges are intensified due to a lack of adaptive capacity and lack of timely response from the policy level in terms of local demands. Agriculture in the region, however, has been able to benefit from a warming climate, although horticulture still needs to adapt to changes in pest and other plant diseases. Locals observe the costs of climate impacts and have difficulty accessing the financial resources to meet the challenge. The importance of food security to the communities – both in terms of access, quality, and affordability - was addressed ranging from comments on the central role of engagement in traditional harvesting to comments on the logistical issues of securing resupply to the local supermarkets. The general perception was that measures and support for adaptive responses to climate change are weak or non-existent.

In terms of substance, the main concern is cultural preservation as climate change is the overarching problem that affects the region and its inhabitants. Relatedly, this development affects the rights of indigenous groups and questions of cultural and political sovereignty. These two planes link to respective procedural questions. Climate change triggers questions over complex temporal and geographical scales because development in the past and in remote regions affect the future of the Arctic environment and livelihood of inhabitants. In this regard, we can raise the issue of self-preservation. An example here is the fact that infrastructure and real property impacts are huge for northern communities. The costs of replacing, relocating, or upgrading building methodologies comes at a large cost for already disadvantaged populations. This is especially critical for youth who know they are inheriting a way of life and a home that will only be further damaged by the impacts of climate change, with no certainty of how they will be able to grow on ground that is literally melting from under their feet.

Intergenerational Justice: Intergenerational justice might provide an opportunity to ensure an increased local capacity in order for local and indigenous groups to participate 'equally' in knowledge production and decision-making. Diverging opinions and conflicts of interests among a diverse set of stakeholders within the context of global change and socio-economic transitions affect migration patterns, access to educational institutions, opportunities for apprenticeships, meaningful employment and career opportunities, housing, and services that are important to youth and young families. Issues around shortages of safe and affordable housing, lack of good day-care facilities, a perceived inferior school system, a lack of good and stable jobs, high youth unemployment, and a lack of sports and recreational opportunities emerge. Perceived power imbalances created by the municipal amalgamation has only served to create further obstacles to human wellbeing and a good life. Opportunities exist in the recognition of the role of nature, the feeling of community, and cultural wellbeing found in small towns in the decisions of young on whether to stay or leave. Youth are especially impacted in this respect since oftentimes they are able to provide only little input into resource development decisions, or other major economic and socioeconomic decisions, that can impact lives years down the line. They will ultimately be the ones inheriting the consequences, yet are not always actively engaged in those decisions.

Human security issues and challenges also relate to decent work, food security, resilience, health. In relation to these values comments were frequently made relating to resilience and the importance of developing an internal structure that can attract more people and provide the foundation for healthy and rewarding lives that would provide the youth with opportunities to make them want to live locally or to return. The importance of dedicated local employers and better access to steady employment, having a voice in things that matter, and not being left behind were expressed by many young people and signalled the presence of intergenerational inequality.

Environmental Justice: Environmental justice is another critical form of justice to consider in understanding the various elements that affect people's life. The long-term survival of society (in the present form) is under threat. As a consequence, Indigenous and local populations whose livelihood closely depends on nature are under threat. Environmental justice becomes an important component in considering the costs and benefits of extractive industry, the growing tourism sector, and the lack of inclusiveness in decision-making concerning processes that affect local life. Amalgamation and the concentration of power further away from the local communities, usually in the capital region, and high cost of transportation and access, are exerting profound pressures on locals. Existing institutional arrangements, gaps in education and health, are limiting factors for locals, and lack of opportunities to participate and influence decisions related to production and distribution, and therefore ultimately environmental impacts.

While environmental and social impact assessments (EIA and SIA) must be completed before most extraction projects, these assessments have been heavily criticised at the local level for their biased results. As a result, local communities find they are losing out in the power struggle, and net benefits of mining may go overwhelmingly to the national and regional level, while local communities bear the costs.

7.7 Which inequalities affect human life?

The aspects of justice relate to different forms of justice that can be drawn from a range of schools of thought. This surprising mixture of justice conceptualisations is due to the simultaneity of issues that arise in the context of socio-ecological questions broadly but also to individual situations. The latter may vary widely depending on the position, training, country of origin, gender, ethnicity and other intersectional aspects. This example demonstrates the complex, overlapping justice considerations at play. Inequalities that are central in affecting people's capabilities include access to resources. Here a variety of descriptions apply including: time, financial capacity, training, and profession-relevant health care. It includes uneven opportunity to utilise cultural skills and knowledge, contribute to training and community-building and decision-making for planning decisions on organisational resources.

8. Summary of the potential national, or/and sub-national (and, if applicable, international) legal and regulatory solutions for the implementation of such mechanisms

EU or National tax law

- Indigenous/northern-owned small to medium enterprises should be included in economic reforms/exemptions. This would be critical to empowering local economies while creating jobs and cash flow to regions so that there can be economic sovereignty in the Arctic.
- Similarly, existing NGOs should also be supported, especially for locally-driven NGOs that provide resources to communities in a way that the communities demand
- Remove barriers for NGOs to provide equipment for training exercises and emergency response by lifting VAT/Sales Tax from purchase of large equipment, such as snowmobiles, boats. Albeit potentially impractical possibly leading to endless line of special interests demanding reduced VAT in their field.
- Remove barriers for NGOs to provide equipment for training exercises and emergency response by lifting VAT/Sales tax from purchase of small equipment and propriety software, such as PLBs, safety clothing, mapping platforms.
- Adding flexitime to national labour law that allow for employees to take time off work for participation in SAR without loss to wages, provided that employers can claim compensation for this cost from the government.
- Insert SAR purposes as exempt from import/ export customs.

EU and National Legislation

- Create a special framework that deals with transnational customs and revenues agreement for goods and services related to SAR provision and emergency management.

- Promotion of a framework that facilitates 'SAR diplomacy', including creating a network for SAR response in a pan-Arctic context, creating domain awareness for locations of fuel depots, medical supplies, medical capacity, regular infrastructure available for SAR, including SAR first responders within Arctic communities, or a 'buddy-system' with fishing or tourism vessels, modelled on the AMVER system.

- 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
    - include a socio-economic advisory body

      include regional councils, or formal advisory bodies from different sections of the fisheries industry in decision making.

    - create 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 system.

    - Changes 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.

Policy at EU, National or NGO level

- Since Arctic societies are generally natural resource-based economies, it is very important that the general public understands natural resource rents, so these can be collected for the benefit of the public, who are the ultimate 'owners' of resources.

- Promotion of equality in recruitment, training and participation in SAR organisations across gender.

- Promotion of equity in recruitment, training and participation in SAR organisations that takes multi-culturalism into account.

- Increasing team-building identity within SAR teams, including recognition for status as a SAR first responder. Could include national registration system or even, recognisable promotional/organisational gear and attire.

- Create MOUs for facilitating cross-border or cross-agency cooperation for information and equipment sharing for SAR training and response.
    a. Projects and frameworks such as ARMNet which are already in progress could be good examples of SAR and community empowerment.

- The EU tourism Policy included in the Communication from the EU Commission - Europe, the world's No 1 tourist destination – a new political framework for tourism in Europe, refers to substantive values of nature preservation and socially responsible practices as the basis for the future tourism plans and could be made specific to the Arctic.

- The EU Maritime Spatial Planning policy (Directive 2014/89/EU) - clearly points at the importance of harmonizing the different uses of the marine space integrating economic, environmental and social aspects to overcome divergent priorities detected in the case study. Its content refers to need to develop the plans involving the whole community.

- To address lags in local equipment availability, make special provisions for facilitating certifications, registration and maintenance requirements for vehicles used in SAR that ensure there is synchronisation between testing, certification and maintenance.

- Ensure that standards are maintained and enforced for cruise shipping as this would contribute positively to the long-term sustainability of the activity. Similarly, tour operators could reconsider employment practices, e.g. providing guides with year-round contracts that would run through periods of lower demand.

- Regarding the specific issue of working conditions in the shipping industry, the nature of international law and customary working arrangements make tangible improvements difficult to implement. One approach could reside in public 'naming and shaming' individual companies which exhibit insufficient adherence to decent working conditions and human rights and stating under whose flag these companies operate.

- Local communities could provide access to legal support, though vulnerable employees may not be in a position in the shipping and cruising industry.

- Create a management system for Skjálfandi Bay that includes rules on whale watching and corporate activities, as well as types of ocean-use and emphasises ecosystem health

- Policy mechanisms related to quota systems, EIAs and SIAs, governance and participation, access to resources and small business start-up support, and educational resources, are areas to consider in bridging the gaps.

- Policies and support for employment creation, including specific efforts to address high youth unemployment (there is a need to attract investors, provide incentives for entrepreneurs, and implement measures to attract newcomers)

  Address lack of inclusivity (via improved dialogue, better representation, transparency in the flow of information between the towns and the municipality of Kujalleq).

- More effort placed on diversifying the local economy, via more business support for startup activities, loans on favourable terms, better opportunities for training and apprenticeships locally.

- A focus on value-added creation in key sectors to ensure that economic sectors provide net-benefits to the local area. Provision and municipal support for needed infrastructure to support business development, e.g., repair, upkeep, and new construction, of new harbour facility, better sea and air access, and improved road network.

- At a more general level, implementing policies and mechanisms for reducing inequalities within and among places, and between towns and Kujalleq, and between locals – is important because inequality threatens long-term social and economic development, harms poverty reduction and destroys people's sense of fulfilment and self-worth as demonstrated in the case study. Some policies may include the elimination of possible discriminatory laws, policies and practices and the promotion of appropriate legislation, policies, and action in this regard; and the adoption of policies, especially fiscal, wage and social protection policies, to progressively achieve greater equality.

- Policies to address the critical housing shortage, including policies to ensure access to safe and affordable housing for locals, to attract newcomers, and to provide incentives for people to stay locally.

- Addressing the lack of quality education, training, and apprenticeship programmes; and by attracting and securing finance to help attract human capital and entrepreneurship, and to reduce out-migration.

- Field stations engage permanent outreach staff who can liaise with the community – both connecting interested community members with pertinent research, and relaying findings back to the community.

- Enhance empowerment of local and indigenous voices through facilitating their engagement in the research process, and as experts in advisory panels for environmental and development decision-making, which must be more than "participation". Their empowerment requires being part of the knowledge that is produced through engagement with local research, it requires training or assistance with the "rules of play" in advisory panels and meetings, and it requires financial compensation for the time spent in meetings that reduces their own ability to make a living.

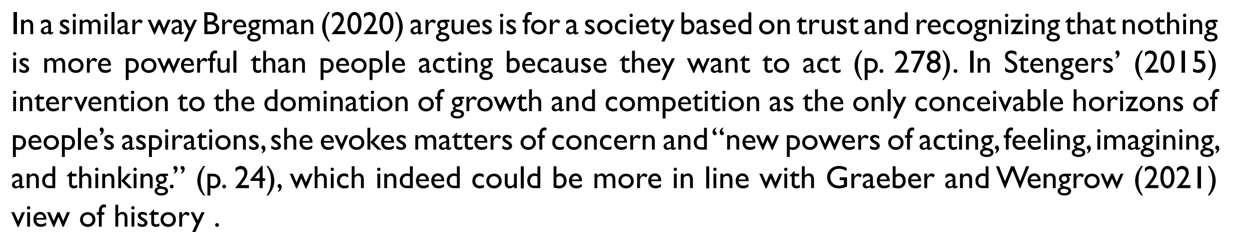
- Field stations engage with the local community to establish a set of key themes or areas of research, to be reviewed annually or every few years to attract different sets of researchers. Such a mechanism empowers the local community, allowing space for particular foci that would directly benefit the community in environmental, social and cultural ways. Further, it would also increase community trust in researchers and their work.

9. Ethics of sustainability – methodological recommendations

Understanding justice in transitions and scale along with issues of distribution, participation and governance needs to be premised on being open to different ways of being and doing into the future. It is imperative to overcome growth-animated extractivism and recognise how each place matters in different ways for people who cannot be alienated from it, nor places rendered abstract for purposes of capital gains through e.g. mining or spectacularised consumption through tourism. Vibrant democracies are perhaps the most important basis here. Democracies that are social in terms of sufficiently equal socio-economic conditions for participation, liberal, deliberatory, and participatory. This suggests that policy should focus on the associative bonds people form and maintain in the places where their activities unfold rather than apply one-size-fits-all approaches. Possibilities lie therefore on thinking and acting together, opening up, honouring divergence and differences. The here and the now for each and everyone is valuable and meaningful, ideally taking into consideration the spatial embeddedness of human relations (Eckersley 2017).

Folded into every here and now is the whole ecology of the place, extending into the depths of time, the places materiality and ecology and its peoples. This folding of people and places is difficult to delineate and demarcate. These processes are not confined to localities, but they need to be progressively addressed nonetheless to make governance future-proof (Hansen-Magnusson 2022). So a 'progressive sense of place' (Massey, 2005) augments people and expands, and it needs to be recognised and its potential for emancipation and a just future as the legacy of exploitation, alienation and abstractions of lifeforces are reconciled with. Here Graeber and Wengrow (2021) give an indication of how we could look at the past and what animates societies hitherto:

> If mutual aid, social c o-operation, civic activism, hospitality or simply caring for others are the kind of things that really go to make civilizations, then this true history of civilization is only just starting to be written. (p. 432)



In a similar way Bregman (2020) argues is for a society based on trust and recognizing that nothing is more powerful than people acting because they want to act (p. 278). In Stengers' (2015) intervention to the domination of growth and competition as the only conceivable horizons of people's aspirations, she evokes matters of concern and "new powers of acting, feeling, imagining, and thinking." (p. 24), which indeed could be more in line with Graeber and Wengrow (2021) view of history .

The story told through the multiplicity of voices and complexity of interests, perceived impacts and relations to the Sustainable Development Goals when it comes to issues of justice in the Arctic is one animated by the politics and practices of on-going relationality. Indeed "contact is contagious" (Bregman, 2020, p. 358) and making the condition for mutual aid and social cooperations is then about allowing for and managing alterity and complexity through care and responsiveness. Kropotkin (1939[1902]) foresaw the gradual extension of these institutes of mutual aid to global proportions. As these had developed from tribes, through clans to cities and later unions, these would "finally embrace one day the whole of mankind without respect to its diverse creeds, languages, and races." (p. 180). Multiplicity, alterity and complexity managed through care can then ultimately foster the planetary consciousness Kropotkin dreamt of, or the earthly attachments necessary to address the challenges of the Anthropocene (Huijbens, 2021).

The ethics of care here advocated for can thereby only be understood through recognizing economic activities through the ways in which people and places are folded together. What emerges thereby in socio-spatial registers are the multiplicity of practices that make up the Arctic. By giving in to places, the art of paying attention to the possible can be cultivated, precipitating an experimental form of everydayness that relies on creative energies and desires whereby people are not consuming individuals, but individuated parts of the Arctic as it is made and remade every day. Allowing for these emergent creative powers of people should be at the heart of policy, as opposed to top-down decision making.

For further methodological considerations on how best to allow for these creative forces in policy-making, and based on the holistic principles of sustainable development animated through agile and nimble governance (Young, 2017), visualisations based on scientific facts are able to underpin collaborative scenario planning and inform decision-making by inclusion of the private and public sectors, policy makers, and civic society. The involvement of local communities is both a crucial and challenging aspect of ecosystem services-based planning and collaboration for sustainable development (Liburd and Edwards, 2018). Visualising state-of-the-art research around biodiversity protection and socio-cultural values captured through citizen science and co-design for sustainable futures will enable civic empowerment, ensure legitimacy, and enable future joint action (see Tengö and Anderson, 2022). Applying immersive technologies and visuals to these collaborative designs can overcome the ineffectiveness of traditional planning and sustainable achievements. Building on user-centred design, collaboration theory and sustainability science, co-design research and practice are intertwined and augmented through immersive tech. Researchers and local stakeholders can thereby explore and reveal issues, socio-cultural values and nuances through dynamic interrelations that envisage and create sustainable futures and transformative change, overcoming a vexing gap between sustainability research and practice through genuine collaboration across conventional silos of national, public, private and civic organisations, investors, groups and individuals (Caniglia et al., 2021).

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