

## Article

# Shifting Safeties and Mobilities on the Land in Arctic North America: A Systematic Approach to Identifying the Root Causes of Disaster

Katy Davis <sup>1,\*</sup>, James D. Ford <sup>1</sup>, Claire H. Quinn <sup>2</sup>, Anuszka Mosurska <sup>1</sup>, Melanie Flynn <sup>1</sup>, IHACC Research Team <sup>3</sup> and Sherilee L. Harper <sup>4</sup>

- <sup>1</sup> Priestley International Centre for Climate, University of Leeds, Leeds LS2 9JT, UK; j.ford2@leeds.ac.uk (J.D.F.); ss18arm@leeds.ac.uk (A.M.); gy08mjf@leeds.ac.uk (M.F.)  
<sup>2</sup> School of Earth & Environment, University of Leeds, Leeds LS2 9JT, UK; c.h.quinn@leeds.ac.uk  
<sup>3</sup> Indigenous Health Adaptation to Climate Change Research Team, University of Alberta, Edmonton, AB T6G 2R3, Canada  
<sup>4</sup> School of Public Health, University of Alberta, Edmonton, AB T6G 2R3, Canada; sherilee.harper@ualberta.ca  
\* Correspondence: eekda@leeds.ac.uk

**Abstract:** Amid the surge in research on mobility and migration in the context of environmental change, little research has focused on the experiences of people for whom travel is cyclical and a part of daily, weekly, or seasonal life. For Inuit in Arctic North America, the land is the heart of cultural and community life. Disruption to time spent on the land is reported to impact the emotional health and well-being of individuals and communities. There is concern that environmental change is creating barriers to safe travel, constituting a creeping disaster. We systematically review and evaluate the literature for discussion of barriers to travel for Inuit in Arctic North America, using an approach from the field of disaster anthropology to identify root causes of constraints to mobility. We identify root causes of risk and barriers to time spent on the land. These emerge from historic and contemporary colonial policy and inequality, as opposed to environmental hazards per se, impacting people's mobility in profound ways and enacting a form of slow violence. These results suggest a need to understand the underlying processes and institutions that put people at risk.

**Keywords:** Inuit; disaster; climate change; Arctic; root causes; environmental justice; mobilities; risk; colonialism



**Citation:** Davis, K.; Ford, J.D.; Quinn, C.H.; Mosurska, A.; Flynn, M.; IHACC Research Team; Harper, S.L. Shifting Safeties and Mobilities on the Land in Arctic North America: A Systematic Approach to Identifying the Root Causes of Disaster. *Sustainability* **2022**, *14*, 7061. <https://doi.org/10.3390/su14127061>

Academic Editors: Oran Young and Mohammad Aslam Khan Khalil

Received: 14 February 2022

Accepted: 30 May 2022

Published: 9 June 2022

**Publisher's Note:** MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



**Copyright:** © 2022 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

## 1. Introduction

Mobilities research addresses peoples' movement over time and space in the context of emerging global challenges relating to environmental and social change, justice and security [1]. In addition to the important role of governance and institutions in enabling and constraining the movement of people, a large amount of mobilities literature is coming to focus on mobility in the context of climate and environmental change [2,3]. Much of this research focuses on large scale migration [4]. However, this has been criticised for reinforcing misleading narratives that frame climate change as the main driver of migration, and the migration itself as a security crisis of one-directional travel of people across borders [5,6]. Some research has added nuance to this narrow approach by highlighting populations for which mobility is restricted or prevented through structures of poverty and precarious livelihoods [7,8], often referred to as populations "trapped in place". There is a significant lack of research that engages with those for whom mobility is changing in more complex or nuanced ways, including those for whom travel is more cyclical and a part of daily, weekly or seasonal life [9–11]. Research that exists suggest that limits to mobility often stem from social and political factors, including governance over resources and access to services [7,12].

Indigenous Peoples have been excluded from many debates and narratives about mobilities, but are increasingly bringing awareness to Indigenous perspectives on mobility, place and belonging, as well as demanding considerations of justice within research on mobilities [13–15]. They have pointed to the fact that climate and environmental change are embedded in social and historical contexts [16–23] and that, for Indigenous Peoples worldwide, relationships to land (which we acknowledge is a reductive term [24]) have been disrupted by colonisation and colonial policy [25]. Importantly, they have highlighted that colonialism can act as a containment strategy that limits mobility [14].

For Inuit in Arctic North America, the land is the heart of cultural and community life [26–31]. Spending time on the land is key for livelihoods, food, culture and transport between communities [32,33]. These activities have deep cultural and social importance to Inuit identity and spirituality [26,34–36]. Land-based activities and relationships to the land are also considered to be a key protective factor for physical, mental, emotional and spiritual health [37–40]. As Sheila Watt-Cloutier writes [31], the land is a place for “learning and absorbing all the essential skills, aptitudes and attitudes required to survive and thrive on the land when their own time to be autonomous comes. In so many ways, the land never fails to invigorate and teach. Family and communal bonds are restored, and our spirits uplifted. We become healthier in mind and body, nourished by the country food the land and sea provides”.

Given the importance of being out on the land for Inuit, disruption to time spent on the land has been reported to impact the mental and emotional health of individuals and communities [26,41,42]. Additionally, challenging travel conditions may be associated with increased stress, anxiety, and risk of accidental injury [43–45]. Understanding what environmental conditions are safe to travel in and how to act in unexpected conditions is a key aspect of Inuit Knowledge (also called Inuit Qaujimagatuqangit or IQ in Nunavut) [34,35,46,47]. Inuit relationships to land require flexibility in the face of constant change and dynamic uncertainty in the Arctic, and Inuit Knowledge provides this [47–50]. Inuit Knowledge is experiential and evolving, and in part comprises intergenerational land-based skills and a deep familiarity with the land and methods of safe travel and hunting [47,51–54]. For Inuit, residential schooling, forced sedentarization, relocations and intergenerational trauma impact mobilities on the land in ongoing ways [14,34,40,55,56]. Inuit have also experienced rapid social and economic change [53] and face large disparities in health outcomes compared to non-Indigenous Canadians, rooted in colonialism [37,57–59]. The reality of decision-making about travel on the land is, therefore, much more complex than simply being about the weather or ice conditions [60,61]. Disruption to this mobility could be considered to constitute a slow-onset disaster, involving creeping processes of loss, with impacts on physical, mental and spiritual health that sometimes go “under the radar” of governmental monitoring and disaster risk reduction processes [62,63].

Mobilities research in Arctic North America has focused both on communities undergoing processes of planned relocation [64–67], and the daily, weekly and seasonal patterns of Inuit travel on the land [68]. These have both been addressed, in part, by literature that focuses on the social impacts of climate change [45,69]. A number of studies have critiqued this body of literature for centring climate change at the expense of attending to colonial legacies [18,70]. Others suggest that there are many more important concerns to Inuit than climate change [61]. Through these critiques, more nuanced understandings of mobilities are emerging, though none of this critical and essential research has used empirical approaches to identify the direct and root causes of limits to mobility, and all have focused on only one country or location. Additionally, as many critiques have focused specifically on what is referred to as “the human dimensions of climate change” literature, none have systematically reviewed all literature that discusses barriers to travel (whether through the lens of climate change or not), synthesising findings across both Arctic Canada and Alaska.

Here, therefore, we set out to identify the direct and root causes of limits to mobility for Inuit in Arctic North America. To do this, we systematically review and evaluate

literature discussing barriers to travel for Inuit across Arctic North America and, drawing from disaster studies, use a root cause analysis framework and causation coding to create a causal flow diagram and identify key themes of relevance across the region. In our research, we do not assume an increase in accidents or disaster, or a statistical decrease in mobility per se, as this data is likely to be complex and heterogenous across Arctic North America. However, we are responsive to reports of perceived change and concern among Inuit [42,71] and set out to ask what the barriers to mobility and travel are in this context of uncertainty. Given this, when we refer to disaster in this context, we are referring to the phenomenon of constrained travel on the land, including barriers to travel on the land, perceived decreased safety on the land and the physical and emotional impacts of both of these on emotional, spiritual and social health.

## 2. Materials and Methods

### 2.1. Research Approach: Disasters and Root Cause Analysis

For some time, disaster scholars have argued that disasters are the result of societal processes that create and perpetuate risk, and are therefore never “natural” phenomena [72–77]. Disaster risk reduction, therefore, requires an understanding of the ways in which disaster risk is socially produced [78]. Globally, legacies and ongoing processes of colonization, globalisation, racialization, capitalism, industrialisation and destructive land management practices have created increasing inequities on multiple scales [24]. These processes produce risk, unevenly, along lines of race, gender, disability, Indigeneity, age and many other social categories [76,79,80]. This makes it clear that people are put at risk by the political and social structures of the societies in which they live, as opposed to by physical hazards [81,82]. It therefore follows that disaster risk reduction that fully attends to the social construction of disaster risk is essentially an issue of sustainable development [83–85].

For the same reasons, climate change can be framed as a crisis of development [23,86,87]. Climate change will likely have diverse impacts on hazards, depending on the type of hazard and scale, including an increase in frequency and intensity of certain hazards [83,88,89]. This includes both rapid onset hazards (such as floods and hurricanes), as well as creeping, slow hazards, which may be characterised by the slow shifting of ecological baselines such as sea level rise, erosion, ice melt and ecological change [77,90,91]. Given this, adaptation in the context of climate change should arguably be seen as a form of disaster risk reduction, nested within a sustainable development agenda [84,92,93].

Regardless of this push for more nuanced language that reveals the social construction of risk, the use of the term “natural disaster” (including in the context of climate change), along with technocratic approaches to disaster risk reduction and climate adaptation, still abound [94,95]. This can create discourses that depoliticise and externalise the threat of climate change and ignore how society constructs (and therefore has the power to reduce) risk [96,97]. This discourse implies that disaster is purely situated in the environment or climate [98]. As a result, it overlooks the need to fix aspects of society to reduce disaster risk, and instead implies technocratic solutions which do not tackle the societal status quo that puts people at risk [83]. In this way, climate change can act as a scapegoat for powerful actors to avoid responsibility for acting on the structural roots of risk [83,99,100], potentially recreating, perpetuating and worsening risk and inequality [101,102]. What’s more, these structural processes are oppressive in themselves as a form of structural violence, and there is an imperative to attend to these as social and environmental injustices even in the absence of a climate-influenced hazard [91,103].

A “root cause analysis” approach [104,105] seeks to identify underlying processes that produce disaster risk in people’s lives, based upon the understanding that socially constructed root causes (deeper processes such as colonial legacies, marginalisation and national policy) can create more direct risk drivers, which in turn create the unsafe conditions that lead to disaster risk [104]. The Forensic Investigations of Disasters (FORIN) conceptual framework [106] lays out an agenda for disaster research that focuses on root causes, approaches research with an understanding of the historical construction of dis-

aster and brings in considerations of political ecology to the study of disasters [105,107]. Research objectives include the application of diverse, transdisciplinary and participatory approaches to the identification of principle causes of disaster risk and ways in which they can be reduced [106]. These will then inform the policy objectives, which include the broadening of the scope of disaster risk reduction measures and the institutions involved, and increased awareness that disasters are not “natural” and have diverse local manifestations [106]. Additionally, FORIN’s equity objectives seek to highlight how conventional ‘development’ can create disaster risk and that disaster risk reduction can be incorporated into all economic and social development planning in all countries [106].

Suggested methodological approaches for such work include: (i) retrospective longitudinal analysis of the temporal development of disaster processes, (ii) future disaster scenario building, (iii) comparative analysis of disaster cases across different social contexts and (iv) meta-analysis of available literature to identify consistent findings across diverse studies in disaster contexts [106]. It is this last approach which we apply in the current study, taking the first step in the use of disaster root cause analysis in an Indigenous Arctic context where it has not been significantly drawn upon previously.

Inuit in Arctic North America have experienced long histories of colonisation, including forced sedentarization, residential schooling, engagement in capitalist economies and cultural assimilation [11,108,109]. As these are well understood to be root causes of risk in broader contexts [14,105,110,111], these warrant examination as potential root causes of risk in the specific context of travel on the land in Arctic North America. Of particular pertinence here are the ways in which colonisation constrains mobility, movement and flexibility associated with ways of life and with peoples’ ability to flexibly adapt to dynamic environments [52,96,110,112–116].

Furthermore, it has been increasingly argued that disasters should be studied through an intersectional lens [117–122], which highlights the multiple, intersecting and interconnected oppressions and power relations within society and how they result in unique individual experiences day to day [123–125]. As human societies and their environments can be considered “fundamentally inseparable” [107] (p. 19), the impacts of these intersecting oppressions manifest in impacts to human relationships with the environment. As Sultana [126] explains: “Gender related subjectivities are negotiated and embodied through social processes and ecological practices while intersecting with other subject positions, such as class, race, age or caste” (p. 633). The experiences of colonization, for Indigenous Peoples in North America, are therefore characterised by intersecting layers of oppression, including Indigeneity and gender [118,120]. Research has often portrayed Indigenous Peoples as homogenous entities [121], but there is evidence that experiences in the context of disasters and environmental change are diverse and require attention [120,127]. For Inuit, power differences along lines of age, gender and other social categories create multiple experiences and situated knowledges [128,129]. Equally, the complexities and power relations within communities are unlikely to be clear to outsider researchers, nor will they necessarily mirror Western literature surrounding “community” [130,131].

## *2.2. Objectives: Untangling the Root Causes of Disaster on the Land and Sea Ice in Arctic North America*

This context of shifting safeties on the land, decreased access to land and the subsequent loss of life and ways of life is characteristic of a slow-onset disaster [34,62,91,132,133]. As root causes of disaster are embedded in the histories of human actions, all disasters evolve over large temporal time frames [62,105,134]. However, slow-onset disasters are those which cannot be artificially reduced (by media reports, for example) to discrete events, and which manifest in more gradual and creeping ways [135]. Examples of these include drought, famine and environmental pollution and degradation. Due to the political nature of the ways in which disasters are defined [136–138], and the relative lack of research in slow-onset disaster contexts [139], slow-onset disasters and intangible losses

can go unaccounted for and unattended to by states, meaning that communities are unsupported [62,90,140,141].

We employ a root cause analysis, and to do so we systematically and comprehensively review the published and grey literature for discussion of: (i) direct causes of increased risk of accidental injury and death while on the land, (ii) direct barriers to spending time on the land, given that this has been identified as a threat to mental and spiritual well-being and (iii) the root causes of these direct drivers. We systematically identified and reviewed the peer-reviewed and grey literature that discussed Inuit travel on land, factors that affect mobility and risk during land-based activities and drivers of risk on the land. This comprised searches using Scopus, Web of Science and Google Scholar using the search terms in Table 1, and screening results for factors affecting opportunities for Inuit to travel, and to travel safely, on the land in Arctic North America. We included grey literature so that important perspectives from beyond academia (including those of Indigenous organisations) were incorporated. Additionally, we carried out a manual search of articles by authors working in social research in Arctic North America and the snowballing of references from included articles. Included studies underwent extraction of descriptions of factors affecting the ability to travel safely, including both direct factors and more distal broader processes that were described to impact land travel (root causes), as well as descriptions of specific events of risk or accidents on the land, or periods of time when travel was prevented. This research began by taking an approach that looked for research relating to all Arctic North American Peoples, but heterogeneity of history and experience between Peoples led us to focus specifically on an Inuit context later in the research process.

**Table 1.** Databases and search terms used to search for peer-reviewed and grey literature.

Database	Search Terms	Date
Scopus	TITLE-ABS-KEY (Arctic AND (Canada OR Alaska OR Nunatsiavut OR Nunavut OR Nunavik OR Inuvialuit) AND (Inuit OR Inuk OR Indigenous OR Aleut OR Yupik OR Iñupiat OR “Gwich’in” OR Innu OR Dene OR Tlingit) AND (travel OR trail OR land))	January 2021
Web of Science	TS = (Arctic AND (Canada OR Alaska OR Nunatsiavut OR Nunavut OR Nunavik OR Inuvialuit) AND (Inuit OR Inuk OR Indigenous OR Aleut OR Yupik OR Iñupiat OR “Gwich’in” OR Innu OR Dene OR Tlingit) AND (travel OR trail OR land))	January 2021

Extracted information was analysed in two ways. The causal analysis [106] included the use of causation coding [142] to create a detailed causal chain diagram [143] and, throughout this process, a mix of inductive and deductive thematic analysis was used to identify narrative themes that were common across regions and then arose in a significant number of documents that we analysed.

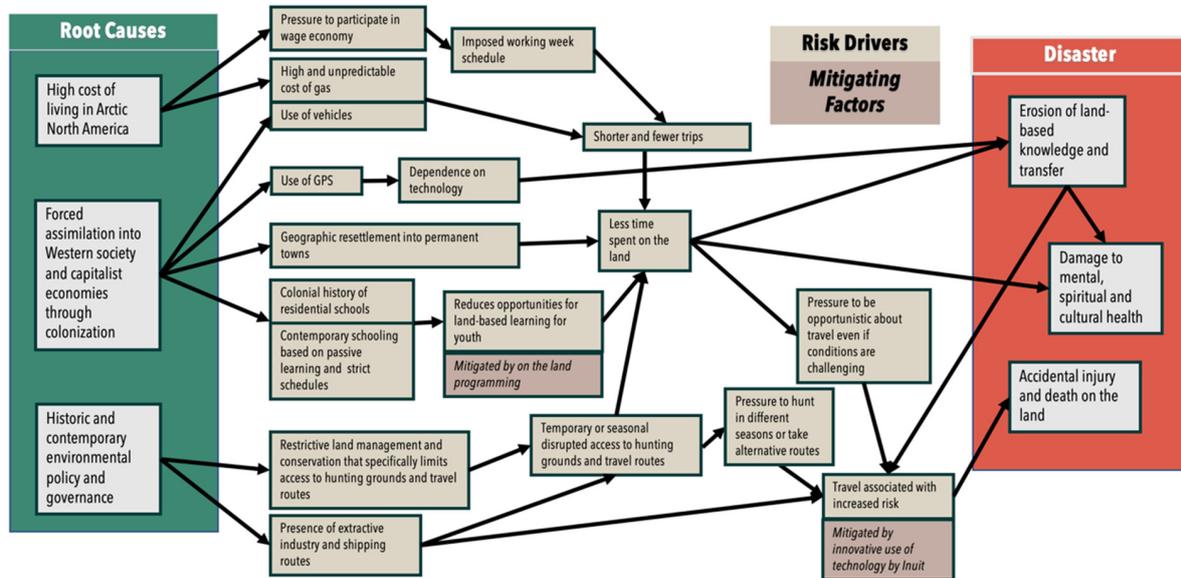
This process was supported by snowballing from the reviewed literature to identify further detail on the “root causes” identified. Such root causes often develop over significant periods of time [137], and it is therefore important to understand pre-disaster conditions and the “normal” order of things to uncover the “policies, prejudices and actions that comprise the disaster conundrum” [72,106] (p. 18). Thus, this requires some degree of focus on the political ecology of the history of the context of interest, which highlights the function of ongoing social orders in the creation of risk [107,144]. It is important, however, to also study the ways in which these processes occur in the present, in order to avoid relegating these risk-shaping processes to history, and to be prepared to “study up” the present-day institutions through analyses of power [145,146].

### 3. Results

145 documents were included in the analysis (Tables 2 and S1). We undertook an iterative process of qualitative causal analysis, which involved first coding for any mention of direct barriers or facilitators of travel or causes of unsafe travel, then re-coding for descriptions of the causes of these direct barriers and so on, iteratively building a causal pathway in reverse. Each causal step was documented with an arrow in the process of building an initial causal loop diagram. The number of documents mentioning each causal step (and the geographic location of the research) was recorded, and once complete, this diagram was distilled down to the major causal mechanism displayed in Figure 1 through selecting causal processes that were present in more than 10 documents and across multiple locations (Table 3). This causal loop diagram has been qualitatively summarized into four main themes, designed to offer a narrative summary of the causal loop diagram, while acknowledging that these themes are deeply interlinked: (i) the high cost of living in Arctic communities and precarity to external market forces makes costs of travel insurmountable; (ii) historic and ongoing processes disrupt intergenerational land-based knowledge sharing and undermine the safety of travel; (iii) externally imposed timescales and schedules constrain time available for travel; (iv) historical and contemporary environmental policy and governance and resource development constrain the geographical spaces in which it is possible to travel. We use direct quotes from reviewed papers to illustrate these themes, attributing the quote to specific interviewees where possible.

**Table 2.** Results of literature searches and screening.

Source	Number of Documents Included in Review	Geographical Focus of Documents		
		Canada	Alaska	Both
Peer-reviewed literature	Database search	49		
	Google Scholar	11		
	Snowballing and author hand search	53	100	36
Grey literature	Conference abstracts	19		
	Reports	9		
<b>Total</b>	<b>141</b>			



**Figure 1.** Causal flow diagram identifying root causes, risk drivers, disaster and mitigating factors.

### 3.1. High Cost of Living in Arctic Communities and Precarity to External Market Forces Frequently Makes Costs of Travel Insurmountable

Disproportionately high living costs in relation to salaries result in direct financial barriers to travel in Arctic North America. Travel costs reflect the high price of navigation technology and means of transport that are increasingly relied upon: “Harvesting costs for the procurement of traditional foods are high and most often covered by hunters and their families and reflect the initial investment in hunting equipment such as snowmobiles and boats, as well as the ongoing costs related to equipment maintenance, fuel for hunting trips, and necessary ammunition” [147] (p. 552). The unpredictability of ongoing costs such as gasoline produces a level of precarity in access to food and travel that is influenced by external market forces: “The high cost of gas has really affected the people of Igloodik. Some people go without food for days... it really takes its toll when you cannot buy gas to get the [traditional] food which to us is cheaper than [the] store [food].’ Abraham Ulayuruluk” [148] (p. 95). This results in fewer and shorter trips on the land for many: ‘A teacher of the Inuvialuktun language in Tuktoyaktuk recalled, “When my dad was alive, we just stayed in a camp, never worried about what’s built. Now, groceries are so expensive, rent—you can’t even enjoy being out on the land. We used to go out for months, whaling camps, fishing camps. A jerry can [of gas] was five dollars, now it’s 60 dollars” (field notes, 10 July 2016)’ [149] (p. 139).

Other economic processes implicated in the reduction of time spent on the land included those which reduce the income that can be made from animal products (discussed further below), hindering people’s ability to make a living from the land: “People were able to make money trapping and sealing. And that can’t be an economic activity anymore, and it costs a lot more nowadays just to go out on the land. I mean, I’d probably go to England just as cheaply for a week as it would cost me to go up to the cabin for a week. But going up to the cabin is far more important.” (William Andersen)’ [150] (p. 22).

### 3.2. Historic and Ongoing Processes Disrupt Intergenerational Land-Based Knowledge Sharing and Reduce Safe Travel

The disruption and undermining of dynamic, intergenerational transfer and the exchange of cultural and environmental knowledge (sometimes also referred to in the literature reviewed as the erosion of Indigenous Knowledge) was described to be a result of historical colonial policies including residential schooling and associated intergenerational trauma [42,151]: “Over the years, the Inuit bond with land and wildlife was weakened due to colonial encroachment, policing, restrictive land management, forced assimilation, and residential school education. These new systems of settler colonialism systematically and deliberately disrupted the generational transfer of traditional knowledge” [152] (p. 5). This was expressed as being an ongoing process inherent to the Western influence over local education today: “Parents in the study identified the experience of forced relocation and/or attendance at residential school as traumatic events for families. These events broke the chain of Inuit knowledge transmission, which participants blamed for health inequalities observed in northern communities today” [153].

A major theme was the role of Western schools in promoting more passive ways of learning at the expense of land-based, experiential learning and concern around youth and younger generations’ well-being and futures: “As an elder noted: ‘There should be more [training] when [young people] are not in school. They don’t know how to hunt or what to do ... it’s better if we just go ahead and tell them to follow when their father or whoever’s going out on the land when they’re taught they learn’ (elders’ focus groups)” [147] (p. 553). This fed directly into concern expressed by Inuit about safe travel for the youth: “Participants in both towns described youth as increasingly likely to take risks without adequate preparation. Lenny from Kugluktuk, Nunavut, shares: ‘My main concern is that none of them will go out hunting anymore. And they don’t know the sea ice conditions. They don’t know how to travel on the ice or on the ocean. They don’t know how to read

the weather... kids these days are gearing more to staying in town and going out just for day trips. But those day trips could be dangerous for them” [152] (p. 10).

As land-based knowledge is known to be experiential and adaptive, these processes were discussed as both a fundamental barrier to safe travel and a consequence of less time spent on the land. The literature describes how residential schooling forcibly and directly separated generations of people, reducing opportunities for knowledge transfer. The intergenerational trauma cultivated through residential schooling was also thought to have undermined close relationships and is compounded by current schooling policies: “Even if the schools, along with community elders, organise trips to bring students out on the land and teach them traditional skills, hunters consulted believe that traditional training should be done by parents, and if the schools are to be involved, they should work with the parents: ‘The school is taking over [the] parent’s role to teach hunting and survival to their children. Parents and school should work together’ (hunters’ focus groups)” [147] (p. 554).

### 3.3. Externally Imposed Timescales and Schedules Constraining Time Available for Travel

Constraints associated with time were present in diverse ways in much of the literature reviewed. Employment schedules are reported to significantly constrain people’s ability to spend time on the land, due to the inflexible weekly structure that they impose: “I travel quite a bit but since I am working most of the time now I don’t get too much time to be out on the land. That’s what I really miss is the life on the land.’ Ricky Wolki, Tuktoyaktuk resident” [154] (p. 875). This is also true of school schedules, which means that whole families experience barriers associated with weekly schedules: “Many families have increasing difficulty in finding the time to go bakeapple picking together. It is difficult to cope with variability in weather and harvest timing with rigid work schedules and increasingly, single men will go to the bakeapple grounds for a couple of hours.” [155] (p. 857).

This results in travel opportunities being restricted to the weekend for many: “It is hard today. If you have machines only you need the gas and equipment to go on the land, but you need the money to take it. It is hard to get all the gas and equipment without working. So you have to work and hunt at the same time. Weekends are very short...so you have to rush. I used to have a permanent job and it was a stress for me. My mind wanted to go out when it was good weather, calm weather, and I was having to work.’ Arviat Harvester” [156] (p. 23). This has also had the effect of incentivising opportunistic travel at weekends, regardless of the travel conditions: “Many community members now go out in conditions previously considered unsuitable: ‘I think some people will now go out when they wouldn’t normally go out.’ James Ungalak” [157] (p. 131).

Where time off must be booked ahead, there is pressure to go ahead with trips, and this is accentuated by the high cost of travel and by the likelihood that money may have already been invested in a trip, including gas or borrowed vehicles: “Time off from work, which is used for hunting trips, has to be booked weeks, if not months, in advance. Weather or safety concerns may, therefore, be superseded by consideration of time availability when harvesting decisions are made” [157] (p. 131).

Regardless of this pressure to go ahead with trips, time constraints mean that many travel plans have to be cancelled, and some people are simply making fewer plans to spend time on the land: “Some hunters are unable to adapt to the longer time requirements needed to travel further and cope with changing trail conditions due to employment commitments, and others are unable to afford the costs of extra gas and supplies. Still others are forgoing travel altogether because they do not feel confident travelling in uncertain conditions, particularly during shoulder seasons and on the sea ice.” [158] (p. 129).

This leads to a paradox whereby individuals may need to engage in waged labour to support the costs of time spent on the land, but this in turn is a time barrier to doing so: “Individuals described the mixed wage and subsistence economy as having introduced an additional dichotomy, whereby money earners who can most afford to hunt have the least amount of flexibility due to work schedules. The mixed economy is seen as displacing land-

use to the weekend, particularly among those with full- or part-time jobs. Some participants described that even if the weather was better (e.g., less chance of a storm) during the work week, inflexible schedules would push them to go out on the weekend instead. Based on time restrictions, land-users can be more likely to go out right before a predicted storm, trying to beat it, or be in a rush to return before work or school commitments" [156] (p. 22).

Constraints also play out on longer timescales. Seasonal or annual restrictions to harvesting in conservation areas may restrict travel in ways that prevent flexibility in the face of unpredictable ecological and environmental conditions. Policies that were seen to restrict travel in these ways included the Nunatsiavut polar bear, goose and duck quotas and caribou ban [159], the United States ban on the import of polar bear skin in 2009 [160,161], the European Union sealskin ban in 2010 [160] and seasonal regulations that impact the walrus hunt in the Bering Straits, Alaska [162]. Here, spatial and temporal constraints meet in the context of policies that constrain harvesting in specific geographic regions over specific timescales [163].

This was reported to result in people being pushed to travel farther and longer to access hunting grounds: "With disruptions in seasonality and availability, tribal communities need flexibility in management systems in order to access traditionally harvested resources. However, the "calendar-driven" agency rules about harvest present a challenge. Namely, the defined "season" for harvesting salmon, deer, and shellfish is in some cases in conflict with the actual season of availability... Tribal communities need flexibility in determining when is the most appropriate time to harvest species because seasons of "onset" are in flux" [164] (p. 8).

### *3.4. Historical and Contemporary Environmental Policy and Governance and Resource Development Constrain the Geographical Spaces in Which It Is Possible to Travel*

Shipping, industrial development and resource extraction are projected to increase in the context of a warming climate, which increases the period of time that the sea is navigable by ships. Dawson et al. [165] find that shipping is something that communities across Arctic Canada are highly concerned about. Shipping, which includes purpose-built icebreakers, as well as other ships which create breaks in the ice, is associated with both direct and indirect threats to safety. The creation of unstable ice conditions is a primary direct driver of risk: "ice breaking also causes the ice to fracture and re-freeze in a way that can make it dangerous and sometimes impossible to cross with a snowmobile. This not only affects the ability of community members to hunt but also can be very dangerous if a hunter were to fall through the ice that has not yet refrozen to previous strength or if a snowmobile breaks down because of challenging ice formations" [165] (p. 30). The risk of wakes created by large ships were also seen to be a risk to safety while travelling on the water: "Hunters from Bering Strait communities [Alaska] travel by small, open boat as far as 100 miles (160 km) or more from land. These boats could be struck by a large vessel or swamped by a large vessel's wake" [166] (p. 122).

Secondary threats to safety were caused by disruption to wildlife, which is an impact of both shipping and industrial development more broadly: "An increase in shipping and icebreaking was mentioned in connection with both wildlife disruption and hunting grounds access. One participant in Cambridge Bay, Nunavut, recounted a story of a hunter being stranded for several days after an icebreaker cut off his ice route back to town." [152] (p. 9).

Ice breaking by ships reduces people's ability to be flexible about when they travel. As a participant in Davies (2007) [167] describes: "People don't really have it logged on their calendar, because we don't know on the calendar when we're going to go off. You know. If we've heard that there's a caribou in certain areas, we'll get ready for them the next day. That's the only thing we think about. Now we have to think about, oh, ship's coming in today. You know, we don't think about that" (p. 78). Additionally, it regularly created a need for detours: "A couple of times we couldn't get to our cabin because the track wasn't froze ... Some Inuit are not used to checking on the safety of the ice in the

ship's track and often forget to do this before they go out on the land. If they reach the track and it is unsafe to cross, they either have to turn back, or to make detours in order to go around it. This also happens when people are coming back from being out on the land, and some people have commented that it makes them feel 'trapped'. But I think that since there's been several incidents this year with one or two people." [167] (p. 78).

### 3.5. Social and Structural Factors Interact with Weather Conditions and Climate

Socially constructed root causes addressed above interact with weather and environmental conditions in complex ways. Time spent on the land requires flexibility: "A traditional subsistence harvest strategy requires the adaptive capacity to adjust to changes in resource availability, through location change, species switching or altering the timing of a hunt. Before colonization the timing of this hunt was not restricted by seasonal regulations so there was more flexibility within the system" [162] (p. 62). The identified root causes of risk constrain peoples' ability to live in and interact with their environment in a dynamic and flexible way: "While climate change is no doubt a challenge, northern peoples have historically been able to respond effectively to changes in the land and seascapes and to the distribution of fish and game through flexible and adaptive subsistence strategies. The research reviewed here highlights how governance and management structures can limit people's options and flexibility in this regard—restrictive land tenure regimes, and hunting and fishing seasons that are increasingly out of sync with changing seasonality and phenology of fish and game are two examples" [168] (p. 386). Specifically, it is people's opportunities for adaptive change that are curtailed: "Some respondents have adapted to changing ice conditions by adjusting the timing and modes of travel on the land. The ability to adapt is dependent on the ability of the respondent to be flexible in the timing of harvesting, access to alternative modes of transportation (e.g., boat, ATV, snowmobile) and having the knowledge and skills necessary to change harvesting locations and techniques" [169] (p. 14). Environmental hazards thus pose a risk because of the social and historical context.

There are differences in the ways that individuals can manage environmental hazards and change, and these differences are based on complex intersections of identity and experience: "Participants reported that although the weather is changing, prepared land-users are not affected because they are ready to make a shelter and spend the night, or if necessary call for help" [156] (p. 24). Intersecting identities of gender, age and other differing identities are described in the literature as shaping experiences of risk on the land and barriers to travel. In particular, there was mention of the unique challenges faced by women and by families with single parents (of all genders), particularly in relation to lower incomes and the increased burden of responsibilities that act as a barrier to time spent on the land. There was also discussion around the differing experiences of different age groups and generations, particularly around the increased influence of Western lifestyles for the youth and perceptions of increased risk among the youth in the North. Some studies report higher rates of unintentional injury and death and search and rescue among men and youth. Few studies employed detailed intersectional approaches.

One study reported weather condition thresholds for safe travel [45], but these tend to be place-specific or dependent on individual circumstances and interacting social drivers. Others suggest that the creation of general thresholds is not possible: "Weather is only one of many factors in Inuit decisions . . . The visiting researchers on the team had initially assumed the existence of weather thresholds for travelling and other activities; for instance, that people would not leave home or camp if wind speeds were above a certain level. In conversation and travel with Inuit on the team, it became apparent that many social and other factors come into play, making it impossible to identify clear thresholds of this kind" [60] (p. 273).

The role of climate change was discussed in some studies within this review, though often in a non-direct way, or as one of a number of factors. For example, climate change was discussed broadly as having an impact on the walrus hunt in Alaska [170], mainly in

combination with other cumulative effects of regulatory frameworks and industry [162], and climate change was also mentioned as a factor leading to a longer shipping season [165]. Climate change's role in increased weather variability was discussed: "One of the observed impacts of climate change is increased seasonal variability, which forces hunters to adjust their seasonal calendar continuously" [171] (p. 117). However, weather variability was not necessarily described as a barrier to travel on the land. For example, Archer et al. [172] found that "hunters are generally making additional preparations given the experience with climate impacts. Many participants, for example, cited checking weather conditions online or seeking additional guidance from elders before leaving" (p. 25). Desjardins et al. [173] suggest that "The use of new technologies and innovation represents one point of continuity between past and present adaptation to changing climates" (p. 244). However, the theme of climate change was not discussed to a significant extent as a barrier to travel on the land, and the ways in which it arose in discussions were heterogeneous across Arctic North America.

### *3.6. Root Causes Versus Direct Drivers of Risk*

Mostly, the literature discussed relatively direct or immediate risk factors or barriers to travel on the land. The literature does also mention—and attribute cause to—underlying and broader root causes that create and shape risk. Sometimes the mechanism through which these cause risk are explicitly and directly described, such as the impact of Western schooling [147,152]. Other times, they are referred to as a broader set of policies that impact and shape Inuit lives in direct ways. For example, many papers reference "colonial encroachment," as characterised by a broader set of processes including, but not limited to, restrictive land management, forced assimilation into western society and capitalist economies, geographic resettlement in permanent towns, residential schooling and associated systemic and deliberate disruption of intergenerational transfer of knowledge, and policing, including the systemic attack of the RCMP on sled dogs and their relationships with Inuit [149,152,174,175]. These are described as undermining land-based activities in a more general sense and act as the root causes of more direct risk factors. Root causes grounded in present day processes and actions were apparent in the literature as, for example, low government employment and low tourism and economic inflow, the domineering influence of western lifestyles among the younger generation of Inuit, and the economic dependence on external factors beyond community control [160,176,177]. In particular, colonial policies of forced sedentarization, a time when many Inuit came in off the land, are considered to have fundamentally altered opportunities for travel and access to spaces outside of urbanised communities: "the move off the land in the 1950s and 1960s changed Inuit lives dramatically. Sedentarization in the villages increased the Inuit feeling of alienation from their land and their traditional way of life" [178] (p. 101). Aporta [68] explains how colonial policies of relocation intersected with imposed timescales: "Before Inuit moved to permanent settlements in the late 1950s and early 1960s . . . the journey took precedence over the route, and the trail was, in a sense, lived rather than travelled . . . This approach started to change with the arrival of European and American whalers and particularly with the arrival of trading posts, and the emergence of regular trading journeys to the posts. The most dramatic change was linked to sedentarization, and the appearance of such concepts as weekend trips" (p. 135).

### *3.7. Positive Drivers of Safe Travel and Factors Mitigating Disaster*

Some of the literature reviewed discussed positive social factors that enable people to get out on the land, including community-level resilience and adaptation, and may mitigate disaster. For example, while dependence on technology was suggested to be a driver of risk-taking behaviour, technology also provides opportunities for flexibility, creativity and learning: "Young Inuit are inspired by technology and readily utilize it. The elders say, 'Now we need young people to teach us.' Internet and school education are the means by

which Inuit learn. When the researcher asked one Inuk fisher about Inuit turbot fish recipes, he replied, ‘Google it,’ with a smile” [179] (p. 8).

Additionally, communities are initiating numerous programmes to tackle many of the drivers of risk discussed so far: “Arviat has numerous programs to increase safety on the land. The Young Hunters Program, for example, exposes youth to harvesting activities. Youth are taught about land navigation, firearm safety, land safety practices, and local hazards by elders and active hunters in the community. The program addresses key vulnerabilities, reducing the susceptibility of participants, and encouraging them to recognize hazards. Study participants were supportive of the programs as they were seen as an avenue to maintain IQ [Inuit Qaujimagatuqangit], cultural identity, and protect youth. Arviat has also taken an active role with the SAR committee to ensure the necessary resources are provided for them to operate effectively. Similarly, Pangnirtung has taken steps to train SAR [search and rescue] members and has a Coast Guard Auxiliary Unit” [156] (p. 24).

**Table 3.** Number of studies reporting each theme and location of studies with examples.

Theme	Number of Studies	Locations/Examples
High cost of living in Arctic communities and precarity to external market forces makes costs of travel insurmountable	27	Alaska, e.g., [180] Nunavut, e.g., [152,156,172] Nunatsiavut e.g., [181] Inuvialuit Settlement Region e.g., [149,158] Yukon e.g., [182] Nunvik e.g., [159]
Historic and ongoing processes disrupt intergenerational land-based knowledge sharing and reduce safe travel	24	Nunavut e.g., [156,183,184] Nunatsiavut e.g., [185] Alaska e.g., [186,187] Inuvialuit Settlement Region e.g., [154,158]
Externally imposed timescales and schedules constraining time available for travel	19	Nunavut e.g., [169,188] Alaska e.g., [189] Labrador e.g., [38,155,167] Yukon e.g., [182] Inuvialuit Settlement Region e.g., [190,191]
historical and contemporary environmental policy and governance and resource development constrain the geographical spaces in which it is possible to travel	16	Nunavut e.g., [152,192] Alaska e.g., [162,174,193] Labrador e.g., [159,167] Inuvialuit Settlement Region e.g., [165] Nunavik e.g., [175]

#### 4. Discussion

Reports among Inuit of increasing risk of accidental injury and death on the land, increased barriers to land travel and associated mental, social and cultural health impacts suggest an unfolding, slow-onset disaster in Arctic North America. This slow-onset disaster can be understood through Nixon’s [91] concept of “slow violence”, a delayed destruction occurring gradually, out of sight and across a range of temporal scales.

This paper presents the first attempt (as far as we are aware) to systematically review the barriers to travel for Inuit in Arctic North America, drawing insights from both Canada and Alaska and using a framework from disaster studies to identify causal mechanisms through which barriers to travel, and to safe travel, are created. We have identified barriers to travel for Inuit across Arctic North America, that include cost, time constraints, prevention of knowledge sharing, and the complex interplay between them. Additionally, we have identified how these processes can create risk of accidental injury and death on the land. These emerge through pathways of causation that have, at their root, historic and contemporary colonial policy and inequality, as opposed to environmental hazards per se. Previous research has suggested that social, economic and political factors play a significant role in shaping the challenges faced by Inuit communities. Our research confirms that, rather than climate hazards being primary drivers of risk in Arctic North America, root causes embedded in colonialism, in the context of changing weather and climatic conditions, are responsible for creating barriers to safe travel on the land. Additionally, we have confirmed that this trend is common (with nuance) across Arctic North America. These

impact peoples' mobilities in profound and complex ways. As Loring and Gerlach [168] explain: "While climate change is no doubt a challenge, northern peoples have historically been able to respond effectively to changes in the land and seascapes and to the distribution of fish and game through flexible and adaptive subsistence strategies" (p. 386). Thus, the unpredictability of weather conditions becomes a greater problem in the context of these root causes and drivers of risk, and these risk drivers act as a barrier to the exercising of the flexibility and life-long learning that Inuit are able to employ [162,168,194].

The way that time constraints shape risk at different scales has emerged as an important paradigm. Sheila Watt-Cloutier [31] writes of the imposition of western timeframes on Inuit: "Suddenly there was a unit of time called a 'week'; how very strange the idea must have seemed to my ancestors that one in every seven days was a special day when hunting and all other 'work' had to stop". At weekly and annual time scales, policies constrain the temporal flexibility of Inuit with respect to travel on the land. Weekly schedules are controlled and constrained by school and work times and act to either prevent travel or to incentivise travel at times when conditions are challenging. On an annual level, seasonal conservation policies restrict access to harvesting sites. These processes act to significantly constrict and reshape people's mobilities on the land, over time and space, and build upon histories of colonial policy that have continually undermined the mobilities and flexibility of Indigenous Peoples in Arctic North America [56,96,164]. Nanni [195] discusses how "the colonization of time" has been a major instrument of Imperialist colonial agendas throughout history, enforcing control and conformity over colonial subjects' lives. In an Arctic context, Christie and Halpern [196] suggest that the imposition of Euro-Canadian temporal constructs has impacted dissociation from the land and its seasonal patterns, with significant mental health impacts for youth in particular. It is apparent here that privileging linear, Western and Eurocentric notions of time [195,197,198] through externally imposed work and school schedules can have tangible impacts on people's ability to travel safely on the land. The ways that people are able to flexibly cope with uncertainty are bound up with personal and community interactions with time [113]. Analyses of time therefore provide a useful lens for identifying immediate risk drivers, but also provide a unifying analytic to link broader themes of colonisation and constraint in the way people can interact with the land [164].

Processes and impacts of colonisation are inherently spatial; Tuck and McKenzie [24] point out that "legacies of the spatial practices of European colonisation over the past 500 years in many parts of the globe continue to be supported by governments, but also social practices more generally, which establish and reify hierarchies of settler over Indigenous" (p. 4). This research speaks to a broader literature that focuses on the way that people's mobilities, in the context of a changing climate, have been constrained by structural processes [7,64,96,199]. Flexible processes used for managing risk through mobility have been replaced with administrative borders, the privatisation of land and externally imposed policies [112,145,200]. External forces of relocation constrain peoples' mobility options and disrupt and transform the space and place of peoples' ecological relationships [96]. Healey [153] interviewed Inuit parents, who identified: "forced relocation and/or attendance at residential school as traumatic events for families. These events broke the chain of Inuit knowledge transmission, which participants blamed for health inequalities observed in northern communities today" (p. 47). As Durkalec et al. [150] describe, "mobility heightens the freedom of decision-making associated with going off on the land . . . health-enhancing aspects of this freedom are contingent on knowledge of how to stay safe on the ice, encompassed by the Inuit concept of *ippigusutsianik*, which combines knowledge, skills, preparation, and mindset" (p. 24). Undermining mobility and flexibility undermine not just safety on the land, but the health-enhancing aspects of this mobility.

Positive drivers of access to land mentioned in the literature reflect community-driven processes of creativity and innovation. The literature reviewed highlighted that learning and adaptation are occurring within Indigenous Knowledge systems, reporting the prag-

matic integration and adaptation of new practices [112]. While this review has focused on the root causes and direct drivers of risk, it does not intend to silence or make invisible these community level processes which continue to resist injustice and push back against colonial oppression and marginalization [17,22,201–203]. We also recognise the problematic nature of discourses that emphasise experiences of trauma and hardship above the positivity of the day-to-day lives of those at home in the Arctic [204].

Due to the long history of advocacy by Indigenous Peoples, Indigenous Knowledge is now recognized in global forums as valuable and relevant for the current challenges facing the world, including climate change [205]. However, Indigenous participation in these global forums is still limited [198,206–209] and global processes are continuing to undermine Indigenous institutions [210]. Critiques of “resilience” point to its potential to “neoliberalise” climate action and place responsibility on communities to act and adapt [56,211–214]. Local agency for communities is, therefore, often in tension with broader power structures and institutions [112]. Doing justice to local agency, while attending to the external structures that create risk is thus an ongoing challenge. While it is important to platform localised, Indigenous-led action that counters risk and promotes safe travel, the institutions that create structural violence and the root causes of risk must also be held to account [75,81,210,215,216], and this research has intended to contribute to this agenda. However, it is important for such work to learn from concepts of environmental justice (EJ) [121,164], which stems from the activism and advocacy of communities in the face of environmental racism, including communities of colour and Indigenous Peoples across the globe [217–219]. EJ can be a powerful lens for recognising the agency of Indigenous Peoples while also placing focus on the structures and institutions that create risk, precarity, loss and damage [21]. Justice considerations also highlight how these root causes and risk drivers for unsafe travel on the land are not just problems in the context of climate change, but are processes of structural violence in and of themselves [217]. These processes are at risk of being hidden or consumed into one broader narrative of climate change, but they require focus and action in and of themselves, and for this an EJ lens may be productive. This would also suggest that there is a danger in taking an approach to researching these things that assumes “climate impacts” without investigating the root causes. As Hall and Sanders [69] suggest, research that centres on climate change as a threat to Arctic Indigenous Peoples fails to “consider the political and legal institutions and structures that constrain Arctic residents’ ability to adapt to climate change . . . to see resource extraction and shipping as human dimensions of climate change . . . and to recognize that hunting policies set in Washington, London, and Brussels may pose a greater threat to Arctic citizens than the changing biophysical climate” (p. 443).

Thus, to minimise loss and disaster, particularly in the context of climate change, we will need to address the root causes of risk, which may involve reform of political systems and institutions [23], and likely should be embedded in sustainable development processes more broadly [84,220]. “Adapting” just to climate change as an “externalised” threat is problematic because it distracts from making the changes to social structures that are required to reduce risk and harm more broadly, as well as in the context of a changing climate. While changing weather conditions are certainly a concern to some in Arctic North America, and continue to play a key role in the narratives surrounding the Arctic and other locations, research and discourse should not ignore the role of structural factors in creating risk in the context of climate change [61,144,221] and should be careful about using resilience-focused approaches that place responsibility on communities to adapt. There is, however, value and opportunity in using a climate change lens in a nuanced way to reveal the socio-political structures and inequalities that underly climate change experience [222,223] and to leverage action and seize a “window of opportunity,” providing it does not distract from the underlying, socially located root causes of risk [97]. The important factor is maintaining a plurality of discourses, perspectives and solutions [17].

This review has demonstrated the value of using a root cause analysis to understand unfolding disaster processes in the Arctic, in particular those unfolding gradually. It has

demonstrated that disaster research can provide a framework through which to examine these processes in an Arctic context. This root cause analysis has opened several possibilities for further research on root causes in this context, including more detailed analysis of the specific institutional and governance processes which are presently replicating and recreating structural violence and processes of risk. Processes which engage, or are led by, Inuit and Inuit organisations must be prioritised in such work [106]. There is significant opportunity in these approaches for producing understandings of disaster creation that are of use for policy and practice [224], both in disaster risk reduction and in processes of equitable policy in the Arctic more generally.

## 5. Conclusions

Systematically reviewing barriers to safe travel for Inuit across Arctic North America has revealed a complex web of socially constructed drivers of risk that impact the safety of people's mobility and travel on the land in Arctic North America. In doing so, we have demonstrated the value of root cause analysis for research in Indigenous Arctic contexts. While the way that environmental hazards and climatic change contextualise loss and disaster in this context is complex, and there can never be a complete absence of risk, the risk and loss associated with constrained mobility in this context is to a great degree explained by the impacts of historic and contemporary colonial policy. There needs to be a shift from a focus on "vulnerable peoples" to the underlying processes and institutions that put people at risk, including rethinking the "location" of disaster to include spaces of power and decision-making [145] and rethinking the temporality of disasters as not just "one-off" events [105]. This may mean "studying up" the institutions and power relations that create risk [146] and employing participatory and Indigenous-led approaches to doing so. It is important that the voices of community-based and non-governmental organisations, Inuit governments and individuals are centred in these conversations, not just in research but in ongoing collective action and fights for environmental justice that Indigenous Peoples have been at the forefront of. There is much evidence here already to suggest that increased social protection, and movements toward greater Indigenous autonomy over mobility, time, education and land use are ways to tackle the root causes of risk.

**Supplementary Materials:** The following supporting information can be downloaded at: <https://www.mdpi.com/article/10.3390/su14127061/s1>, Table S1: List of Documents Included in Review.

**Author Contributions:** Conceptualization, K.D., J.D.F., C.H.Q., A.M., M.F., S.L.H. and IHACC; formal analysis, K.D.; writing—original draft preparation, K.D.; writing—review and editing, K.D., J.D.F., C.H.Q., A.M., M.F. and S.L.H.; supervision, J.D.F., C.H.Q. and S.L.H. All authors have read and agreed to the published version of the manuscript.

**Funding:** K.D. was funded by a University of Leeds Priestley Scholarship. J.D.F., S.L.H. and the IHACC Project Team were funded by the Canadian Institutes of Health Research.

**Institutional Review Board Statement:** Not applicable.

**Informed Consent Statement:** Not applicable.

**Data Availability Statement:** A list of articles included in the study can be found in Supplementary Materials Table S1.

**Conflicts of Interest:** The authors declare no conflict of interest.

## References

1. D'Andrea, A.; Ciolfi, L.; Gray, B. Methodological Challenges and Innovations in Mobilities Research. *Mobilities* **2011**, *6*, 149–160. [[CrossRef](#)]
2. Bettini, G. Where Next? Climate Change, Migration, and the (Bio)Politics of Adaptation. *Glob. Policy* **2017**, *8*, 33–39. [[CrossRef](#)]
3. Bettini, G.; Gioli, G. Waltz with Development: Insights on the Developmentalization of Climate-Induced Migration. *Migr. Dev.* **2016**, *5*, 171–189. [[CrossRef](#)]
4. Wiegel, H.; Boas, I.; Warner, J. A Mobilities Perspective on Migration in the Context of Environmental Change. *WIREs Clim. Chang.* **2019**, *10*, e610. [[CrossRef](#)]

5. Boas, I.; Farbotko, C.; Adams, H.; Sterly, H.; Bush, S.; van der Geest, K.; Wiegel, H.; Ashraf, H.; Baldwin, A.; Bettini, G.; et al. Climate Migration Myths. *Nat. Clim. Chang.* **2019**, *9*, 901–903. [CrossRef]
6. McLeman, R.A.; Dupre, J.; Berrang Ford, L.; Ford, J.; Gajewski, K.; Marchildon, G. What We Learned from the Dust Bowl: Lessons in Science, Policy, and Adaptation. *Popul. Environ.* **2014**, *35*, 417–440. [CrossRef]
7. Nawrotzki, R.J.; DeWaard, J. Putting Trapped Populations into Place: Climate Change and Inter-District Migration Flows in Zambia. *Reg. Environ. Chang.* **2018**, *18*, 533–546. [CrossRef]
8. Black, R.; Adger, N.; Arnel, N.; Dercon, S.; Geddes, A.; Thomas, D. *Foresight: Migration and Global Environmental Change, Final Project Report*; The Government Office for Science: London, UK, 2017.
9. Hannam, K.; Sheller, M.; Urry, J. Editorial: Mobilities, Immobilities and Moorings. *Mobilities* **2006**, *1*, 1–22. [CrossRef]
10. Huntington, H.P. From Trails to Models. *Nat. Clim. Chang.* **2019**, *9*, 259–260. [CrossRef]
11. Huntington, H.P.; Carey, M.; Apok, C.; Forbes, B.C.; Fox, S.; Holm, L.K.; Ivanova, A.; Jaypoody, J.; Noongwook, G.; Stammer, F. Climate Change in Context: Putting People First in the Arctic. *Reg. Environ. Chang.* **2019**, *19*, 1217–1223. [CrossRef]
12. Zickgraf, C. Keeping People in Place: Political Factors of (Im)Mobility and Climate Change. *Soc. Sci.* **2019**, *8*, 228. [CrossRef]
13. Suliman, S.; Farbotko, C.; Ransan-Cooper, H.; Elizabeth McNamara, K.; Thornton, F.; McMichael, C.; Kitara, T. Indigenous (Im)Mobilities in the Anthropocene. *Mobilities* **2019**, *14*, 298–318. [CrossRef]
14. Whyte, K.; Talley, J.L.; Gibson, J.D. Indigenous Mobility Traditions, Colonialism, and the Anthropocene. *Mobilities* **2019**, *14*, 319–335. [CrossRef]
15. Sheller, M. *Mobility Justice: The Politics of Movement in An Age of Extremes*; Verso: London, UK; Brooklyn, NY, USA, 2018; ISBN 978-1-78873-092-1.
16. Hastrup, K. Climate Knowledge: Assemblage, Anticipation, Action. In *Anthropology and Climate Change: From Actions to Transformations*; Crate, S.A., Nuttall, M., Eds.; Routledge: London, UK, 2016.
17. Callison, C. *How Climate Change Comes to Matter: The Communal Life of Facts*; Duke University Press: Durham, NC, USA, 2014; ISBN 978-0-8223-5787-2.
18. Cameron, E.S. Securing Indigenous Politics: A Critique of the Vulnerability and Adaptation Approach to the Human Dimensions of Climate Change in the Canadian Arctic. *Glob. Environ. Chang.* **2012**, *22*, 103–114. [CrossRef]
19. Coggins, S.; Ford, J.; Berrang-Ford, L.; Harper, S.; Hyams, K.; Paavola, J.; Satyal, P.; Arotoma-Rojas, I. Climate Justice and Indigenous Peoples in the Arctic. *Georget. J. Int. Aff.* **2021**. Available online: <https://gja.georgetown.edu/2021/02/23/indigenous-peoples-and-climate-justice-in-the-arctic/> (accessed on 17 September 2021).
20. ITK. *National Inuit Climate Change Strategy*; ITK: Ottawa, ON, Canada, 2019.
21. Mattar, S.D.; Mikulewicz, M.; McCauley, D. Climate Justice in the Arctic: A Critical and Interdisciplinary Climate Research Agenda. *Arct. Yearb.* **2020**, *265*. Available online: [https://arcticyearbook.com/images/yearbook/2020/Scholarly-Papers/13\\_Mattar\\_et\\_al.pdf](https://arcticyearbook.com/images/yearbook/2020/Scholarly-Papers/13_Mattar_et_al.pdf) (accessed on 17 September 2021).
22. Watt-Cloutier, S. *The Right to Be Cold: One Woman's Story of Protecting Her Culture, the Arctic and the Whole Planet*; Penguin Canada: Toronto, ON, Canada, 2015; ISBN 0-14-319022-9.
23. Whyte, K. Too Late for Indigenous Climate Justice: Ecological and Relational Tipping Points. *WIREs Clim. Chang.* **2020**, *11*, e603. [CrossRef]
24. Tuck, E.; McKenzie, M. Introduction to Place in Research. In *Place in Research: Theory, Methodology, and Methods*; Routledge: New York, NY, USA, 2014; ISBN 978-1-315-76484-9.
25. Smith, L.T. *Decolonizing Methodologies: Research and Indigenous Peoples*; Zed Books: London, UK, 1999; ISBN 978-1-85649-624-7.
26. Cunsolo Willox, A.; Harper, S.L.; Ford, J.D.; Landman, K.; Houle, K.; Edge, V.L. "From This Place and of This Place:" Climate Change, Sense of Place, and Health in Nunatsiavut, Canada. *Soc. Sci. Med.* **2012**, *75*, 538–547. [CrossRef]
27. Ljubicic, G.J.; Mearns, R.; Okpakok, S.; Robertson, S. Nunami iliharniq (Learning from the land): Reflecting on relational accountability in land-based learning and cross-cultural research in Uq̓suqtuuq (Gjoa Haven, Nunavut). *Arctic Sci.* **2021**, *8*, 252–291. [CrossRef]
28. Sakakibara, C. Climate Change and Cultural Survival in the Arctic: People of the Whales and Mukluk Politics. *Weather Clim. Soc.* **2011**, *3*, 76–89. [CrossRef]
29. Sakakibara, C. People of the Whales: Climate Change and Cultural Resilience Among Iñupiat of Arctic Alaska. *Geogr. Rev.* **2017**, *107*, 159–184. [CrossRef]
30. Todd, Z. An Indigenous Feminist's Take on the Ontological Turn: 'Ontology' Is Just Another Word For Colonialism. *J. Hist. Sociol.* **2016**, *29*, 4–22. [CrossRef]
31. Watt-Cloutier, S. *Upirngasaq (Arctic Spring)*; Granta: London, UK, 2020.
32. AMAP. *Adaptation Actions for a Changing Arctic: Perspectives from the Bering-Chukchi-Beaufort Region*; Arctic Monitoring and Assessment Programme (AMAP): Oslo, Norway, 2017.
33. AMAP. *Adaptation Actions for a Changing Arctic: Perspectives from the Baffin Bay/Davis Strait Region*; Arctic Monitoring and Assessment Programme (AMAP): Oslo, Norway, 2018.
34. Cunsolo Willox, A.; Harper, S.L.; Edge, V.L.; Landman, K.; Houle, K.; Ford, J.D. The Land Enriches the Soul: On Climatic and Environmental Change, Affect, and Emotional Health and Well-Being in Rigolet, Nunatsiavut, Canada. *Emot. Space Soc.* **2013**, *6*, 14–24. [CrossRef]

35. Sawatzky, A.; Cunsolo, A.; Shiwak, I.; Flowers, C.; Jones-Bitton, A.; Gillis, D.; Middleton, J.; Wood, M.; Harper, S.L. Rigolet Inuit Community Government “It Depends . . . ”: Inuit-Led Identification and Interpretation of Land-Based Observations for Climate Change Adaptation in Nunatsiavut, Labrador. *Reg. Environ. Chang.* **2021**, *21*, 54. [CrossRef]
36. The Lancet Commission on Arctic Health—Shared Vision Statement. Available online: <https://sites.google.com/dartmouth.edu/lancetarctic/shared-vision-statement> (accessed on 1 November 2021).
37. Cueva, K.; Rink, E.; Lavoie, J.G.; Stoor, J.P.A.; Healey Akearok, G.; Gladun, E.; Larsen, C.V.L. Diving below the Surface: A Framework for Arctic Health Research to Support Thriving Communities. *Scand. J. Public Health* **2021**, 14034948211007694. [CrossRef]
38. Petrasek MacDonald, J.; Cunsolo Willox, A.; Ford, J.D.; Shiwak, I.; Wood, M. Protective Factors for Mental Health and Well-Being in a Changing Climate: Perspectives from Inuit Youth in Nunatsiavut, Labrador. *Soc. Sci. Med.* **2015**, *141*, 133–141. [CrossRef]
39. Redvers, J.M. Land-Based Practice for Indigenous Health and Wellness in Yukon, Nunavut, and the Northwest Territories. Master’s Thesis, University of Calgary, Calgary, AB, Canada, 2016.
40. Sawatzky, A.; Cunsolo, A.; Harper, S.L.; Shiwak, I.; Wood, M. “We Have Our Own Way”: Exploring Pathways for Wellbeing among Inuit in Nunatsiavut, Labrador, Canada. Available online: <https://www.taylorfrancis.com/> (accessed on 10 December 2019).
41. Hackett, C.; Furgal, C.; Angnatok, D.; Sheldon, T.; Karpik, S.; Baikie, D.; Pamak, C.; Bell, T. Going Off, Growing Strong: Building Resilience of Indigenous Youth. *Can. J. Community Ment. Health* **2016**, *35*, 79–82. [CrossRef]
42. Hirsch, R.; Furgal, C.; Hackett, C.; Sheldon, T.; Bell, T.; Angnatok, D.; Winters, K.; Pamak, C. Going Off, Growing Strong: A Program to Enhance Individual Youth and Community Resilience in the Face of Change in Nain, Nunatsiavut. *Études/Inuit/Studies* **2016**, *40*, 63–84. [CrossRef]
43. Dowsley, M.; Gearheard, S.; Johnson, N.; Inksetter, J. Should We Turn the Tent? Inuit Women and Climate Change. *Études/Inuit/Studies* **2010**, *34*, 151–165. [CrossRef]
44. Harper, S.L.; Edge, V.L.; Ford, J.; Willox, A.C.; Wood, M.; McEwen, S.A.; IHACC Research Team. RICG Climate-Sensitive Health Priorities in Nunatsiavut, Canada. *BMC Public Health* **2015**, *15*, 605. [CrossRef]
45. Ford, J.D.; Clark, D.; Pearce, T.; Berrang-Ford, L.; Copland, L.; Dawson, J.; New, M.; Harper, S.L. Changing Access to Ice, Land and Water in Arctic Communities. *Nat. Clim. Chang.* **2019**, *9*, 335. [CrossRef]
46. ITK. *National Inuit Strategy on Research*; Inuit Tapiriit Kanatami: Ottawa, ON, Canada, 2018.
47. Pedersen, C.; Otokiak, M.; Koonoo, I.; Milton, J.; Maktar, E.; Anaviapik, A.; Milton, M.; Porter, G.; Scott, A.; Newman, C.; et al. SciQ: An Invitation and Recommendations to Combine Science and Inuit Qaujimagatuqangit for Meaningful Engagement of Inuit Communities in Research. *Arct. Sci.* **2020**, *6*, 326–339. [CrossRef]
48. Berkes, F. *Sacred Ecology: Traditional Ecological Knowledge and Resource Management*; Taylor & Francis: Abingdon, UK, 1999; ISBN 978-1-56032-694-6.
49. ICC. *Ethical and Equitable Engagement Synthesis Report: A Collection of Inuit Rules, Guidelines, Protocols, and Values for the Engagement of Inuit Communities and Indigenous Knowledge from Across Inuit Nunaat*; International; Inuit Circumpolar Council: Utqiagvik, AK, USA, 2021.
50. Scott, T.L. *Inuit Qaujimagatuqangit: What Inuit Have Always Known to Be True*; Karetak, J., Tester, F., Tagalik, S., Eds.; Fernwood Publishing Co., Ltd.: Halifax, UK; Winnipeg, MB, Canada, 2017; ISBN 978-1-55266-991-4.
51. Bates, P. Inuit and Scientific Philosophies about Planning, Prediction, and Uncertainty. *Arct. Anthropol.* **2007**, *44*, 87–100. [CrossRef]
52. Gram-Hanssen, I. The Role of Flexibility in Enabling Transformational Social Change: Perspectives from an Indigenous Community Using Q-Methodology. *Geoforum* **2019**, *100*, 10–20. [CrossRef]
53. Kaplan, S. Labrador Inuit Ingenuity and Resourcefulness: Adapting to a Complex Environmental, Social, and Spiritual Environment. In *Settlement, Subsistence and Change among the Labrador Inuit*; Natcher, D., Felt, L., Procter, A., Eds.; Contemporary Studies on the North; University of Manitoba Press: Winnipeg, MB, Canada, 2012.
54. Laidler, G.J.; Elee, P.; Ikummaq, T.; Joamie, E.; Aporta, C. Mapping Inuit Sea Ice Knowledge, Use, and Change in Nunavut, Canada (Cape Dorset, Igloodik, Pangnirtung). In *SIKU: Knowing Our Ice: Documenting Inuit Sea Ice Knowledge and Use*; Springer: Dordrecht, The Netherlands, 2010; pp. 45–80.
55. Commission, Q.T. *Qikiqtani Truth Commission: Achieving Saimaatigiingniq*; Qikiqtani Inuit Association: Iqaluit, NU, Canada, 2010.
56. Snook, J.; Cunsolo, A.; Borish, D.; Furgal, C.; Ford, J.D.; Shiwak, I.; Flowers, C.T.R.; Harper, S.L. “We’re Made Criminals Just to Eat off the Land”: Colonial Wildlife Management and Repercussions on Inuit Well-Being. *Sustainability* **2020**, *12*, 8177. [CrossRef]
57. Kirmayer, L.J.; Brass, G.M.; Tait, C.L. The Mental Health of Aboriginal Peoples: Transformations of Identity and Community. *Can. J. Psychiatry* **2000**, *45*, 607–616. [CrossRef]
58. Kirmayer, L.J.; Valaskakis, G.G. *Healing Traditions: The Mental Health of Aboriginal Peoples in Canada*; UBC Press: Vancouver, BC, Canada, 2009; ISBN 978-0-7748-5863-2.
59. Richmond, C.A.M.; Ross, N.A. The Determinants of First Nation and Inuit Health: A Critical Population Health Approach. *Health Place* **2009**, *15*, 403–411. [CrossRef]
60. Fox, S.; Qillaq, E.; Angutikjuak, I.; Tigullaraq, D.J.; Kautuk, R.; Huntington, H.P.; Liston, G.E.; Elder, K. Connecting Understandings of Weather and Climate: Steps Towards Co-Production of Knowledge and Collaborative Environmental Management in Inuit Nunangat. *Arct. Sci.* **2020**, *6*, 267–278. [CrossRef]
61. Ready, E.; Collings, P. “All the Problems in the Community Are Multifaceted and Related to Each Other”: Inuit Concerns in an Era of Climate Change. *Am. J. Hum. Biol.* **2020**, *33*, e23516. [CrossRef]

62. Fortun, K.; Choi, V.; Jobin, P. Researching Disaster from an STS Perspective. In *The Handbook of Science and Technology Studies*; MIT Press: Cambridge, MA, USA, 2017; ISBN 978-0-262-03568-2.
63. Willis, C. Ending “Acceptable Losses” in Disasters: How Emergency Management Can Help Build More Equitable Communities. *Route Fifty*, 28 April 2020.
64. Marino, E. The Long History of Environmental Migration: Assessing Vulnerability Construction and Obstacles to Successful Relocation in Shishmaref, Alaska. *Glob. Environ. Chang.* **2012**, *22*, 374–381. [[CrossRef](#)]
65. Wolsko, C.; Marino, E. Disasters, Migrations, and the Unintended Consequences of Urbanization: What’s the Harm in Getting out of Harm’s Way? *Popul. Environ.* **2016**, *37*, 411–428. [[CrossRef](#)]
66. Albert, S.; Bronen, R.; Tooler, N.; Leon, J.; Yee, D.; Ash, J.; Boseto, D.; Grinham, A. Heading for the Hills: Climate-Driven Community Relocations in the Solomon Islands and Alaska Provide Insight for a 1.5 °C Future. *Reg. Environ. Chang.* **2018**, *18*, 2261–2272. [[CrossRef](#)]
67. Wilson, N.J. The Politics of Adaptation: Subsistence Livelihoods and Vulnerability to Climate Change in the Koyukon Athabascan Village of Ruby, Alaska. *Hum. Ecol.* **2014**, *42*, 87–101. [[CrossRef](#)]
68. Aporta, C. The Trail as Home: Inuit and Their Pan-Arctic Network of Routes. *Hum. Ecol.* **2009**, *37*, 131–146. [[CrossRef](#)]
69. Hall, E.F.; Sanders, T. Accountability and the Academy: Producing Knowledge about the Human Dimensions of Climate Change. *J. R. Anthropol. Inst.* **2015**, *21*, 438–461. [[CrossRef](#)]
70. Prentice, S. *A Critical Examination of the Climate Change Vulnerability and Adaptation Literature in Nunavut, Canada*. Independent Study Project (ISP) Collection. 2017. Available online: [https://digitalcollections.sit.edu/isp\\_collection/2750](https://digitalcollections.sit.edu/isp_collection/2750) (accessed on 7 May 2022).
71. Parlee, B.; Furgal, C. Well-Being and Environmental Change in the Arctic: A Synthesis of Selected Research from Canada’s International Polar Year Program. *Clim. Chang.* **2012**, *115*, 13–34. [[CrossRef](#)]
72. Bankoff, G. Rendering the World Unsafe: ‘Vulnerability’ as Western Discourse. *Disasters* **2001**, *25*, 19–35. [[CrossRef](#)]
73. Hewitt, K. *Interpretations of Calamity*, 1st ed.; Allen & Unwin: London, UK, 1983.
74. Kelman, I. Natural Disasters Do Not Exist (Natural Hazards Do Not Exist Either). 2010. Available online: <http://www.ilankelman.org/miscellany/NaturalDisasters.doc> (accessed on 8 May 2022).
75. Kelman, I.; Gaillard, J.C.; Lewis, J.; Mercer, J. Learning from the History of Disaster Vulnerability and Resilience Research and Practice for Climate Change. *Nat. Hazards* **2016**, *82*, 129–143. [[CrossRef](#)]
76. O’Keefe, P.; Westgate, K.; Wisner, B. Taking the Naturalness out of Natural Disasters. *Nature* **1976**, *260*, 566–567. [[CrossRef](#)]
77. Oliver-Smith, A. Disaster Context and Causation: An Overview of Changing Perspectives in Disaster Research. In *Natural Disasters and Cultural Responses*; College of William and Mary: Williamsburg, VA, USA, 1986; pp. 1–35.
78. Sun, L.; Faas, A.J. Social Production of Disasters and Disaster Social Constructs: An Exercise in Disambiguation and Reframing. *Disaster Prev. Manag. Int. J.* **2018**, *27*, 623–635. [[CrossRef](#)]
79. Cannon, T.; Varley, A. *Disasters, Development and Environment*; John Wiley and Sons: Chichester, UK; New York, NY, USA; Brisbane, Australia; Toronto, ON, Canada; Singapore, 1994; pp. 13–29.
80. Watts, M.J.; Bohle, H.G. The Space of Vulnerability: The Causal Structure of Hunger and Famine. *Prog. Hum. Geogr.* **1993**, *17*, 43–67. [[CrossRef](#)]
81. Bankoff, G. Remaking the World in Our Own Image: Vulnerability, Resilience and Adaptation as Historical Discourses. *Disasters* **2019**, *43*, 221–239. [[CrossRef](#)] [[PubMed](#)]
82. Wisner, B.; Luce, H.R. Disaster Vulnerability: Scale, Power and Daily Life. *GeoJournal* **1993**, *30*, 127–140. [[CrossRef](#)]
83. Hore, K.; Kelman, I.; Mercer, J.; Gaillard, J. Climate Change and Disasters. In *Handbook of Disaster Research*; Rodríguez, H., Donner, W., Trainor, J.E., Eds.; Handbooks of Sociology and Social Research; Springer International Publishing: Cham, Switzerland, 2018; pp. 145–159. ISBN 978-3-319-63254-4.
84. Kelman, I.; Mercer, J.; Gaillard, J. Editorial Introduction to This Handbook Why Act on Disaster Risk Reduction Including Climate Change Adaptation? In *The Routledge Handbook of Disaster Risk Reduction Including Climate Change Adaptation*; Routledge: London, UK, 2017; pp. 3–8, ISBN 978-1-315-68426-0.
85. Mercer, J. Disaster Risk Reduction or Climate Change Adaptation: Are We Reinventing the Wheel? *J. Int. Dev.* **2010**, *22*, 247–264. [[CrossRef](#)]
86. Boyd, E.; Chaffin, B.C.; Dorkenoo, K.; Jackson, G.; Harrington, L.; N’Guetta, A.; Johansson, E.L.; Nordlander, L.; Rosa, S.P.D.; Raju, E.; et al. Loss and Damage from Climate Change: A New Climate Justice Agenda. *One Earth* **2021**, *4*, 1365–1370. [[CrossRef](#)]
87. Parry, M. Climate Change Is a Development Issue, and Only Sustainable Development Can Confront the Challenge. *Clim. Dev.* **2009**, *1*, 5–9. [[CrossRef](#)]
88. AghaKouchak, A.; Chiang, F.; Huning, L.S.; Love, C.A.; Mallakpour, I.; Mazdiyasi, O.; Moftakhari, H.; Papalexioiu, S.M.; Ragno, E.; Sadegh, M. Climate Extremes and Compound Hazards in a Warming World. *Annu. Rev. Earth Planet. Sci.* **2020**, *48*, 519–548. [[CrossRef](#)]
89. Costello, A.; Abbas, M.; Allen, A.; Ball, S.; Bell, S.; Bellamy, R.; Friel, S.; Groce, N.; Johnson, A.; Kett, M.; et al. Managing the Health Effects of Climate Change. Lancet and University College London Institute for Global Health Commission. *Lancet* **2009**, *373*, 1693–1733. [[CrossRef](#)]
90. Fiske, S.J.; Marino, E. Slow-Onset Disaster: Climate Change and the Gaps between Knowledge, Policy and Practice. In *Disaster Upon Disaster: Exploring the Gap Between Knowledge, Policy and Practice*; Berghahn Books: New York, NY, USA, 2019.

91. Nixon, R. *Slow Violence and the Environmentalism of the Poor*; Harvard University Press: Cambridge, MA, USA, 2011; ISBN 978-0-674-04930-7.
92. Kelman, I.; Gaillard, J.C.; Mercer, J. Climate Change's Role in Disaster Risk Reduction's Future: Beyond Vulnerability and Resilience. *Int. J. Disaster Risk Sci.* **2015**, *6*, 21–27. [[CrossRef](#)]
93. Roy, J.; Tschakert, P.; Waisman, H.; Halim, S.A.; Antwi-Agyei, P.; Dasgupta, P.; Pinho, P.F.; Riahi, K.; Suarez, A.G.; Aragón-Durand, F.; et al. Sustainable Development, Poverty Eradication and Reducing Inequalities. Sustainable Development. In *Global Warming of 1.5 °C: An IPCC Special Report*; Masson-Delmotte, V., Zhai, P., Pörtner, H.O., Roberts, D., Skea, J., Shukla, P.R., Pirani, A., Moufouma-Okia, W., Péan, C., Pidcock, R., et al., Eds.; Cambridge University Press: Cambridge, UK, 2018; Volume 94.
94. Chmutina, K.; von Meding, J. A Dilemma of Language: “Natural Disasters” in Academic Literature. *Int. J. Disaster Risk Sci.* **2019**, *10*, 283–292. [[CrossRef](#)]
95. Chmutina, K.; von Meding, J.; Boshier, L. *Language Matters: Dangers of the “Natural Disaster” Misnomer*. 2019. Available online: [https://repository.lboro.ac.uk/articles/online\\_resource/Language\\_matters\\_Dangers\\_of\\_the\\_natural\\_disaster\\_misnomer/9460862](https://repository.lboro.ac.uk/articles/online_resource/Language_matters_Dangers_of_the_natural_disaster_misnomer/9460862) (accessed on 8 May 2022).
96. Faas, A.J.; Barrios, R.; Marino, E.; Maldonado, J. Disaster and Climate Change-Related Displacements and Resettlements: Cultural and Political Ecologies of Space, Power, and Practice. In *The Angry Earth*; Routledge: London, UK, 2019; pp. 345–356. ISBN 978-1-315-29891-7.
97. Roberts, E.; Pelling, M. Loss and Damage: An Opportunity for Transformation? *Clim. Policy* **2020**, *20*, 758–771. [[CrossRef](#)]
98. Liverman, D.M. Conventions of Climate Change: Constructions of Danger and the Dispossession of the Atmosphere. *J. Hist. Geogr.* **2009**, *35*, 279–296. [[CrossRef](#)]
99. Gaillard, J.C. Vulnerability, Capacity and Resilience: Perspectives for Climate and Development Policy. *J. Int. Dev.* **2010**, *22*, 218–232. [[CrossRef](#)]
100. Kelman, I.; Gaillard, J.C. Chapter 2 Embedding Climate Change Adaptation within Disaster Risk Reduction. In *Climate Change Adaptation and Disaster Risk Reduction: Issues and Challenges*; Shaw, R., Pulhin, J.M., Jacqueline Pereira, J., Eds.; Community, Environment and Disaster Risk Management; Emerald Group Publishing Limited, 2010; Volume 4, pp. 23–46. ISBN 978-0-85724-487-1. Available online: [https://www.emerald.com/insight/content/doi/10.1108/S2040-7262\(2010\)0004008/full/html](https://www.emerald.com/insight/content/doi/10.1108/S2040-7262(2010)0004008/full/html) (accessed on 10 May 2022).
101. Eriksen, S.; Schipper, E.L.F.; Scoville-Simonds, M.; Vincent, K.; Adam, H.N.; Brooks, N.; Harding, B.; Khatri, D.; Lenaerts, L.; Liverman, D.; et al. Adaptation Interventions and Their Effect on Vulnerability in Developing Countries: Help, Hindrance or Irrelevance? *World Dev.* **2021**, *141*, 105383. [[CrossRef](#)]
102. Marino, E.; Ribot, J. Special Issue Introduction: Adding Insult to Injury: Climate Change and the Inequities of Climate Intervention. *Glob. Environ. Chang.* **2012**, *22*, 323–328. [[CrossRef](#)]
103. Schlosberg, D.; Collins, L.B. From Environmental to Climate Justice: Climate Change and the Discourse of Environmental Justice. *WIREs Clim. Chang.* **2014**, *5*, 359–374. [[CrossRef](#)]
104. Burton, I. Forensic Disaster Investigations in Depth: A New Case Study Model. *Environ. Sci. Policy Sustain. Dev.* **2010**, *52*, 36–41. [[CrossRef](#)]
105. Oliver-Smith, A. Peru's Five-Hundred-Year Earthquake: Vulnerability in Historical Context 1. In *The Angry Earth*; Routledge: London, UK, 2019; pp. 83–93, ISBN 978-1-315-29891-7.
106. Oliver-Smith, A.; Alcántara-Ayala, I.; Burton, I.; Lavell, A. *Forensic Investigations of Disasters (FORIN): A Conceptual Framework and Guide to Research*; UNISDR, ICSU, ISSC, Eds.; Integrated Research on Disaster Risk (IRDR): Beijing, China, 2016.
107. Hoffman, S.M.; Oliver-Smith, A. Introduction to the First Edition. Anthropology and the Angry Earth: An Overview. In *The Angry Earth*; Routledge: London, UK, 2019; pp. 15–26, ISBN 978-1-315-29891-7.
108. Whyte, K. Settler Colonialism, Ecology, and Environmental Injustice. *Environ. Soc.* **2018**, *9*, 125–144. [[CrossRef](#)]
109. Whyte, K.P. Is It Colonial Déjà vu? Indigenous Peoples and Climate Injustice. In *Humanities for the Environment*; Routledge: London, UK, 2016; ISBN 9781315642659.
110. Kelman, I.; Naess, M.W. Climate Change and Migration for Scandinavian Saami: A Review of Possible Impacts. *Climate* **2019**, *7*, 47. [[CrossRef](#)]
111. McNamara, K.E.; Westoby, R.; Smithers, S.G. Identification of Limits and Barriers to Climate Change Adaptation: Case Study of Two Islands in Torres Strait, Australia. *Geogr. Res.* **2017**, *55*, 438–455. [[CrossRef](#)]
112. Ford, J.D.; King, N.; Galappaththi, E.K.; Pearce, T.; McDowell, G.; Harper, S.L. The Resilience of Indigenous Peoples to Environmental Change. *One Earth* **2020**, *2*, 532–543. [[CrossRef](#)]
113. Marino, E.; Lazrus, H.; Button, G.; Schuller, M. “We Are Always Getting Ready”: How Diverse Notions of Time and Flexibility Build Adaptive Capacity in Alaska and Tuvalu. In *Contextualizing Disaster*; Berghahn: New York, NY, USA, 2016.
114. Sayles, J.; Mulrennan, M. Securing a Future: Cree Hunters' Resistance and Flexibility to Environmental Changes, Wemindji, James Bay. *Ecol. Soc.* **2010**, *15*, 22. [[CrossRef](#)]
115. Whyte, K. *Indigenous Climate Change Studies: Indigenizing Futures, Decolonizing the Anthropocene*; Social Science Research Network: Rochester, NY, USA, 2017.
116. Badia, L.; Cetinić, M.; Diamanti, J. (Eds.) Kyle Powys Whyte Indigenous Realism and Climate Change. In *Climate Realism: The Aesthetics of Weather and Atmosphere in the Anthropocene*; Routledge: London, UK, 2020; ISBN 978-0-429-76652-7.

117. Andharia, J. Thinking About Disasters: A Call for Intersectionality and Transdisciplinarity in Disaster Studies. In *Disaster Studies: Exploring Intersectionalities in Disaster Discourse*; Andharia, J., Ed.; Disaster Studies and Management; Springer: Singapore, 2020; pp. 3–32, ISBN 978-981-329-339-7.
118. Meissner, S.N.; Whyte, K. Theorizing Indigeneity, Gender, and Settler Colonialism. In *The Routledge Companion to Philosophy of Race*; Routledge Handbooks Online: New York, NY, USA, 2017; ISBN 978-0-415-71123-4.
119. Ryder, S.S. A Bridge to Challenging Environmental Inequality: Intersectionality, Environmental Justice, and Disaster Vulnerability. *Soc. Thought Res.* **2017**, *34*, 85–115. [[CrossRef](#)]
120. Vinyeta, K.; Whyte, K.P.; Lynn, K. *Climate Change through an Intersectional Lens: Gendered Vulnerability and Resilience in Indigenous Communities in the United States*; Gen. Tech. Rep. PNW-GTR-923; U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station: Portland, OR, USA, 2015; 72p. [[CrossRef](#)]
121. Walker, H.M.; Culham, A.; Fletcher, A.J.; Reed, M.G. Social Dimensions of Climate Hazards in Rural Communities of the Global North: An Intersectionality Framework. *J. Rural Stud.* **2019**, *72*, 1–10. [[CrossRef](#)]
122. Walker, H.M.; Reed, M.G.; Fletcher, A.J. Applying Intersectionality to Climate Hazards: A Theoretically Informed Study of Wildfire in Northern Saskatchewan. *Clim. Policy* **2021**, *21*, 171–185. [[CrossRef](#)]
123. Collins, P.H. Black Feminist Thought in the Matrix of Domination. In *Black Feminist Thought: Knowledge, Consciousness, and the Politics of Empowerment*; Routledge: New York, NY, USA, 1990; Volume 138, pp. 221–238.
124. Collins, P.H.; Bilge, S. *Intersectionality*; John Wiley & Sons: Hoboken, NJ, USA, 2020; ISBN 978-1-5095-3969-7.
125. Crenshaw, K. Mapping the Margins: Intersectionality, Identity Politics, and Violence against Women of Color. *Stanf. Law Rev.* **1991**, *43*, 1241–1299. [[CrossRef](#)]
126. Sultana, F. Emotional Political Ecology. In *The International Handbook of Political Ecology*; Edward Elgar Publishing: Cheltenham, UK, 2015; pp. 633–645.
127. Reed, M.G.; Scott, A.; Natcher, D.; Johnston, M. Linking Gender. Climate Change, Adaptive Capacity, and Forest-Based Communities in Canada. *Can. J. For. Res.* **2014**, *44*, 995–1004. [[CrossRef](#)]
128. Collins, P.H. Learning from the Outsider Within: The Sociological Significance of Black Feminist Thought\*. *Soc. Probl.* **1986**, *33*, s14–s32. [[CrossRef](#)]
129. Hitomi, M.K.; Loring, P.A. Hidden Participants and Unheard Voices? A Systematic Review of Gender, Age, and Other Influences on Local and Traditional Knowledge Research in the North. *Facets* **2018**, *3*, 830–848. [[CrossRef](#)]
130. Mosurska, A.; Ford, J.D. Unpacking Community Participation in Research: A Systematic Literature Review of Community-Based and Participatory Research in Alaska. *Arctic* **2020**, *73*, 347–367, in press. [[CrossRef](#)]
131. Titz, A.; Cannon, T.; Krüger, F. Uncovering “Community”: Challenging an Elusive Concept in Development and Disaster Related Work. *Societies* **2018**, *8*, 71. [[CrossRef](#)]
132. Tschakert, P.; Barnett, J.; Ellis, N.; Lawrence, C.; Tuana, N.; New, M.; Elrick-Barr, C.; Pandit, R.; Pannell, D. Climate Change and Loss, as If People Mattered: Values, Places, and Experiences. *Wiley Interdiscip. Rev. Clim. Chang.* **2017**, *8*, e476. [[CrossRef](#)]
133. Tschakert, P.; Ellis, N.R.; Anderson, C.; Kelly, A.; Obeng, J. One Thousand Ways to Experience Loss: A Systematic Analysis of Climate-Related Intangible Harm from around the World. *Glob. Environ. Chang.* **2019**, *55*, 58–72. [[CrossRef](#)]
134. Knowles, S.G. Learning from Disaster? The History of Technology and the Future of Disaster Research. *Technol. Cult.* **2014**, *55*, 773–784. [[CrossRef](#)]
135. Williamson, F.; Courtney, C. Disasters Fast and Slow: The Temporality of Hazards in Environmental History. *Int. Rev. Environ. Hist.* **2018**, *4*, 5–11. [[CrossRef](#)]
136. Bond, D. GOVERNING DISASTER: The Political Life of the Environment during the BP Oil Spill. *Cult. Anthropol.* **2013**, *28*, 694–715. [[CrossRef](#)]
137. Oliver-Smith, A. “What Is a Disaster?”: Anthropological Perspectives on a Persistent Question. In *The Angry Earth*; Routledge: London, UK, 2019; ISBN 978-1-315-29891-7.
138. Liboiron, M.; Wachsmuth, D. The Fantasy of Disaster Response: Governance and Social Action During Hurricane Sandy. *Soc. Text* **2013**, *29*. Available online: [https://socialtextjournal.org/periscope\\_article/the-fantasy-of-disaster-response-governance-and-social-action-during-hurricane-sandy/](https://socialtextjournal.org/periscope_article/the-fantasy-of-disaster-response-governance-and-social-action-during-hurricane-sandy/) (accessed on 11 May 2022).
139. Staube-Delgado, R. Progress, Traditions and Future Directions in Research on Disasters Involving Slow-Onset Hazards. *Disaster Prev. Manag. Int. J.* **2019**, *28*, 623–635. [[CrossRef](#)]
140. Anderson, B.; Grove, K.; Rickards, L.; Kearnes, M. Slow Emergencies: Temporality and the Racialized Biopolitics of Emergency Governance. *Prog. Hum. Geogr.* **2020**, *44*, 621–639. [[CrossRef](#)]
141. Murphy, M. Uncertain Exposures and the Privilege of Imperception: Activist Scientists and Race at the U.S. Environmental Protection Agency. *Osiris* **2004**, *19*, 266–282. [[CrossRef](#)] [[PubMed](#)]
142. Saldaña, J. *The Coding Manual for Qualitative Researchers*, 3rd ed.; SAGE: Los Angeles, CA, USA, 2016; ISBN 978-1-4739-0249-7.
143. Sohns, A.; Ford, J.D.; Adamowski, J.; Robinson, B.E. Participatory Modeling of Water Vulnerability in Remote Alaskan Households Using Causal Loop Diagrams. *Environ. Manag.* **2021**, *67*, 26–42. [[CrossRef](#)] [[PubMed](#)]
144. Tschakert, P. From Impacts to Embodied Experiences: Tracing Political Ecology in Climate Change Research. *Geogr. Tidsskr. Dan. J. Geogr.* **2012**, *112*, 144–158. [[CrossRef](#)]
145. Marino, E.K.; Faas, A.J. Is Vulnerability an Outdated Concept? After Subjects and Spaces. *Ann. Anthropol. Pract.* **2020**, *44*, 33–46. [[CrossRef](#)]

146. Nader, L. Up the Anthropologist: Perspectives Gained from Studying Up. 1972. Available online: <https://files.eric.ed.gov/fulltext/ED065375.pdf> (accessed on 17 September 2021).
147. Beaumier, M.C.; Ford, J.D.; Tagalik, S. The Food Security of Inuit Women in Arviat, Nunavut: The Role of Socio-Economic Factors and Climate Change. *Polar Rec.* **2015**, *51*, 550–559. [[CrossRef](#)]
148. Ford, J.D. Vulnerability of Inuit Food Systems to Food Insecurity as a Consequence of Climate Change: A Case Study from Igloodik, Nunavut. *Reg. Environ. Chang.* **2009**, *9*, 83–100. [[CrossRef](#)]
149. Bennett, M.M. From State-Initiated to Indigenous-Driven Infrastructure: The Inuvialuit and Canada’s First Highway to the Arctic Ocean. *World Dev.* **2018**, *109*, 134–148. [[CrossRef](#)]
150. Durkalec, A.; Furgal, C.; Skinner, M.W.; Sheldon, T. Climate Change Influences on Environment as a Determinant of Indigenous Health: Relationships to Place, Sea Ice, and Health in an Inuit Community. *Soc. Sci. Med.* **2015**, *136–137*, 17–26. [[CrossRef](#)]
151. Battiste, M. Enabling the Autumn Seed: Toward a Decolonized Approach to Aboriginal Knowledge, Language, and Education. *Can. J. Nativ. Educ.* **1998**, *22*, 16–27.
152. Panikkar, B.; Lemmond, B. Being on Land and Sea in Troubled Times: Climate Change and Food Sovereignty in Nunavut. *Land* **2020**, *9*, 508. [[CrossRef](#)]
153. Healey, G. (Re)Settlement, Displacement, and Family Separation: Contributors to Health Inequality in Nunavut. *North. Rev.* **2016**, *42*, 47–68. [[CrossRef](#)]
154. Andrachuk, M.; Smit, B. Community-Based Vulnerability Assessment of Tuktoyaktuk, NWT, Canada to Environmental and Socio-Economic Changes. *Reg. Environ. Chang.* **2012**, *12*, 867–885. [[CrossRef](#)]
155. Anderson, D.; Ford, J.D.; Way, R.G. The Impacts of Climate and Social Changes on Cloudberry (Bakeapple) Picking: A Case Study from Southeastern Labrador. *Hum. Ecol.* **2018**, *46*, 849–863. [[CrossRef](#)] [[PubMed](#)]
156. Clark, D.G.; Ford, J.D.; Pearce, T.; Berrang-Ford, L. Vulnerability to Unintentional Injuries Associated with Land-Use Activities and Search and Rescue in Nunavut, Canada. *Soc. Sci. Med.* **2016**, *169*, 18–26. [[CrossRef](#)] [[PubMed](#)]
157. Ford, J.D.; Smit, B.; Wandel, J. Vulnerability to Climate Change in the Arctic: A Case Study from Arctic Bay, Canada. *Glob. Environ. Chang.* **2006**, *16*, 145–160. [[CrossRef](#)]
158. Fawcett, D.; Pearce, T.; Notaina, R.; Ford, J.D.; Collings, P. Inuit Adaptability to Changing Environmental Conditions over an 11-Year Period in Ulukhaktok, Northwest Territories. *Polar Rec.* **2018**, *54*, 119–132. [[CrossRef](#)]
159. Natcher, D.; Shirley, S.; Rodon, T.; Southcott, C. Constraints to Wildlife Harvesting among Aboriginal Communities in Alaska and Canada. *Food Secur.* **2016**, *8*, 1153–1167. [[CrossRef](#)]
160. Ford, J.D.; McDowell, G.; Shirley, J.; Pitre, M.; Siewierski, R.; Gough, W.; Duerden, F.; Pearce, T.; Adams, P.; Statham, S. The Dynamic Multiscale Nature of Climate Change Vulnerability: An Inuit Harvesting Example. *Ann. Assoc. Am. Geogr.* **2013**, *103*, 1193–1211. [[CrossRef](#)]
161. Wenzel, G.W. Canadian Inuit Subsistence and Ecological Instability—If the Climate Changes, Must the Inuit? *Polar Res.* **2009**, *28*, 89–99. [[CrossRef](#)]
162. Fidel, M.; Kliskey, A.; Alessa, L.; Sutton, O.; (Olia), P. Walrus Harvest Locations Reflect Adaptation: A Contribution from a Community-Based Observation Network in the Bering Sea. *Polar Geogr.* **2014**, *37*, 48–68. [[CrossRef](#)]
163. McNeeley, S.M.; Shulski, M.D. Anatomy of a Closing Window: Vulnerability to Changing Seasonality in Interior Alaska. *Glob. Environ. Chang.* **2011**, *21*, 464–473. [[CrossRef](#)]
164. Chisholm Hatfield, S.; Marino, E.; Whyte, K.P.; Dello, K.D.; Mote, P.W. Indian Time: Time, Seasonality, and Culture in Traditional Ecological Knowledge of Climate Change. *Ecol. Process.* **2018**, *7*, 25. [[CrossRef](#)]
165. Dawson, J.; Carter, N.; van Luijk, N.; Parker, C.; Weber, M.; Cook, A.; Grey, K.; Provencher, J. Infusing Inuit and Local Knowledge into the Low Impact Shipping Corridors: An Adaptation to Increased Shipping Activity and Climate Change in Arctic Canada. *Environ. Sci. Policy* **2020**, *105*, 19–36. [[CrossRef](#)]
166. Huntington, H.P.; Daniel, R.; Hartsig, A.; Harun, K.; Heiman, M.; Meehan, R.; Noongwook, G.; Pearson, L.; Prior-Parks, M.; Robards, M.; et al. Vessels, Risks, and Rules: Planning for Safe Shipping in Bering Strait. *Mar. Policy* **2015**, *51*, 119–127. [[CrossRef](#)]
167. Davies, H. Inuit Observations of Environmental Change and Effects of Change in Anaktalâk Bay, Labrador. Master’s Thesis, Queen’s University, Kingston, ON, Canada, 2007.
168. Loring, P.A.; Gerlach, S.C. Searching for Progress on Food Security in the North American North: A Research Synthesis and Meta-Analysis of the Peer-Reviewed Literature. *Arctic* **2015**, *68*, 380–392. [[CrossRef](#)]
169. Prno, J.; Bradshaw, B.; Wandel, J.; Pearce, T.; Smit, B.; Tozer, L. Community Vulnerability to Climate Change in the Context of Other Exposure-Sensitivities in Kugluktuk, Nunavut. *Polar Res.* **2011**, *30*, 7363. [[CrossRef](#)]
170. Lynch, A.H.; Curry, J.A.; Brunner, R.D.; Maslanik, J.A. Toward an Integrated Assessment of the Impacts of Extreme Wind Events on Barrow, Alaska. *Bull. Am. Meteorol. Soc.* **2004**, *85*, 209–222. [[CrossRef](#)]
171. Berkes, F.; Armitage, D. Co-Management Institutions, Knowledge, and Learning: Adapting to Change in the Arctic. *Études/Inuit/Studies* **2010**, *34*, 109–131. [[CrossRef](#)]
172. Archer, L.; Ford, J.D.; Pearce, T.; Kowal, S.; Gough, W.A.; Allurut, M. Longitudinal Assessment of Climate Vulnerability: A Case Study from the Canadian Arctic. *Sustain. Sci.* **2017**, *12*, 15–29. [[CrossRef](#)]
173. Desjardins, S.P.A.; Friesen, T.M.; Jordan, P.D. Looking Back While Moving Forward: How Past Responses to Climate Change Can Inform Future Adaptation and Mitigation Strategies in the Arctic. *Quat. Int.* **2020**, *549*, 239–248. [[CrossRef](#)]

174. Dinero, S.C. Indigenous Perspectives of Climate Change and Its Effects upon Subsistence Activities in the Arctic: The Case of the Nets'ait Gwich'in. *GeoJournal* **2013**, *78*, 117–137. [[CrossRef](#)]
175. Rodon, T.; Schott, S. Towards a Sustainable Future for Nunavik. *Polar Rec.* **2014**, *50*, 260–276. [[CrossRef](#)]
176. Collings, P.; Marten, M.G.; Pearce, T.; Young, A.G. Country Food Sharing Networks, Household Structure, and Implications for Understanding Food Insecurity in Arctic Canada. *Ecol. Food Nutr.* **2016**, *55*, 30–49. [[CrossRef](#)] [[PubMed](#)]
177. Dowsley, M. Identity and the Evolving Relationship between Inuit Women and the Land in the Eastern Canadian Arctic. *Polar Rec.* **2015**, *51*, 536–549. [[CrossRef](#)]
178. Légaré, A. Inuit Identity and Regionalization in the Canadian Central and Eastern Arctic: A Survey of Writings about Nunavut. *Polar Geogr.* **2008**, *31*, 99–118. [[CrossRef](#)]
179. Galappaththi, E.K.; Ford, J.D.; Bennett, E.M.; Berkes, F. Climate Change and Community Fisheries in the Arctic: A Case Study from Pangnirtung, Canada. *J. Environ. Manag.* **2019**, *250*, 109534. [[CrossRef](#)]
180. Brinkman, T.J.; Hansen, W.D.; Chapin, F.S.; Kofinas, G.; BurnSilver, S.; Rupp, T.S. Arctic Communities Perceive Climate Impacts on Access as a Critical Challenge to Availability of Subsistence Resources. *Clim. Chang.* **2016**, *139*, 413–427. [[CrossRef](#)]
181. Boulanger-Lapointe, N.; Gerin-Lajoie, J.; Collier, L.S.; Desrosiers, S.; Spiech, C.; Henry, G.H.R.; Hermanutz, L.; Levesque, E.; Cuerrier, A. Berry Plants and Berry Picking in Inuit Nunangat: Traditions in a Changing Socio-Ecological Landscape. *Hum. Ecol.* **2019**, *47*, 81–93. [[CrossRef](#)]
182. Chiu, A.; Goddard, E.; Parlee, B. Caribou Consumption in Northern Canadian Communities. *J. Toxicol. Environ. Health Part A Curr. Issues* **2016**, *79*, 762–797. [[CrossRef](#)]
183. Laidler, G.J.; Ford, J.D.; Gough, W.A.; Ikummaq, T.; Gagnon, A.S.; Kowal, S.; Qrunnut, K.; Irgaut, C. Travelling and Hunting in a Changing Arctic: Assessing Inuit Vulnerability to Sea Ice Change in Igloodik, Nunavut. *Clim. Chang.* **2009**, *94*, 363–397. [[CrossRef](#)]
184. Johansson, K.; Manseau, M. Inuit Safety Culture and Its Relevance to Safety Management in Auyuittuq National Park. *Soc. Nat. Resour.* **2012**, *25*, 176–190. [[CrossRef](#)]
185. Durkalec, A. Investigating Land-Based Injury and Trauma in the Canadian North. In *Understanding the Role of Environment for Indigenous Health: A Case Study of Sea Ice as a Place of Health and Risk in the Inuit Community of Nain, Nunatsiavut*; Trent University: Nunatsiavut, ON, Canada, 2012.
186. Eisner, W.R.; Hinkel, K.M.; Cuomo, C.J.; Beck, R.A. Environmental, Cultural, and Social Change in Arctic Alaska as Observed by Iñupiat Elders over Their Lifetimes: A GIS Synthesis. *Polar Geogr.* **2013**, *36*, 221–231. [[CrossRef](#)]
187. George, J.C.; Huntington, H.P.; Brewster, K.; Eicken, H.; Norton, D.W.; Glenn, R. Observations on Shorefast Ice Dynamics in Arctic Alaska and the Responses of the Iñupiat Hunting Community. *Arctic* **2004**, *57*, 363–374. [[CrossRef](#)]
188. Aporta, C. The Sea, the Land, the Coast, and the Winds: Understanding Inuit Sea Ice Use in Context. In *SIKU: Knowing Our Ice: Documenting Inuit Sea Ice Knowledge and Use*; Springer: Dordrecht, The Netherlands, 2010; pp. 163–180.
189. Blair, B.; Lovecraft, A.L. Risks without Borders: A Cultural Consensus Model of Risks to Sustainability in Rapidly Changing Social-Ecological Systems. *Sustainability* **2020**, *12*, 2446. [[CrossRef](#)]
190. Collings, P. Economic Strategies, Community, and Food Networks in Ulukhaktok, Northwest Territories, Canada. *Arctic* **2011**, *64*, 207–219. [[CrossRef](#)]
191. Pearce, T.; Smit, B.; Duerden, F.; Ford, J.D.; Goose, A.; Kataoyak, F. Inuit Vulnerability and Adaptive Capacity to Climate Change in Ulukhaktok, Northwest Territories, Canada. *Polar Rec.* **2010**, *46*, 157–177. [[CrossRef](#)]
192. Bowman, L. Sealing the Deal: Environmental and Indigenous Justice and Mining in Nunavut. *Rev. Eur. Community Int. Environ. Law* **2011**, *20*, 19–28. [[CrossRef](#)]
193. GLADDEN, J.N. Arctic Wilderness Policy in the United States and Finland. *Environ. Manag.* **2001**, *27*, 367–376. [[CrossRef](#)]
194. Ford, J.D.; Smit, B. A Framework for Assessing the Vulnerability of Communities in the Canadian Arctic to Risks Associated with Climate Change. *Arctic* **2004**, *57*, 389–400. [[CrossRef](#)]
195. Nanni, G. *The Colonisation of Time: Ritual, Routine and Resistance in the British Empire (Studies in Imperialism): 94*; Illustrated Edition; Manchester University Press: Manchester, UK; New York, NY, USA, 2013; ISBN 978-0-7190-9129-2.
196. Christie, L.; Halpern, J.M. Temporal Constructs and Inuit Mental Health. *Soc. Sci. Med.* **1990**, *30*, 739–749. [[CrossRef](#)]
197. Gingrich, A.; Ochs, E.; Swedlund, A. Repertoires of Timekeeping in Anthropology. *Curr. Anthropol.* **2002**, *43*, S3–S4. [[CrossRef](#)]
198. Hodges, M. Rethinking Time's Arrow: Bergson, Deleuze and the Anthropology of Time. *Anthropol. Theory* **2008**, *8*, 399–429. [[CrossRef](#)]
199. Maldonado, J.K.; Shearer, C.; Bronen, R.; Peterson, K.; Lazrus, H. The Impact of Climate Change on Tribal Communities in the US: Displacement, Relocation, and Human Rights. *Clim. Chang.* **2013**, *120*, 601–614. [[CrossRef](#)]
200. Liao, C.; Ruelle, M.L.; Kassam, K.-A.S. Indigenous Ecological Knowledge as the Basis for Adaptive Environmental Management: Evidence from Pastoralist Communities in the Horn of Africa. *J. Environ. Manag.* **2016**, *182*, 70–79. [[CrossRef](#)] [[PubMed](#)]
201. Abele, F.; Southcott, C. *Care, Cooperation and Activism in Canada's Northern Social Economy*; University of Alberta: Edmonton, AB, Canada, 2016; ISBN 978-1-77212-087-5.
202. Jodoin, S.; Snow, S.; Corobow, A. Realizing the Right to Be Cold? Framing Processes and Outcomes Associated with the Inuit Petition on Human Rights and Global Warming. *Law Soc. Rev.* **2020**, *54*, 168–200. [[CrossRef](#)]
203. Redvers, J. "The Land Is a Healer": Perspectives on Land-Based Healing from Indigenous Practitioners in Northern Canada. *Int. J. Indig. Health* **2020**, *15*, 90–107. [[CrossRef](#)]

204. Akearok, G.H.; Holzman, S.; Kunnuk, J.; Kuppaq, N.; Martos, Z.; Healey, C.; Makkik, R.; Mearns, C.; Mike-Qaunaq, A.; Tabish, T. Identifying and Achieving Consensus on Health-Related Indicators of Climate Change in Nunavut. *Arctic* **2019**, *72*, 289–299. [[CrossRef](#)]
205. Fernández-Llamazares, Á.; Cabeza, M. Rediscovering the Potential of Indigenous Storytelling for Conservation Practice. *Conserv. Lett.* **2018**, *11*, e12398. [[CrossRef](#)]
206. Gilbert, J.; Lennox, C. Towards New Development Paradigms: The United Nations Declaration on the Rights of Indigenous Peoples as a Tool to Support Self-Determined Development. *Int. J. Hum. Rights* **2019**, *23*, 104–124. [[CrossRef](#)]
207. Hohmann, J. Introduction. *Int. J. Hum. Rights* **2019**, *23*, 1–6. [[CrossRef](#)]
208. Shea, M.M.; Thornton, T.F. Tracing Country Commitment to Indigenous Peoples in the UN Framework Convention on Climate Change. *Glob. Environ. Chang.* **2019**, *58*, 101973. [[CrossRef](#)]
209. United Nations. *State of the World's Indigenous Peoples*; United Nations: New York, NY, USA, 2021.
210. Lindroth, M.; Sinevaara-Niskanen, H. *Global Politics and Its Violent Care for Indigeneity: Sequels to Colonialism*; Springer: Berlin/Heidelberg, Germany, 2017; ISBN 978-3-319-60982-9.
211. Fournier, B.; Kushner, K.E.; Raine, K. “To Me, Policy Is Government”: Creating a Locally Driven Healthy Food Environment in the Canadian Arctic. *Health Place* **2019**, *58*, 102138. [[CrossRef](#)] [[PubMed](#)]
212. Labbé, J.; Ford, J.D.; Araos, M.; Flynn, M. The Government-Led Climate Change Adaptation Landscape in Nunavut, Canada. *Environ. Rev.* **2017**, *25*, 12–25. [[CrossRef](#)]
213. Mikulewicz, M. Thwarting Adaptation's Potential? A Critique of Resilience and Climate-Resilient Development. *Geoforum* **2019**, *104*, 267–282. [[CrossRef](#)]
214. Mikulewicz, M.; Taylor, M. Getting the Resilience Right: Climate Change and Development Policy in the ‘African Age’. *New Political Econ.* **2020**, *25*, 626–641. [[CrossRef](#)]
215. Béné, C.; Headey, D.; Haddad, L.; von Grebmer, K. Is Resilience a Useful Concept in the Context of Food Security and Nutrition Programmes? Some Conceptual and Practical Considerations. *Food Sec.* **2016**, *8*, 123–138. [[CrossRef](#)]
216. Béné, C.; Newsham, A.; Davies, M.; Ulrichs, M.; Godfrey-Wood, R. Review Article: Resilience, Poverty and Development. *J. Int. Dev.* **2014**, *26*, 598–623. [[CrossRef](#)]
217. Whyte, K.P. Indigenous Science (Fiction) for the Anthropocene: Ancestral Dystopias and Fantasies of Climate Change Crises. *Environ. Plan. E Nat. Space* **2018**, *1*, 224–242. [[CrossRef](#)]
218. Bullard, R.D. Anatomy of Environmental Racism and the Environmental Justice Movement. In *Confronting Environmental Racism: Voices from the Grassroots*; South End Press: Boston, MA, USA, 1993; pp. 15–39.
219. Gilio-Whitaker, D. *As Long as Grass Grows: The Indigenous Fight for Environmental Justice, from Colonization to Standing Rock*; Reprint Edition; Beacon Press: Boston, MA, USA, 2020; ISBN 978-0-8070-2836-0.
220. Ford, J.D.; Willox, A.C.; Chatwood, S.; Furgal, C.; Harper, S.; Mauro, I.; Pearce, T. Adapting to the Effects of Climate Change on Inuit Health. *Am. J. Public Health* **2014**, *104*, e9–e17. [[CrossRef](#)]
221. Nyantakyi-Frimpong, H.; Bezner-Kerr, R. The Relative Importance of Climate Change in the Context of Multiple Stressors in Semi-Arid Ghana. *Glob. Environ. Chang.* **2015**, *32*, 40–56. [[CrossRef](#)]
222. Marino, E.; Schweitzer, P. Speaking Again of Climate Change: An Analysis of Climate Change Discourses in Northwestern Alaska. In *Anthropology and Climate Change: From Actions to Transformations*; Routledge: New York, NY, USA, 2016.
223. Griffin, P.J. Pacing Climate Precarity: Food, Care and Sovereignty in Iñupiaq Alaska. *Med. Anthropol.* **2020**, *39*, 333–347. [[CrossRef](#)] [[PubMed](#)]
224. Fraser, A.; Paterson, S.; Pelling, M. Developing Frameworks to Understand Disaster Causation: From Forensic Disaster Investigation to Risk Root Cause Analysis. *J. Extr. Even.* **2016**, *3*, 1650008. [[CrossRef](#)]