



Original research article

## Energy justice in the Arctic: Implications for energy infrastructural development in the Arctic

Darren McCauley<sup>a,\*</sup>, Raphael Heffron<sup>b</sup>, Maria Pavlenko<sup>c</sup>, Robert Rehner<sup>d</sup>, Ryan Holmes<sup>e</sup><sup>a</sup> Arctic Research Centre, University of St. Andrews, United Kingdom<sup>b</sup> Law, Queen Mary, London, United Kingdom<sup>c</sup> West Sands Limited, Edinburgh, United Kingdom<sup>d</sup> The Arctic Research Centre, St. Andrews, United Kingdom<sup>e</sup> University of St. Andrews, United Kingdom

### ARTICLE INFO

#### Article history:

Received 15 September 2015

Received in revised form 19 March 2016

Accepted 21 March 2016

Available online 25 March 2016

#### Keywords:

Energy justice

Arctic

Energy infrastructure

Due process

Vulnerability

Proximity

### ABSTRACT

The development of energy infrastructure in the Arctic poses serious far reaching justice based questions for local, regional and international communities. Oil and gas rigs, renewable energy sites, shipping and transportation all force us to reflect on how fair and equitable infrastructural expansion is locally and globally. We examine the justice claims of business, government and civil society in an attempt to understand current problems, and their likely solutions. The results suggest that we need to replace the current stakeholder-centred approach of energy policy, with one based upon justice. A widening of procedural justice to include not only the co-production of decisions, but also knowledge should be complemented with new ways of recognising the vulnerabilities of mis- and under-represented people, as well as exploring the sensitivities around proximity to new energy infrastructures.

© 2016 Elsevier Ltd. All rights reserved.

## 1. The introduction

We advance the emerging research agenda in “energy justice” to the context of energy exploration in the Arctic region, in response to the challenge set out by Sidortsov and Sovacool [51].<sup>1</sup> The US is one of the Arctic states directly involved in energy exploration, alongside an increasingly observant EU. Almost a third of the world’s undiscovered gas and 13% of the world’s undiscovered oil may be found there, mostly offshore under less than 500 m of water [21]. In an age of resource depletion, researchers need to pay greater attention to justice concerns in energy policy. Energy justice is a new framework for assessing the justice implications – or simply the injustices – of current policy decisions as well as making practical recommendations. We therefore identify some key injustices and recommendations with regards to energy infrastructural development in the Arctic. The paper is based upon interview data from

selected expert representatives in industry, government and civil society.

We begin the paper with an overview of our energy justice framework. We define energy justice in this paper as an analytical framework that aims to examine whether and how all individuals, across all areas can access safe, affordable and sustainable energy. A literature review is undertaken on the philosophical origins and contemporary use of energy justice. The conceptual framework itself is introduced and constructed upon the three pronged approach of distributional, recognition and procedural justice perspectives. The methodology of the paper is detailed with reference to data collection and analytical tools, as well as the overall research context of energy developments in the Arctic. We then take each component of the framework in turn, identifying some key justice concerns raised in our expert interviews. The final section discusses the broader implications of our research, namely the development of a justice-centre approach to energy policy in the Arctic.

## 2. Literature review

This section covers literature on the philosophical underpinnings and modern development of energy justice as a concept. We then outline an energy justice conceptual framework that is applied to the Arctic.

\* Corresponding author.

E-mail address: [dam7@st-andrews.ac.uk](mailto:dam7@st-andrews.ac.uk) (D. McCauley).

<sup>1</sup> “(T)his commentary advocates for a wider proliferation of the energy justice concept in Arctic energy research” ([51]: 302). We do so by providing a first empirical attempt at applying the energy justice concept to the Arctic.

### 2.1. The philosophical origins

We identify the main philosophical debate in the development of energy justice as *liberalism* versus *libertarianism*. The former is often associated with Rawls' [44] "A Theory of Justice", whilst the latter emerges from Nozick's [38] "Anarchy, State and Utopia". Liberalism from this perspective is based upon the (1) 'liberty principle' leading to the maximization of 'basic' freedoms and (2) 'difference principle' designed to encourage interventions and redistribution when inequalities in social and economic goods affect disproportionately the least advantaged. Libertarianism from Nozick effectively agrees with the first principle, but not the second. In brief, Nozick's justice is punitive and much less redistributive, where the state's role is minimized in as far as possible. Both Rawls and Nozick agree on the central role of legal justice. Rawls views, however, a much greater role for social justice than Nozick.

John Rawls is therefore identified as the pioneering thinker for energy justice in recent history. Inspired by Rawls' work, Sen [49] introduced the concept of capability-centred justice. He developed this approach throughout the 1980s and '90s, taking the concepts of justice and freedom beyond Rawls' focus on "primary goods", to focus on "functionings" and "capability" [50]. Both emphasise the importance of freedom, but while Rawls, with his focus on "primary goods", gives priority to an individual's *means* to freedom, Sen gives priority to the *extent* of an individual's freedoms, i.e., the extent of choice, a person has, over his/her life. Capability is thus defined as a person's freedom to pursue functionings that he/she has reason to value where functionings are what constitute a person's being – with both a well-being and agency aspect.

We identify two further important developments in thinking in this area, (1) the rise of cosmopolitanism and (2) the move from redistribution to recognition. Cosmopolitan philosophy is the belief in that we are all 'world citizens' [54,53]. Cosmopolitanism has existed in some form since the ancient Greeks, associated more recently with Immanuel Kant. The 'energy challenge' as defined above has encouraged the development of solidarities that cut across national borders and unite the citizens of different political communities. Fraser has, secondly, challenged justice researchers to explore processes of recognition, in addition to the redistribution principles argued by Rawls. Fraser ([16]: 2–12) comments, "I assume that justice today requires both redistribution and recognition. . . (whereby) claims for the recognition of group difference have become intensely salient, at times eclipsing claims for social equality".

### 2.2. The emergence of energy justice

A wide range of modern-day justice conceptualizations exist, including environmental, (anti-)global, climate and now energy justice. 'Environmental justice' aims to act "(where) people of color and lower socio-economic status are disproportionately affected by pollution, the siting of toxic waste dumps, and other Locally Unwanted Land Uses (LULU's)" ([30]: 169). It is more successfully a mobilization tool for activists in the US [1], with some notable exceptions with regards to the protection of indigenous peoples across the Americas [26,48,59] or Taiwan [9] or tribal groups from environmental hazards in Africa [35,60]. Environmental justice scholars have through explorations of, initially, distributive and, then, procedural justice concerns "examined multiple reasons for the construction of *injustice*" ([47]: 37), including race [43], gender [6] or culture [15].

'Global Justice' [3,39], and its more recent incarnation, 'climate justice' [2,20], emerged from 'anti-globalization protests', aimed in the first instance at global trade imbalances and then respectively at international climate negotiations. Global justice retains a distinctly economic focus in arguing for redistribution and

new distributions of wealth. Its procedural dimension concentrates specifically on reforming international governance structures. In a similar vein, the perceived failure of the Kyoto Protocol triggered the rise of 'climate protests' at the lack of international progress on carbon reduction targets [41]. Global and climate justice share, moreover, a common preoccupation of increased recognition of under-represented cultures [16]. Climate justice has, nonetheless, developed a more sophisticated research agenda through assessments of city and local based incarnations [7], in addition to international level action.

Energy justice emerged as a literature set has been primarily dominated by fuel poverty and the social and spatial distribution of energy [4]. It is, however, important to recognise that it also encompasses discussion on procedural and recognition justice, the creation of intergenerational inequalities and cross-boundary impacts of energy policies. Despite Bickerstaff et al. [4] claim that energy justice has primarily focussed on fuel poverty, literature debating fuel poverty as a matter of justice has been written as part of the environmental or social justice literature [5,56,61,63]. Instead, energy justice, the literature on which is still in its infancy [25,54], is considered to be concerned with the full spectrum of justice issues relating to energy (such as ethical behaviour – [23] or activism – [19], and should encompass the full energy chain from its production and distribution, through to its consumption and waste [34,27].

Energy justice (the focus throughout here) carries the same Rawlsian liberalism approach, whilst incorporating Sovacool's cosmopolitanism and Fraser's recognition justice. Two critical distinctions are evident with this research agenda. The concept is, firstly, rooted to energy systems of production and consumption [27]. Energy justice offers, secondly, a unique opportunity to critically engage with the ethics of energy decision-making on a global scale, such as in the Arctic [51,52]. We now outline the conceptual framework for this paper based on the three core themes of *distributional*, *recognition* and *procedural* justice.

## 3. The conceptual framework

Our energy justice framework is therefore underpinned by the principles of cosmopolitan justice. Cosmopolitan philosophy is the belief in that we are all 'world citizens' [52]. With the advent of clear and visible effects of climate change the approach to environmental protection is being seen more in the light of cosmopolitan philosophy. Cosmopolitanism has of course a distinctly long history in global justice thinking. From this perspective, we build on environmental and climate justice demands for a collective approach to resources. The focus here, however, is targeted on energy resources in the Arctic regions in an attempt to achieve a meaningful global change specifically in energy behaviours and attitudes.

In contrast to Sidortsov and Sovacool [51], we identify three frames of analysis: distributional, recognition and procedural. Energy justice includes both the physically unequal allocation of benefits and ills, and the uneven distribution of their associated responsibilities [34]. The resultant distributional injustices focus our attention on the content and location of the unjust consequences originating from energy development. As a frame, it does not give us a true reflection on who is affected. For example, we cannot easily discern which parts of society are impacted upon. Recognition based justice provides an opportunity to re-orient attention towards identification, looking for instances of misrecognition in policy responses for example.

An adoption of recognition justice could therefore shed light on under-recognised sections of society. It may manifest itself not only as a failure to recognise, but also as misrecognising—a distortion of people's views that may appear demeaning or contemptible [46].

Thus it includes calls to recognise the divergent perspectives rooted in social, cultural, ethnic, racial and gender differences [19,46]. Lastly, energy justice requires the use of equitable procedures that engage all stakeholders in a non-discriminatory way [62,8]. It states that all groups should be able to participate in decision making, and that their contributions should be taken seriously throughout. It also requires participation, impartiality and full information disclosure by government and industry [12], and the use of appropriate and sympathetic engagement mechanisms [58]. In addition, due process is relevant to every level of energy decision-making at local, provincial, national and global.

#### 4. Methodology

For this study, the research design is based upon qualitative analysis through semi-structured expert interviews. The interview sampling approach was purposeful snowballing. The interviewees requested anonymity. Dorussen et al. [13] advocate that expert interviews are a useful tool to identify central dimensions within the field researched and to get insider information on those dimensions. Sufficient room for manoeuvre was accorded in the interviews for experts to elaborate on issues, which they considered important. We follow the definition of Tansey [57] in understanding an elite as someone holding a privileged position in society, often resulting in more influence than a member of the public. This method provides the researcher with a window into how key individuals in energy policy perceive and construct their context and the common assumptions which help shape it [36].

The recruitment of experts from various institutions and backgrounds was designed to increase the diversity in expert opinions retrieved. Interview participants were either conference attendees or speakers at international conferences or part of the researchers' personal networks. A sample of 16 experts was recruited from businesses, NGOs and academia (see Appendix A). The interviews were either performed at a range of venues internationally in both public and private venues, varying also in length. They were voice recorded and transcribed verbatim, while in some cases researchers' relied upon written notes. Some interviewees insisted upon anonymity where possible when reporting results. As a result, we have anonymized and randomized the interview data. We detail the organisations involved in the research at the end of the paper. We report the results in the next three chapters by associating key quotations or paraphrased comments to anonymous interviewees, denoted by number in the form of (#6) or (#9). Where possible, we do mention the type of organisation for which the representative works for.

A template analysis was performed and is a tool to thematically organize and analyse textual data [31], and was thus applied to the transcripts of the interviews, which were finalised within few days after the interviews to incorporate non-verbal implications of the participants. The transcripts were checked on reoccurring themes which were then coded to summarize, compare and contrast expert opinions on those common themes—based upon the energy justice conceptual framework outlined above. This enabled the themes to be categorised as either predefined to provide the framework of the semi-structured interviews, or which emerged during the interviews and to put them in relation to each other. Repetitive analysis of transcripts led to the identification of new themes, as well as the refining and separation of existing ones. Finally, the most important themes were selected.

##### 4.1. Research context

The energy context in the Arctic is dominated by oil and gas reserves and the increasing role of international companies.

Extraction and production takes place on the basis of resource ownership. The Arctic states are Canada, Denmark (with Greenland, an autonomous Danish dependent territory, and the Faroe Islands), Finland, Iceland, Norway, Russia, Sweden and the United States. However, according to the 1982 United Nations' Convention on the Law of the Sea (UNCLOS), the right to explore natural resources in the ocean belongs to the coastal states within the distance of their Exclusive Economic Zones (EEZ), i.e., 200 miles. Therefore, only five of the Arctic states can legally exploit oil and gas within the Arctic circle, namely Canada, Denmark, Norway, Russia and the USA.

Non-Arctic states such as China, Japan, India and Singapore as well as the European Union have expressed their interest in engaging in Arctic-related activities from research programmes to direct extractive operations. Some non-Arctic based companies take part in joint projects with companies from the Arctic states, for example Italian Eni has currently a joint exploration agreement with Russian Rosneft. This creates a unique operational environment where a few actors representing countries with diverse economic, political and cultural background are responsible for a vulnerable environmental complex and the intimately linked future of 400 000 indigenous peoples.

Yet, Arctic development is a risky and costly venture. The major drawbacks include: remoteness and harsh climate conditions, implying the need for more advanced technologies, equipment and infrastructure, as well as the competition from unconventional gas sources such as shale gas and liquified natural gas, long investment cycle and potential overlap in sovereignty claims [14]. The development of Arctic reserves, however, may have serious implications not only for an oil and gas company's budget, but for the global climate in general. Interventions in the Arctic fragile environment may put the future of the region and the planet under a great threat. While the rising demand for resources push companies to play for high stakes, environmentalists warn that the consequences of their actions may be irreversible.

#### 5. Results 1: distributional justice and shifting proximities

The first tenet of energy justice is distributional justice. Energy justice is an inherently spatial concept with notions of place at its centre. For geographers and sociologists, place is not space [22]. Places have a distinct materiality that mediates and regulates social relations and daily routines. The implication here is that energy justice work on distributional injustices tends to focus on the proximity of a locality to any given energy infrastructural development. Energy justice can therefore appear as a situation where "questions about the desirability of technologies in principle become entangled with issues that relate to specific localities" ([40]: 4414).

The siting of onshore oilrigs such as Vostochno-Messoyakhskoye on the Gydan Peninsula in Northern Russia pose, at first sight, a potential threat for communities. However, most future oil and gas activity is predicted to take place offshore, and further from communities. The most recent examples of distributional injustices have, in fact, involved onshore renewable projects, especially wind farms in the Arctic. A proposed development by Finnmark Kraft AS in the predominantly Sami county of Finnmark could, for example, "disrupt reindeer populations"—resulting in significant opposition (interview #6). Opposition groups concentrate on the key issue of all proposed locations being situated "in disruptive (geographical) areas" (interview #2).

The Finnmark controversy raised by our participants reflects the media driven nature of injustice. It has received attention from several media outlets throughout the past five years. Other research participants (interviews #16, #13) draw attention, however, towards the inevitable increase in "remote" or "less visible"

risk for local communities. Dry land is, after all, only a third of the Arctic area. The second third being the oil and gas targeted Arctic shelf (not exceeding depths of 500 m), leaving the last third to depths over 500 m. Areas previously disregarded as unreachable “(are) becoming the concern of onshore communities” (interview #14) as oil and gas reserves are identified. Notions of place are therefore challenged by expanding spheres of risk – or as geographers and sociologists would refer to – spaces of dependence [11].

The multiple spatialities of injustice become even more evident when shipping is part of the Arctic equation. Future estimates indicate that the reduction of the Arctic ice cap will open up new areas and increase the viability of the region to be increasingly used for international shipping [32]. According to Sakhujia [45], the two most practical Arctic shipping routes are the Northern Sea Route and the Northwest Passage. Running between the Atlantic and Pacific along the Russian coast, the Northern Sea Route ranges between 2100 and 2900 nautical miles depending on the distribution of sea ice and the Northern Sea Route is part of the shortest connection between Northeast Asia and Northern Europe [32].

An oil spill “would inevitably result in the collapse of local ecosystem” upon which communities depend, such as fisheries and reindeer husbandries (interview #16). These are “direct risks to the livelihood” of local communities and constitute therefore distributional injustices of risks (interviews #16, #11). The recession of the ice caps is therefore encouraging the development of a wide range in energy infrastructural projects, both on and offshore. Fluctuating oil prices will not hinder the appearance of distributional energy injustices. Perhaps then the most striking developments in this area are, in fact, un-sited. “Shipping routes threaten livelihoods such as fishing” as well as establish a “permanent risk of future oil tanker spills” in the region due to transportation activities (interview #7). Despite significant fluctuation in shipping in the area, the increased interest from “non-Arctic states from Asia will no doubt increase” concerns on the impact of shipping (interview #16).

## 6. Results 2: recognition-based justice and vulnerability

The second tenet of our framework, recognition justice sheds light upon instances of under- or mis-recognition of vulnerability. Local communities such as the indigenous Sami peoples are scattered across mostly the northern parts of Norway, Sweden, Finland and Russia, living off fishing and Reindeer herding. *In addition*, one participant (interview #15) reinforced the “under-recognised importance of *non-indigenous* people” in this area. In both cases, they are heavily dependent on local ecosystems. Hence, “such communities are extremely vulnerable” to energy development (interview #2).

The richness in fossil fuel energy resources of the area can be seen in contrast to the provision of energy and electricity in many of those areas. “A number of Arctic regions in Alaska are off the electricity grid” and electricity has to be generated by diesel generators (interview #2). This is highly problematic in many regards, often resulting in health issues and comparatively low living standards. Those lower living standards in areas of fuel richness point to an insufficient participation/stake of local communities in the wealth generated by exploitation activities. As Parlee [42] notes, indigenous communities often have limited access to certain forms of capital and are therefore particularly susceptible to the resource curse phenomenon.

Increasing living standards in the Arctic regions is a central mechanism for reducing vulnerability, whilst simultaneously threatening the environment. The low population density within Arctic regions alludes to the vast natural space, which makes the Arctic so unique. Tourism in the Arctic regions will increase with

a globally “growing upper middle class which is looking for somewhat more authentic” and exotic holiday experiences (interview #10). This comes with challenges: little effort is put into preserving reindeer herding as one of the large traditional economic activities. Tourism, if exercised in certain ways and scales will “contribute to environmental degradation itself” and create issues of different natures, depriving the Arctic of its unique vastness (interview #9). Stewart et al. [55] reported that while the opportunity to educate visitors appeared as a positive benefit reflected in the perspectives of residents concerning cruise tourism in Nunavut, the emergence of risks at the community level necessitates the need for appropriate policies to mitigate the vulnerability of communities. Therefore, more involvement of local populations with “their knowledge about the region is needed to direct touristic flows” (interview #3). This allows both the generation of additional income by offering authentic experiences, while preserving local ecosystems and habitat.

In this context, it is important to consider how extractive industries and other activities potentially impact upon the means of action of local peoples. One dimension is to improve general levels of human security. Revenue streams from commercial activities could potentially benefit the security aspect of “freedom from want”—the provision of an adequate standard of living (interview #9). In fulfilling this approach, we need to fully appreciate that indigenous groups significantly alter in their histories, and thus in their present needs as well as their visions for the future. Therefore, it is important that different local groups are considered individually within their contexts rather than all coming from the Arctic region. Thus, the mere engagement of the Arctic community into planning and decision making as an attempt for procedural justice is insufficient. Regional differences across Arctic communities are to be respected and taken into consideration.

Beyond indigenous peoples, academic scholars are equally identified as under- or mis-recognised. A call for recognition is also clear for greater engagement of northern scholars in the identification of research priorities in Arctic areas. The focus has to be redirected towards “co-production and co-communication of research results between science and stakeholders” (interview #8). Next to a better integration of natural and social science in the Arctic, advancing recognition based justices would be achieved in presenting research results in a way which is easy to understand for non-scientific audiences. Part of recognition justice is the informed self-determination in the choice of future development pathways the communities choose for themselves, despite the adherence to traditional social and economic activities.

## 7. Results 3: procedural justice and due process

The third tenet of the framework manifests as a call for equitable procedures that engage all stakeholders in a non-discriminatory way. Indigenous and non-indigenous peoples are central, for example, to monitoring the increase in tourism in the high north, but equally the intentions of business to develop there. Cultural pluralism is a place for creative industry. “Companies need to realize that local communities offer more than opposition. . . (we) offer a wealth of local knowledge” (interview #2). Fishing or reindeer based livelihoods should be respected. But more attention should be paid to the knowledge creation this involves with its implications for siting and procedural based decisions. Land use change is a key challenge for indigenous peoples – who moderates if and where land is used for other uses. We need, therefore, holistic management plans where we “equally focus on land and not just sea” (interview #4).

Early intervention is paramount to an effective consultation process. “(T)here needs to be some prior agreement on the siting of infrastructural projects, rather than at a later stage, which is all

too common” (interview #11). The participant outlined several instances whereby communities were involved after development had taken place. More positive examples were raised also, where companies took a more proactive and constructive approach. As Kadenic [29] concluded in an examination of large-scale Arctic mining projects, the degree of local involvement during the planning phase will directly affect future socioeconomic outcomes. From siting decisions to projected habitat destruction, the Sami people can therefore help developers achieve common outcomes. Procedural justice is therefore more than simply inclusion. It involves also the mobilization of local knowledge.

A central theme in Arctic energy development is the identification of local communities. Two participants (#3 and #5) claim to the fact that projects in Canada involve multiple indigenous peoples in project development in an explicit attempt to profit from “multiple views” on local knowledge and creativity. They express that almost all economic activity in Canada’s Arctic is reviewed not just for economic and environmental, but also social factors. However, a representative (#2) from two cited projects claims that the involvement of indigenous peoples “was limited”. These differing views clearly indicate that a desirable level of economic activity, as well as the extent of being or feeling included in decision making is highly subjective and contextual.

On Russian oil development in the Arctic, one participant (#3) refers to the trilateral central nature of policy making: businesses, local governments and indigenous peoples, who all need to get their “fair share” from the activities agreed upon. Yet especially the latter group are often “disadvantaged” as they for example “endure low level jobs” which result from development projects (interview #14). He points to situations where large corporations come into local communities – where education tends to be low – “with 500 page technical reports and ask for comments” – which is not in his view a fair way of involvement. The large size of the corporations involved mean that decisions are currently taken at headquarters based elsewhere, where local representatives manage their implications for affected communities.

## 8. Discussion and implications

While global warming and melting ice might facilitate the development of the Arctic’s oil and gas resources by making these resources easier to reach and exploit, climate change also presents a series of challenges to the development of Arctic oil and gas. An increase in the frequency and severity of extreme weather conditions resulting from climate change, such as hurricanes would have dire effects on oil and gas developments in the Arctic and present the possibility of devastating events ranging from costly production and transportation disruptions to disasters such as oil spills [24]. These potential risks will certainly factor into the rate at which oil and gas development in the Arctic progresses. Noble et al. [37] point to the recent purchases of offshore exploration leases in the Beaufort Sea of Canada by global energy firms such as Chevron, BP and Exxon Mobil as examples of the international attention that potential oil and gas developments in the region are rapidly increasing, but also point to the amplified need for a strategic approach towards impact assessment and planning before developments take place.

Dictated by the unequal distribution of benefits and threats of oil and gas, justice on the procedural level must be an imperative to not just respect, or include but rather *mobilize* local communities within the decision making for governmental and business processes. Currently six international institutions representing Arctic indigenous people have representation within the Arctic Council as one of the main governance bodies of the Arctic, next to the eight Arctic member states. This is one of the engagement mecha-

nisms for minority groups. It serves as a good example for inclusion in decision-making. Yet, the influence of local communities on corporations and lower level institutions within the exploitation processes of oil and gas, transport and processing are questionable. This self-reflection and acceptance to adapt must be reciprocated by energy companies, which would allow for economic growth in the region while minimizing the risk of local habitat and ecosystem disruption.

Given the vulnerability of the Arctic ecosystem and associated climate change risks as well as the region’s importance for local populations, it is essential to hold energy companies who aspire to exploit its resources to account. Moreover, it is crucial to ensure that all those who can potentially be affected by these companies’ activities participate in the process of decision-making in regards to the Arctic’s future. Stakeholder engagement and social accounting are thought of as tools to implement these tasks. Indeed, stakeholder engagement is primarily designed to ensure the inclusiveness of the decision-making process by empowering all the stakeholders to participate in it and have their claims taken into account [10]. However, stakeholder engagement and social accounting currently fail to achieve the goals they were established for. Hence a new approach to ensuring sustainability of Arctic resource extraction is needed.

We propose a *justice*-rather than simply a stakeholder-centred perspective. In other words, the inclusion, even mobilization (as suggested above), of local communities in business decision making is an insufficient expansion of stakeholder approaches such as social accounting. The discussion in Section 2.1 reminds us that environmental, social and now energy justice is dominated by Rawlsian liberalism, rather than Nozick’s libertarianism. This implies that energy justice scholars must continue to make the case for a fair re-distribution of burdens and benefits, and not just make the case for due process in decision-making. The Finnmark controversy in the first results section underlines the extent to which indigenous peoples are subject to distributional injustices—from a due process perspective of course, but also a proximity one as an energy infrastructure that benefits all, and burdens only some.

The distributional angle of emerging injustices in energy infrastructural development are inflated further through the growth in shipping. The burden of risk is disproportionately borne by local communities. In this case, proximity to home is less important than the immediacy of “local ecosystems” and “livelihoods” (interview #16). In support of Scholsberg [47], injustices in the Arctic are multiple in origin and scope. In contrast to Sidortsov and Sovacool [51], our results suggest that we must also look deeper into who we mean to be ‘local communities’. Here, we invoke the contributions of Fraser [16,17,19], Fraser and Honneth [18] and consequently Walker and Day [61] to conceptualizations of environmental and climate justice through the introduction of recognition forms of justice. Our interviewee (#15) reminds us of the “under-recognised importance of non-indigenous people”. As the interviewee continues, they too suffer the same vulnerabilities of indigenous peoples, “often without the same level of political representation”.

## 9. Conclusion

A *justice-centred approach* to energy developments in the Arctic brings a more expanded conceptual viewpoint on the injustices suffered, and possible justice solutions. As Sidortsov and Sovacool ([51]: 306) put it, “(e)nergy justice analysis helps ensure that Arctic energy development puts people and their homes first”. It challenges social science scholars in the Arctic to move beyond the stakeholder – or stakeholder engagement – argument. Not being involved in a decision that affects an individual’s life in the Arctic is an injustice worthy of exploration. It should, however, be accom-

panied with a recognition that others may be in greater need, either in terms of proximity or level of vulnerability. Energy justice aims to provide all individuals, across all areas, with safe, affordable and sustainable energy—but it must also be wary that injustice, like poverty, is actually relative, not absolute. The challenge for energy justice scholars in and outside Arctic research is to find ways in the future to square that circle.

## Appendix A.

### Affiliation of interviewed experts with institutions

- Arctic Economic Council.
- Association of Southeast Asian Nations.
- Canadian Northern Economic Development Agency.
- DNB Bank.
- Energy company A.
- Energy company B.
- Energy company C.
- Finmark Kraft AS.
- International Maritime Organization.
- Polar Research Institute of China.
- Sami Parliament.
- Sustainable Development Working Group.
- University of Lapland.
- WWF.

## References

- [1] J. Agyeman, P. Cole, R. Haluza-DeLay, P. O'Riley, *Speaking For Ourselves: Environmental Justice in Canada*, UBC Press, Vancouver, 2010.
- [2] A. Aylett, Conflict, collaboration and climate change: participatory democracy and urban environmental struggles in Durban, South Africa, *Int. J. Urban Reg. Res.* 34 (3) (2010) p478–495.
- [3] C. Beitz, Rawls's law of peoples, *Ethics* 110 (2000) 669–696.
- [4] K. Bickerstaff, G.P. Walker, H. Bulkeley, Introduction: making sense of energy justice, in: K. Bickerstaff, G.P. Walker, Bulkeley (Eds.), *Energy Justice in a Changing Climate: Social Equity and Low-Carbon Energy*, Zed Books, 2013.
- [5] S. Bouzarovski, Energy poverty in the European Union: landscapes of vulnerability, *Wiley Interdiscip. Rev.: Energy Environ.* 3 (2014) 276–289.
- [6] S. Buckingham, R. Kulcur, Gendered geographies of environmental injustice, *Antipode* 41 (4) (2009) 659–683.
- [7] H. Bulkeley, J. Carmin, V. Broto, G. Edwards, S. Fuller, Climate justice and global cities: mapping the emerging discourses, *Glob. Environ. Change* 23 (5) (2013) 914–925.
- [8] R. Bullard, Environmental justice in the 21st century, in: J. Dryzek, D. Schlosberg (Eds.), *Debating the Earth*, Oxford University press, Oxford, 2005, pp. 322–356.
- [9] C. Chi, Capitalist expansion and indigenous land rights: emerging environmental justice issues in Taiwan, *Asia Pac. J. Anthropol.* 2 (2) (2001) 135–153.
- [10] S.M. Cooper, D.L. Owen, Corporate social reporting and stakeholder accountability: the missing link, *Account. Org. Soc.* 32 (2007) 649–667.
- [11] K. Cox, Spaces of dependence, spaces of engagement and the politics of scale, *Political Geogr.* 17 (1) (1998) 1–23.
- [12] A. Davies, Environmental justice as subtext or omission: examining discourses of anti-incineration campaigns in Ireland, *Geoforum* 37 (2006) 708–724.
- [13] H. Dorussen, H. Lenz, S. Blavoukos, Assessing the reliability and validity of expert interviews, *Eur. Union Politics* 6 (3) (2005) 315–337.
- [14] Ernst, Young, Arctic oil and gas, *Glob. Oil Gas Center* (2013).
- [15] M. Fan, Environmental justice and nuclear waste conflicts in Taiwan, *Environ. Politics* 15 (3) (2006) 417–434.
- [16] N. Fraser, *Justice Interruptus*, Routledge, London, 2014.
- [17] N. Fraser, *Scales of Justice*, Polity Press, Cambridge, 2008.
- [18] N. Fraser, A. Honneth, Redistribution or Recognition? A Political-Philosophical Exchange, Verso, London, 2003.
- [19] S. Fuller, D. McCauley, Framing energy justice: perspectives from activism and advocacy, *Energy Res. Soc. Sci.* 11 (2016) 1–8.
- [20] S. Gardiner, Ethics and global climate change, *Ethics* 114 (3) (2004) 555–600.
- [21] D.L. Gautier, K.J. Bird, R.R. Charpentier, A. Grantz, D.W. Houseknecht, T.R. Klett, et al., Assessment of undiscovered oil and gas in the Arctic, *Science* 324 (2009) 1175–1179.
- [22] T. Gieryn, A space for place in sociology, *Annu. Rev. Sociol.* 26 (2000) 463–496.
- [23] S. Hall, Energy justice and ethical consumption, *Local Environ.* 18 (4) (2013) 422–437.
- [24] Ø. Harsem, A. Eide, K. Heen, Factors influencing future oil and gas prospects in the Arctic, *Energy Policy* 39 (12) (2011) 8037–8045.
- [25] R. Heffron, D. McCauley, B. Sovacool, Resolving society's energy trilemma through the energy justice metric, *Energy Policy* 87 (2015) 168–177.
- [26] R. Holfield, Environmental justice as recognition and participation in risk assessment: negotiating and translating health risk at a superfund site in Indian country, *Ann. Assoc. Am. Geogr.* 102 (3) (2012) 591–613.
- [27] K.E.H. Jenkins, D. McCauley, R. Heffron, H. Stephan, R.W.M. Rehner, Energy justice: a conceptual review, *Energy Res. Soc. Sci.* 11 (2016) 174–182.
- [28] M. Kadenic, Socioeconomic value creation and the role of local participation in large-scale mining projects in the Arctic, *Extr. Ind. Soc.* 2 (3) (2015) 562–571.
- [29] N. Kibert, Green justice: a holistic approach to environmental injustice, *J. Land Use Environ. Law* 17 (1) (2001) 169–182.
- [30] N. King, Using templates in the thematic analysis of text, in: C. Cassell, G. Symon (Eds.), *Essential Guide to Qualitative Methods in Organizational Research*, SAGE Publications Ltd., London, 2004, pp. 256–271.
- [31] M. Liu, J. Kronbak, The potential economic viability of using the Northern Sea Route (NSR) as an alternative route between Asia and Europe, *J. Transp. Geogr.* 18 (3) (2010) 434–444.
- [32] D. McCauley, R. Heffron, S. Hanne, K. Jenkins, Advancing energy justice: the triumvirate of tenets, *Int. Energy Law Rev.* 32 (2013) 107–110.
- [33] D. McDonald, *Environmental Justice in South Africa*, University Press, Ohio, 2002.
- [34] Z. Morris, The truth about interviewing elites, *Politics* 29 (2009) 209–217.
- [35] B. Noble, S. Ketilson, A. Aitken, G. Poelzer, Strategic environmental assessment opportunities and risks for Arctic offshore energy planning and development, *Mar. Policy* 39 (2013) 296–302.
- [36] R. Nozick, *Anarchy, State and Utopia*, Blackwell, Oxford, 1974.
- [37] T. Nagel, The problem of global justice, *Philos. Polit. Aff.* 33 (2005) 113–147.
- [38] S. Owens, L. Driffill, How to change attitudes and behaviours in the context of energy, *Energy Policy* 36 (2008) 4412–4418.
- [39] J. Paavola, W.N. Adger, Fair adaptation to climate change, *Ecol. Econ.* 56 (4) (2006) 594–609.
- [40] B. Parlee, Avoiding the resource curse: indigenous communities and Canada's oil sands, *World Dev.* 74 (2015) 425–436.
- [41] L. Pulido, Rethinking environmental racism, *Ann. Assoc. Am. Geogr.* 90 (1) (2000) 12–40.
- [42] J. Rawls, *A Theory of Justice*, CUP, Cambridge, 1971 (1991 revised edition).
- [43] V. Sakhujia, The Polar Code and Arctic navigation, *Strateg. Anal.* 38 (6) (2014) 803–811.
- [44] D. Schlosberg, The justice of environmental justice: reconciling equity, recognition, and participation in a political movement, in: A. Light, A. De-Shalit (Eds.), *Moral and Political Reasoning in Environmental Practice*, MIT Press, London, 2003, pp. 125–156.
- [45] D. Schlosberg, Theorizing environmental justice: the expanding sphere of a discourse, *Environ. Politics* 22 (1) (2013) 37–55.
- [46] D. Schlosberg, D. Carruthers, Indigenous struggles, environmental justice, and community capabilities, *Glob. Environ. Politics* 10 (4) (2010) 12–35.
- [47] A. Sen, Equality of what? in: *The Tanner Lecture on Human Values*, CUP, Cambridge, 1979, pp. 197–220.
- [48] A. Sen, *Inequality Re-Examined*, Clarendon Press, Oxford, 1992.
- [49] R. Sidortsov, B. Sovacool, Left out in the cold: energy justice and Arctic energy research, *J. Environ. Stud. Sci.* 5 (2015) 302–307.
- [50] B. Sovacool, M.H. Dworkin, Energy justice: conceptual insights and practical implications, *Appl. Energy* 142 (2015) 435–444.
- [51] B.K. Sovacool, M.H. Dworkin, *Global Energy Justice: Principles, Problems, and Practices*, Cambridge University Press, Cambridge, 2014.
- [52] B.K. Sovacool, R. Sidortsov, B. Jones, *Energy Security, Equality and Justice*, Routledge, London, 2013.
- [53] E. Stewart, J. Dawson, D. Draper, Cruise tourism and residents in Arctic Canada: development of a resident attitude typology, *J. Hosp. Tour. Manag.* 18 (1) (2011) 95–106.
- [54] H. Stockton, R. Campbell, *Time to Reconsider UK Energy and Fuel Poverty Policies*, Joseph Rowntree Foundation, York, 2011.
- [55] O. Tansey, Process tracing and elite interviewing: a case for non-probability sampling, *Polit. Sci. Politics* 40 (2007) 765–772.
- [56] H. Todd, C. Zografos, Justice for the environment: developing an indicator of environmental justice for Scotland, *Environ. Values* 13 (2005) 483–501.
- [57] L. Urkidi, W. Walter, Dimensions of environmental justice in anti-gold mining movements in Latin America, *Geoforum* 42 (2011) 683–695.
- [58] G. Visser, Spatialities of social justice and local government transition: notes on and for a South African social justice discourse, *S. Afr. Geogr. J.* 85 (2) (2003) 99–111.
- [59] G. Walker, R. Day, Fuel poverty as injustice: integrating distribution: recognition and procedure in the struggle for affordable warmth, *Energy Policy* 49 (2012) 69–75.
- [60] G. Walker, Beyond distribution and proximity: exploring the multiple spatialities of environmental justice, *Antipode* 41 (4) (2009) 614–636.
- [61] G. Walker, Decentralised systems and fuel poverty: are there any links or risks? *Energy Policy* 36 (12) (2008) 4514–4517.