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Contested framings of climate change and health in the Arctic: A narrative analysis of health in Canadian government climate change policy affecting Inuit Nunangat

Katy Davis ^{a,b,*}, Claire H. Quinn ^c, James D. Ford ^a, Melanie Flynn ^a, Anuszka Mosurska ^{a,c}, Sherilee L. Harper ^d

- ^a Priestley International Centre for Climate, University of Leeds, Woodhouse, Leeds LS2 9JT, United Kingdom
- ^b Department of International Public Health, Liverpool School of Tropical Medicine, Liverpool, L35QA, UK
- c Sustainability Research Institute, School of Earth and Environment, University of Leeds, Woodhouse, Leeds LS2 9JT, United Kingdom
- ^d School of Public Health, University of Alberta, Edmonton, AB T6G 1C9, Canada

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ABSTRACT

Narratives are used to make sense of the world, to understand complex challenges and to imagine change. Inequity and unequal power structures are understood to be the root causes of disasters, but dominant narratives frame climate change as an 'externalised' threat and propose technocratic approaches to defending the status quo. This distracts from solutions that address the root causes of disaster. In Inuit Nunangat, social determinants of health include ongoing colonialism and policy, shaping Inuit experiences of climate change. This paper reports the results of a narrative analysis of Canadian governmental climate and health policy documents relevant to Inuit Nunangat between 2015 and 2021. Narratives are deconstructed and common narratives are identified, drawing from Burke's Dramatistic Pentad. The dominant narrative identified focuses on knowledge, technological innovation and resilience, externalising the threat of climate change and proposing solutions that leverage knowledge and innovation. A second narrative highlights collective responsibility and partnership, identifying inequity as a driver of harm but not engaging with power relations when detailing solutions. A third narrative, present in fewer documents, centres sovereignty and relationships, identifies inequities and colonial policy as drivers of harm in the context of climate change, and proposes solutions that address root causes and further Indigenous sovereignty. How we tell the 'story' of climate change determines how we act and adapt. If dominant policy narratives distract from addressing the root causes of harm, inequities and violence will be perpetuated through inappropriate actions and missed opportunities. Narratives identified in this analysis offer other ways of telling this story.

1. Introduction

Disasters are the outcome of social, political, and economic conditions and processes (Hewitt, 1983; O'Brien et al., 2007; Oliver-Smith, 2019a; Oliver-Smith, 2019b), and research increasingly points to the relevance of this understanding of disasters for action to protect human, and more-than-human, health in the context of climate change (Kelman et al., 2016, 2017; Mercer, 2010; Todd, 2017). As Zoe Todd (2017, p107) points out, it is not a hazard that is violent, but the "machinations of human political-ideological entanglements". The structural nature of

disasters and climate change (meaning the ways that they are associated with the political, social and economic structures of society) are highlighted in frameworks including the 'root causes of disaster' (Oliver-Smith et al., 2016) and the 'social determinants of health' (Marmot et al., 2008). Indigenous scholarship has further emphasised the need to centre the relational in understanding the root causes of disaster (Howitt, 2020; Todd, 2017). These understandings not only provide conceptual guidance for research into these processes, but they also provide narratives that highlight how inequity, oppression and colonialism shape the health and ill-health of people, whether in the context of crises or not.

^{*} Corresponding author at: Department of International Public Health, Liverpool School of Tropical Medicine, Liverpool, L35QA, UK

E-mail addresses: katy.davis@lstmed.ac.uk (K. Davis), C.H.Quinn@leeds.ac.uk (C.H. Quinn), J.Ford2@leeds.ac.uk (J.D. Ford), gy08mjf@leeds.ac.uk (M. Flynn),

ss18arm@leeds.ac.uk (A. Mosurska), sherilee@ualberta.ca (S.L. Harper).

They illustrate how disasters reveal failures in governance, and in particular, colonial governance (Howitt, 2020).

Narratives are accounts of series of actions and events that unfold over time (Bruner, 2004; Mroz et al., 2021). They are "world-making" (Bruner, 2004), and a tool through which social actors "interpret, navigate, and (re)constitute the social world" (Edgell et al., 2016; Foucault, 1972). They are "multimdimensional purposive commication" (Herman et al., 2012). They can powerfully draw together diverse events, processes and experiences of human life into unified, goaldirected processes (Polkinghorne, 1995) and are thus particularly important for shaping our understanding of the ongoing challenges facing humanity, including disasters and climate change (Mroz et al., 2021). Feminist approaches to narrative have highlighted that "patriarchal arrangements still govern Western culture and institutions" (Herman et al., 2012). Therefore, examining narratives is one way to interpret the social world and these power processes (Vincent 2000) and to make visible "that which has already shaped our consciousness" (Wong and Breheny, 2018, p246).

Policy-making is a particularly powerful discursive space responsible for creating shared meaning around these challenges through the framing of problems that need responding to and relevant solutions (Feindt & Oels, 2005; Hajer & Versteeg, 2005; Iannantuono & Eyles, 1999). Policy-making is thus a fundamentally narrative process (Fischer & Forester, 1993; Mroz et al., 2021). However, policymaking is also a space characterised by significant power imbalances and exclusions (Lindroth and Sinevaara-Niskanen, 2017). Therefore, critically analysing narratives within policy documents can illuminate how these power imbalances might be playing out in the discourses that emerge from the process, or "the ways in which the elements of any narrative... are shaped in the service of larger ends" (Barkin and Gurevitch, 1987, n3)

The narrative(s) contained within any one policy document do not necessarily equate directly to, or dictate, the specific actions and outcomes of the policy, as the document is only the visible part of a policy-making process that is complex, negotiated, changing and often occurring behind closed doors (Naess et al., 2011). However, the policy document is the aspect of policy-making that is most visible to most people, and the narratives contained within it will collectively have a powerful role in shaping collective understanding of the issue and its solutions (Roe, 1994). Therefore, even if policy actions differ in reality from policy documents, the narrative(s) within policy documents can have deep influence over wider policy action and the ways that this action is received.

Climate change policy is a highly politicised and contested discursive space (Pelling 2011), but global discussions often draw heavily on dominant and often unquestioned narratives of adaptation (Mikulewicz, 2020), which Taylor (2014) argues have become a "common-sense default assumption that is now firmly engrained" (p14). Interrogating political discourses and narratives of climate change can, therefore, "help uncover the specific, often invisible representational mechanisms through which adaptation to climate change is molded to fit the business-as-usual, neoliberal articulations of local development" (Mikulewicz 2020, p5).

Despite a need to centre the root causes and social determinants of harm in responses to climate change (Pörtner et al., 2022, Meredith et al., 2019) many of these dominant narratives of disaster, climate change, and health in policy, media, academia and elsewhere, frame climate change as an 'externalised' threat to human health and propose technocratic approaches to defending the status quo (Cheek & Chmutina, 2021; Harcourt et al., 2020; Mikulewicz, 2019). This risks depoliticising the problem and missing opportunities to propose solutions that address the root causes of disaster and ill-health in the context of climate change, thus perpetuating inequities and structural violence through pursued actions and missed opportunities (Lahsen & Ribot, 2021; Nixon, 2011). They risk disconnecting narratives from the scales

of human experience (Howitt, 2020) and erasing Indigenous Peoples' understandings of the deep connections between colonial violence and climate change (Whyte, 2018), while simultaneously proposing 'unprecedented' solutions such as 'climate-induced resettlement' (Whyte et al., 2019).

In Arctic North America, rapid climatic change has been met with a surge in policy approaches to identify and address the impacts that climate change will have on human health, and particularly the health of Indigenous Peoples (Austin et al., 2019). This is taking place within a context of increased understanding of the role of the environment as a determinant of health (Iannantuono & Eyles, 1999). At the same time, Canada is reckoning with ongoing colonial legacies and reconciliation is also being increasingly incorporated into policy agendas (Qikiqtani Truth Commission, 2010; Truth and Reconciliation Commission of Canada, 2015). The two issues are deeply interlinked, with anthropogenic climate change being labelled as another manifestation of colonialism (Whyte, 2020), and colonialism identified as a key ongoing determinant of Indigenous health and root cause of disaster (Faas et al., 2020; Inuit Tapiriit Kanatami, 2014). Therefore, failing to tackle colonialism in policy that seeks to address the links between climate change and health directly conflicts with goals of Indigenous self-determination (ITK, 2019). Nevertheless, across countries, dominant narratives surrounding climate change and health are regularly failing to do so. Given current goals of reconciliation in Canada, it is particularly important that Canadian policy narratives reflect these connections. To our knowledge, however, few have attempted to deconstruct government policy narratives in Canada that pertain to climate change and health.

In this paper, we identify and characterise policy narratives of climate change and health in governmental policy in Canada. We focus specifically on policy (federal, provincial, and territorial) that pertains to the health of Inuit in Inuit Nunangat (the Inuit homeland in Canada) alongside issues of climate change and ask how these narratives engage with the social determinants of health and the root causes of disaster for Inuit. We begin with a background to this context, before describing the narrative policy analysis research approach.

1.1. Background: Indigenous social determinants of health and the root causes of disaster

The 'social determinants of health' framework highlights how health inequities and uneven distribution of harms to health are broadly caused by the "unequal distribution of power, income, goods, and services, globally and nationally" (Marmot et al., 2008, p1). Societal structures cause different people and populations to have different health outcomes based on intersecting identities and oppressions, including gender, age, disability, race and others (Hankivsky & Christoffersen, 2008; López & Gadsden, 2017; McGibbon & McPherson, 2011). Such health outcomes can be tangible harms such as physical injury, death, ill-health, and mental ill-health. However, they can also include intangible forms of loss and harm, such as personal and collective sense of identity and culture (Johnson et al., 2021; Lavallee & Poole, 2010; Tschakert et al., 2019). Marmot et al (2008) point to the role of policies, programmes and politics in creating these conditions.

Importantly, frameworks of the 'Indigenous Social Determinants of Health' highlight the profound role of oppressive colonial structures (including contemporary ideological and political structures) in creating these conditions (Reading, 2015). Colonialism, as a form of historic and ongoing territorial domination, is characterised by dispossession and cultural erasure and produces health disparities and inequities over significant periods of time (Thomas et al., 2025). Indigenous Social Determinants of Health identified by Indigenous Peoples and organisations, include not only root causes such as income, education, health services, gender, age, and disability, but also colonization and associated historical and ongoing trauma (Bambra et al., 2010; Chatwood et al., 2012; Driscoll et al., 2013; Inuit Tapiriit Kanatami, 2014). Most

importantly, Indigenous Social Determinants of Health centre selfdetermination, Indigenous Knowledges and languages, spirituality, and connection to land (Cueva et al., 2021a; Greenwood & de Leeuw, 2012; Healey, 2018; Redvers, 2020; Tagalik et al., 2018). Individual, family, social, cultural, historical, linguistic, and environmental contexts are all factors that support communities in the Circumpolar North to thrive (Cueva et al., 2021b). Inuit health requires that "Inuit are empowered to be at the forefront of studying their homeland, and to be decision makers in the solutions put forward" (Pfeifer 2020, p266). There is also a push to reframe Arctic health determinants, moving away from deficit framings of Inuit health (Aldred et al., 2021; Walter & Andersen, 2013) and moving towards understanding and supporting what makes communities thrive (Healey Akearok et al., 2019). Meaningful policy action to address these social determinants of health will need to acknowledge and integrate Indigenous Rights and knowledges, using strength-based framings to support community-led critical research approaches, monitoring and assessment (Cueva et al., 2021a).

Disaster scholars have studied the determinants of health and wellbeing through different frameworks, investigating the ways that these same processes that cause harm to health manifest as disasters, historically focusing on rapid-onset crises, but increasingly expanding definitions of disaster to include creeping processes of loss and harm to health (Oliver-Smith, 2019a). In disaster research, the 'social determinants' that create these disasters are referred to as the 'root causes' of disaster (Bankoff, 2019; Hewitt, 1983; Kelman et al., 2016; Oliver-Smith et al., 2017). Feminist contributions to disaster research have further pushed for disasters to be conceptualised as the determinants and inequities that exist in societies in advance of the 'events' that trigger emergencies and crises - in other words, the disaster is the inequity in society, and is thus linked to social justice and development (Ahmad, 2018). In this way, the social determinants of health and the root causes of disaster are deeply linked in a number of intersecting ways. It is clear that the societal processes of inequity and oppression that determine health outcomes in and between populations in an ongoing way are the same processes that shape risk of disaster and determine harm in the context of disaster. Additionally, the harm and inequitable burden of ill-health that is caused by the social determinants of health, can themselves be considered a disaster that unfolds in an ongoing or creeping way (Ahmad, 2018). Finally, it is also important to remember that both the social determinants of health and the root causes of disaster represent processes that are forms of structural violence and thus both are social justice issues (Ahmad, 2018; Marmot et al., 2008; Nader, 1972).

Both the social determinants of health and the root causes of disaster have been discussed in the context of climate change adaptation, as being key to deconstructing how and why different people and populations will have different experiences of climate change and will be subject to differing harms (Clark et al., 2021; Kelman, 2017). Action to protect human health in the context of climate change must, therefore, address root causes and social determinants, and adaptation approaches that seek to protect the status quo from the 'external' threat of climate change will miss the point that the greatest source of risk (and that which we have most control over) lies within the structures of our societies (Lahsen & Ribot, 2021). Here, given the cross-over between the two, we use "root causes" to refer to both the "social determinants of health" and the "root causes of disaster", unless we are referring specifically to one framework. We argue that it is useful to bear both the social determinants of health and the root causes of disaster in mind when considering adaptation to climate change, as this can bring together communities of scholars and policymakers from different disciplines. While the two concepts are sometimes discussed alongside each other (Faas et al., 2020) we are not aware of a significant body of literature that brings them into conversation. This also means that we take an expansive approach to conceptualising "health", with a particular emphasis on the root causes of wellbeing or ill-health as opposed to specific illness or disease.

1.2. Inuit Nunangat

In Inuit Nunangat (the Inuit 'homeland' in Canada) there is a diverse policy landscape dealing with the human health dimensions of climate change (Vogel & Bullock, 2021). Across Canada, discussions are ongoing over which institutions, nationally and regionally have accountability for tackling the health dimensions of climate change (Austin et al., 2015; Clark et al., 2021; Raikes et al., 2022). The Arctic is experiencing rapid climate and environmental change and there is rapidly accelerating research on the human dimensions of climate change (AMAP, 2017, 2018). However, it is increasingly apparent that the social determinants of health include ongoing colonialism and contemporary policy (Cueva et al., 2021a; Greenwood & de Leeuw, 2012; Healey, 2018; Redvers, 2020; Tagalik et al., 2018). The root causes that need to be tackled in adapting to climate change have historically been neglected in governmental policy in Canada (Clark et al., 2021; Ford et al., 2014). Critically analysing the discourses around root causes present in the diversity of Arctic Canada's policy landscape can shed light on the degree to which policy is currently attending to these root causes in proposed solutions and adaptation options.

2. Research approach

2.1. Narrative policy analysis

Narratives are accounts of series of actions and events that unfold over time (Bruner, 2004; Mroz et al., 2021). Narratives are therefore a specific type of discourse, and while discourses can be broadly defined as a way of construing aspects of the world, narratives do so through telling stories (Burke, 1945; Foucault, 1972; Gee & Handford, 2012). They are "world-making" (Bruner, 2004), in that they are a tool through which social actors "interpret, navigate, and (re)constitute the social world" (Edgell et al., 2016). Discourses of all types are powerful, agenda-setting phenomena (Cheek & Chmutina, 2021; Marino & Schweitzer, 2016; Hajer & Versteeg, 2005), but the power of a narrative is in its ability to draw together diverse events, processes and experiences of human life into unified, goal-directed processes (Polkinghorne, 1995). Narratives can be divided up into various components. For example, Burke's Dramatistic Pentad frames narrative as "concerned above all else with purposeful action towards a goal" and proposes five key narrative elements that include the act (what is done), the scene (the context in which it is done), the agent (who does it), the agency (how it is done) and the purpose or motive (why it is done) (Burke, 1945, 1955).

There is increasing recognition of the value of critically interrogating discourses and narratives and the power relations between them.

There is understanding that narratives can be used strategically to engender action on climate change (Bushell et al., 2015, 2017). Many common narratives have thus far focused on leveraging action on mitigation, attempting to frame the problem in such a way that it drives this action (Bevan et al., 2020; Bushell et al., 2017). Some have focused on reframing the narrative around adaptation from one proposing reactive, incremental adjustments to narratives that focus on addressing root causes from 'transformative' (Ajulo et al., 2020; Gillard et al., 2016), 'justice' (Mattar et al., 2020) and 'intersectional' (Amorim-Maia et al., 2022) framings. In Arctic North America, however, dominant narratives in research, policy and media continue to frame the region as being on the 'front-line' of climate change, being at heightened risk, as a resource frontier (Bravo, 2009; Stoddart & Smith, 2016), some giving little attention to Indigenous concerns other than labelling them as 'vulnerable' or 'resilient' (Callison, 2017; Cameron, 2012; Hall & Sanders, 2015). In contrast, Inuit narratives of climate change are deeply intertwined with community, culture, land rights, food sovereignty and histories of colonialism, and call for Inuit leadership at the heart of any action (Caughey et al., 2022; Harper et al., 2012; ITK, 2019, Meredith et al., 2019).

We use narrative analysis to deconstruct the narratives present in

governmental policy in Canada surrounding climate change and health. There is a diversity of approaches to narrative analysis, and these have been used in a variety of contexts (Polkinghorne, 1995; Thornborrow, 2012). We are interested in "analysis of narratives", or "paradigmatic analysis", which involves the collection of narratives, their deconstruction into common elements, and creation of taxonomies or categories (Polkinghorne, 1995). Deconstruction of narratives in climate change discourse can encourage consideration of the 'framing' process involved in policy (Iannantuono & Eyles, 1999; Roe, 1994), situating it within the social and cultural context in which it comes to have meaning (Yanow, 1993). Narrative analysis seeks to make visible the values and underlying assumptions involved in the production of policy, and thus the power over the authorship of the narrative (Culler, 2014). The 'metanarrative', or overall story that a policy document tells, can reveal the powers that shape and determine the process of narrative creation in policy (Iannantuono & Eyles, 1999). We apply Burke's Dramatistic Pentad to analyse narratives of climate change and health within Canadian government policy documents, to identify dominant narratives and themes. Few analyses of policy narratives have drawn explicitly from literary theory in this way (Mroz et al., 2021).

3. Research questions

In this paper we ask: what narratives about climate change and health in Inuit Nunangat are being told in governmental policy in Canada? Specifically, we analyse the narrative discourses surrounding the relationship between climate change and health, challenges or problems that are identified, and the ways forward that are present in this body of policy. To do so, we review policy documents, defined as "a set of ideas or a plan of what to do in particular situations" such as plans, reports or strategy documents (Cambridge University Press, N.d.), produced by the Canadian federal and governments, or Inuit regions, and which address or discuss human health and climate change side by side. We follow Polkinghorne's (1995) paradigmatic analysis of narrative data, to identify narrative elements (the framing of each of the scene, act, actor for example), narratives (the common ways in which these narrative elements appear together within policy documents), and overarching narratives (common metanarratives across policy documents) surrounding the framing of problems and solutions (Burke, 1945, 1955) (Fig. 1). We then reflect on the ways in which these narratives engage with framings of the social determinants of health and the root causes of disaster. As we are interested in policy narratives as processes that influence wider framings of climate change and health, we focus solely on the narratives within the policy documents and do not analyse or reflect on the ways in which these policies are enacted (or not).

3.1. Search strategy

We carried out a manual search of the websites of the federal government and agencies, and territorial and provincial governments encompassed linked to Inuit Nunangat (Newfoundland and Labrador, Northwest Territories, Nunavut, Quebec and Yukon), for policy documents of interest (Table S1). In particular, we searched webpages of environmental and health departments, agencies and ministries within

these institutions.

This was followed by web searches in Google using a specific search string (Table 1) in order to locate all relevant policy documents that are publicly available. For this reason, we did not search databases that are not publicly accessible. We followed an approach outline by Furgal et al., (2010) and Panic & Ford, (2013) for managing large numbers of results returned in web searches. This involved reviewing the first 30 hits of any search, and then reviewing every other search result until 20 consecutive results are found to be irrelevant. Results were screened using the inclusion criteria in Table 2 and all relevant documents identified were downloaded for review.

3.2. Analysis

We analysed narratives within the included policy documents using the framework in Table 3, which was developed iteratively and based upon the most common and representative narrative elements that emerged in the policy documents analysed. Drawing from Burke's 'dramatistic pentad', narratives within each document were broken down into the following narrative elements: 'scene', 'act' and 'agent'. The 'scene' narrative element, which encompassed the framing of the problem or challenge, was broken down further into the framing of the relationship between climate change and human health, and the framing of who or what is particularly vulnerable or at risk. The latter is important as it has been shown that the way that vulnerability is framed and understood can give rise to very different approaches towards adaptation (O'Brien et al., 2007). This framework emerged iteratively based upon the key narrative elements within the policy documents. Each document was coded qualitatively for the narrative elements in the coding frame, and then common sub-themes within each narrative element were identified. Finally, summary 'overarching narratives' were reconstructed to illustrate the ways that these different narrative elements were commonly woven together to create narratives within the policy documents. Any one policy documents may not contain one single, coherent narrative. That is, the different narrative elements within the document may not necessarily build directly upon each other and, in some cases, they may seem to be in conflict. For example, a document may frame the 'scene' with a description of how inequality dictates experience of climate change but propose an 'act' that focuses on the use of technology rather than addressing inequality. The purpose of this analysis is to deconstruct these narrative elements contained within each and all of the policy documents and then to reconstruct these into overarching coherent narratives. This then enables us to establish which of these are the most dominant narratives, both in terms of frequency of occurrence in the policy documents, as well as the power balance between the narratives within the policy documents, such as where one narrative silences another. It is important to note that the overarching narratives that are identified through this analysis are not necessarily arising in their complete form (that is, including all narrative elements) within any of the documents.

4. Results

Our search identified 40 policy documents. This included 29 from

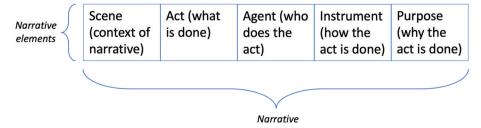


Fig. 1. Illustration of narrative structure based upon Burke's 'Dramatistic Pentad'.

Table 1 Google search strategy.

("climate change" OR "global warming" OR "climatic change") AND health AND (Canada OR Canadian OR "gc.ca" OR Nunavut OR "Northwest Territories" OR "Inuvialuit Settlement Region" OR ISR OR Nunavik OR Nunatsiavut OR Labrador OR Yukon OR Inuit)

Table 2
Inclusion Criteria.

Inclusion Criteria English or French language Documents or websites produced by federal or regional governmental agencies, government-established research organizations or networks or consultants hired by the government (Austin et al., 2015) and officially agreed upon by the Canadian Federal, Provincial or Territorial Government Policy, defined as "a set of ideas or a plan of what to do in particular situations," (Cambridge University Press, N.d.) including plans, reports or strategy documents Documents that are likely to directly discuss the intersection of health (broadly conceptualised) and climate change With relevance to Inuit (not Arctic Canada) (including Northwest Territories, Yukon, Nunavut, Quebec (or Nunavik), Newfoundland and Labrador (or Nunatsiavut) Documents produced since 2015 Non-English or French language Documents by non-governmental organizations, unaffiliated institutions, private companies or professional associations (Austin et al., 2015) Peer-reviewed academic research, media reports, editorials, meeting or conference reports, presentations, abstracts, cost-benefit analyses Documents that do not discuss the intersection of health and climate change Focuses on non-Arctic region of Canada Focuses on non-Arctic region of Canada Documents produced prior to 2015			
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Documents produced since 2015 Documents produced prior to 2015			Doguments produced prior to 2015
	_	Documents produced since 2015	Documents produced prior to 2015

Table 3Initial coding frame.

Scene		Act		Agent	
Climate Change	Vulnerability / Risk	Goal	Strategy	Responsibility for action	
How is climate changed framed in the context of human health?	What discourses around who is at risk, and why, are present?	What goals are outlined in the document?	What solutions or strategies are proposed?	Who is mentioned in relation to actions and responsibilities for acting?	

federal government and its agencies and 11 from territorial and provincial governments. This also included 22 plans and strategies and 18 reports (Table S2). Below, we present qualitative summaries of three key overarching narratives that emerge from the policy documents. These have different levels of dominance in policy and wider discourse.

4.1. Overarching narratives

Fig. 2 summarises the overarching narratives, which are key narratives that emerge from the documents. These are based on analysis that identified common narrative elements and how they commonly are woven together in policy documents to create coherent narratives, which is illustrated for each included document in Fig. 3. Below, we provide qualitative descriptions of each overarching narrative, followed by a discussion of how these overarching narratives exist alongside one another in the policy documents. Narratives are powerful in and of themselves, and where we refer to a 'dominant' narrative it is primarily referencing the frequency with which it arises in and across the policy documents. However, we will also consider the dominance of the

narratives over one another.

4.1.1. Overarching narrative one: knowledge, technological innovation and resilience

Narrative one is the most frequent narrative to emerge from the policy documents. It is present across federal, provincial and territorial policy documents, and in all but one of the 40 documents. It is present in all four narrative elements in 41 percent of federal documents and 27 percent of provincial or territorial documents (Fig. 3). It tends to dominate (in that it is not accompanied by any other narratives) in the 'scene' narrative element concerned with the relationship between climate change and health. This narrative positions climate change as a significant, and often direct, driver of harm to human health and to communities' wellbeing. Little detail is given on *how* climate change is directly impacting health, but it is taken as a given that it does and will continue to do so. Links between climate change and health include impacts of extreme weather events and secondary impacts on social and economic systems, including worsening inequities. This narrative places primary responsibility on climate change for these impacts to health.

Narrative one describes vulnerability to climate change as a feature or characteristic of specific people or groups, primarily linked to social characteristics such as gender, age and pre-existing health conditions, or based on geographic location: "Certain populations in Canada, such as expectant mothers, children, the elderly, and Indigenous communities, are more vulnerable" (ECCC, 2021d, p. 19). The most common focus of this framing is on Indigenous Peoples: "Indigenous people and other residents of the NWT are particularly vulnerable to climate related changes since, for generations, they have depended on the land, water and wildlife for their livelihood and sustenance" (GNWT, 2019, p. 7). At times, this narrative also frames locations as vulnerable in and of themselves, for example referring to the 'climate-sensitive' North (ECCC, 2017b), and coastal regions. 'Characteristics' of the location are emphasised as affecting the health of people who live there, including disproportionate climate change and social factors. This narrative ultimately frames this vulnerability as a problem 'of' the specific location, rather than seeing these circumstances as embedded in broader national and historic processes.

Solutions proposed in this narrative build from this framing of risk and vulnerability and propose that what is required is greater knowledge about climate risks in combination with technological innovation. It focuses on 'knowledge production' and 'translation' as key to adaptation to the health impacts of climate change (ECCC, 2020b), and the development and application of "innovative adaptation technologies" (ECCC, 2021b) which includes suggestions such as home retrofits, clean transport, climate-smart agriculture, and nature-based solutions to minimise the direct impacts of climate change on health. Hand in hand with this innovation, reduction in emissions and improved air quality are proposed as a direct solution to health impacts of pollution and climate change. In these documents, there is an overall implication that more or better knowledge will lead to adaptation.

In particular, this narrative suggests that leveraging Indigenous Knowledge, or bridging or integrating knowledge types offers solutions for reducing impact to health: "As the climate continues to change, it is important to improve our understanding of how the natural environment is responding, using a combination of Indigenous, local and scientific knowledge and ways of knowing, doing and being" (Government of Yukon, 2020b, p. 50). This narrative suggests that these solutions will build resilience, frequently described as a desirable outcome, though often not accompanied by a clear definition. This framing can tend to imply individual responsibility, suggesting that the problem is 'within'

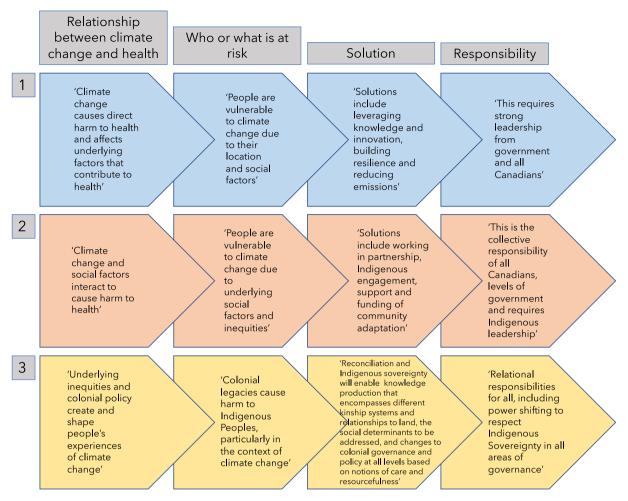


Fig. 2. Three overarching narratives identified in the policy documents.

the community in question as opposed to rooted in governmental policies, political economies, and processes of marginalisation.

When describing responsibility for this commitment, this narrative highlights the need for 'strong' leadership from the federal government and its agencies, with its role being framed as to 'protect and empower' (PHAC, 2017), but responsibility is generally framed as being spread across all levels of government: "The Government will also continue to encourage all levels of Government to step up and enhance their ambition on climate action" (ECCC, 2020a, p. 10) and a need for cooperation across multiple levels of government (NRC, 2021). This narrative, therefore, identifies a direct link between climate change hazards and health.

4.1.2. Overarching narrative two: inequity, collective responsibility and partnership

Narrative two is present in 36 of the 40 documents (90 percent), including 86 percent of federal policy documents and 100 percent of provincial or territorial documents. It is present in three or more narrative elements in 24 percent of federal documents and 27 percent of provincial or territorial documents. It is most frequently present in the 'act' (solutions) and the 'agent' (responsibility) narrative elements, though most often accompanied by narrative one in these narrative elements. Narrative two suggests that the interaction of climate change and social factors results in harm to health, so that climate change is in part responsible for the harm in "the interplay between climate change and important determinants of health, which can affect adaptive capacity and health equity to influence vulnerability to health impacts" (Berry & Schnitter, 2022, p. 9). To address this, narrative two suggests a

need to work in partnership and collaboration. Proposed partnerships often involve the federal government, territorial governments with a range of other partners, and are broad and high-level: "We will foster partnerships, collaboration, information-sharing and capacity-building to empower all governments, organizations, businesses and individuals to take action" (Government of Yukon, 2020b, p. 9). Partnership is often described such that it seems to become a goal in and of itself, as opposed to a means, and it is often not clear what the partnership sought to achieve beyond the relationship-building process, and in relation to climate change and health, or how differing agendas might be reconciled.

Frequently, this proposed partnership involves Indigenous Peoples, aligned with a general reference in this narrative to the need for Indigenous engagement. This involves participatory approaches to knowledge production, as well as policy and planning for adaptation. For example, "Adaptation planning should involve communities and those most affected by climate change. Participation of marginalized individuals and communities that already experience a disproportionate burden of illness and health inequities, such as Indigenous Peoples and racialized populations, is particularly important" (Berry & Schnitter, 2022, p. 31). Across the documents, there tends to be little detail around specific roles and power over the process.

Alongside this, narrative two suggests a need to 'help' and 'support' communities: "to support First Nations and Inuit as they manage the health impacts of climate change, such as access to country food, impacts of extreme weather events, and mental health impacts of climate change on youth" (ECCC, 2021c, p. 4). Much of this 'help' is proposed in the form of funding, particularly through funding from federal

		1	Namadin	e Element	
Document	Scale	Relationship between		Solution	Responsibility
		climate change and	13 dt 113k		
Pan-Canadian Framework on Clean Growth and Climate Change (Environment and Climate Change Canada, 2016)		health			
A Healthy Environment and a Healthy Economy (Environment and Climate Change Canada, 2020)	_				
Canada's Climate Actions for a Healthy Environment and a Healthy Economy (Environment and Climate Change Canada, 2021)	_				
Health Canada 2021-22 Departmental Sustainable Development Strategy (Health Canada, 2021)	_				
	_				
Science Narrative - Climate Change Impacts on the Health of Canadians (Public Health Agency of Canada, 2017)	_				
Environment and Climate Change Canada 2016–17 Report on Plans and Priorities (Environment and Climate Change Canada, 2016)	_				
Environment and Climate Change Canada 2021–22 Departmental Plan (Environment and Climate Change Canada, 2021)					
Environment and Climate Change Canada 2017–2020 Departmental Sustainable Development Strategy (Environment and Climate Change Canada, 2017)					
Environment and Climate Change Canada 2019–20 Departmental Results Report (Environment and Climate Change Canada, 2020)					
Pan-Canadian Framework on Clean Growth and Climate Change: Third Annual Synthesis Report on the Status of Implementation (ECCC 2020)					
Canada's Adaptation Communication to the United Nations Framework Convention on Climate Change (ECCC 2021)	_				
Canada's 7th National Communication and 3rd Biennial Report (Environment and Climate Change Canada, 2017)					
Achieving a sustainable future winter 2021 update, a federal sustainable development strategy (Environment and Climate					
Change Canada, 2021) Federal Actions for a Clean Growth Economy - Delivering on the Pan-Canadian Framework on Clean Growth and Climate Change					
(Environment and Climate Change Canada, 2016) Strategy on Short-Lived Climate Pollutants (Environment and Climate Change Canada, 2017)	Federal				
Measuring progress on adaptation and climate resilience: recommendations to the government of canada (Environment and	rederai				
Climate Change Canada, 2018) Climate Science 2050: Advancing Science and Knowledge on Climate Change (Environment and Climate Change Canada, 2020)	_				
Strategic Assessment of Climate Change (Government of Canada, 2020)	_				
	_				
Canada in a Changing Climate: National Issues Report (Natural Resources Canada, 2021)	_				
Adapting to the Impacts of Climate Change in Canada: an update on the National Adaptation Strategy (Environment and Climate Change Canada, 2021)	_				
Crown-Indigenous Relations and Northern Affairs Canada Departmental Plan 2021–22 (CIRNAC 2020)					
Working within the Territorial Health Context: A Framework to Understanding and Applying a Northern Lens (Indigenous Services Canada, 2019)					
Canada's Adaptation Communication to the United Nations Framework Convention on Climate Change (Environment and Climate Change Canada, 2021)					
Canada's 2021 Nationally Determined Contribution Under the Paris Agreement (2021)	_				
Clean Canada: Protecting the Environment and Growing Our Economy (Environment and Climate Change Canada, 2019)	-				
Achieving a sustainable future: Draft federal sustainable development strategy 2022 to 2026 (Environment and Climate Change Canada, 2021)	_				
Canada's Arctic and Northern Policy Framework (Crown Indigenous Relations and Norther Affairs Canada, 2019)	_				
Federal Adaptation Policy Framework for climate change (Environment and Natural Resources, 2016)	-				
Health of Canadians in a Changing Climate: Advancing our knowledge for action (Helath Canada, 2022)	-				
2030 NWT Climate Change Strategic Framework 2019-2023 Action Plan (Government of Northwest Territories, 2019)					
Annual report 2019/20 (Government of Newfoundland and Labrador, Environment, Climate Change and Municipalities, 2020)	-		-		
Health Effects of Extreme Weather Events and Wildland Fires: A Yukon Perspective (Government of Yukon Health, 2020)	_				
Our Clean Future 2020 annual report (Government of Yukon, 2021)	_				
	_				
Our Clean Future, A Yukon strategy for climate change, energy and a green economy (Government of Yukon, 2020)					
Pan-Territorial Adaptation Strategy (Pan-territorial Adaptation Partnership, n.d.)	Provincial/ Territorial				
mework Policy on Electrification and the Fight Against Climate Change (Government of Québec, 2020)					
The way forward on climate change in Newfoundland and Labrador (Government of Newfoundland and Labrador, n.d.)					
2030 NWT Climate Change Strategic Framework (Government of Northwest Territories, 2019)					
NT Climate Change Action Plan: Annual report 2019/20 (Government of Northwest Territories, 2021) uvialuit on the front line of climate change (Inuvialuit Regional Corporation, 2016)					
Narrative 1					
Narrative 2					
Narrative 3					

Fig. 3. Summary of which narratives are contained in each narrative element of each policy document. Blue represents Narrative one, orange represents Narrative two, and yellow represents Narrative three. (For interpretation of the references to colour in this figure legend, the reader is referred to the web version of this article.)

government agencies: "to help communities across Canada better manage the risks of natural disasters, the Disaster Mitigation and Adaptation Fund continued to support a number of large-scale infrastructure projects in multiple jurisdictions, investing \$1.5 billion in 2019" (ECCC, 2020c, p. ii). The importance of providing 'protection' is also present in this narrative: "protection of people and culture is of paramount importance" (GNWT, 2021, p. 20). The role of government and its agencies is emphasised: "ECCC will continue to play a leadership role in work with partners to improve air quality and protect Canadians from harmful substances in air, water and on land" (ECCC, 2017, p. 2).

Many of these actions are described as being at the 'community-level', 'community-based' or 'place-based': "Canada provided \$5.95 million in 2018–2019 to support First Nations and Inuit to undertake community-led adaptation projects. These projects address a wide range of health and climate change concerns including food security, vulnerability assessments, access to land and medicines, and mental wellness" (ECCC, 2020c, p. 33). Thus, proposed action is contained to this scale, targeting issues directly at this level, as opposed to addressing issues at a national or policy level.

Action, in this narrative, is seen to be a 'collective commitment' and 'shared responsibility', with involvement required by all levels of government, Indigenous Peoples, non-governmental organizations, the private sector, and individuals (ECCC, 2018). Many responsible institutions were listed, but specific roles are not identified or proposed and, as such, no specific responsibilities are proposed. Linking particularly with the 'behaviour change' and 'raise awareness' narratives of the 'act' narrative element, this narrative also suggests that individuals must act: "Canadians need to adapt to the changing climate by taking action to reduce negative consequences and to take advantage of new opportunities that the changes may bring" (ENRC, 2016, p. 1). Again, these narratives offer little detail of what these responsibilities are, including no information on how broader actions by governments will facilitate individual actions, beyond providing information to individuals.

One distinct responsibility emerging in this narrative is that of Indigenous Leadership, with documents describing the position of Indigenous Peoples as 'at the forefront of climate change' (ECCC, 2020a) and having already led "crucial contributions to climate change science and knowledge" (ECCC, 2020b, p. 9). The role of Indigenous youth is particularly emphasised, and the role of Indigenous women in ongoing action is also highlighted. While the need for funding to support these adaptation efforts is mentioned, this narrative does not engage with the structural barriers to youth participation and engagement, and thus does not make explicit the power relations involved in this process.

4.1.3. Overarching narrative three: sovereignty and relationships

Narrative three was present to some degree (in one or more narrative elements) in 34 percent of federal policy documents and 55 percent of provincial or territorial documents. It arises most frequently in the 'act' (solution) narrative element, though most often accompanied by narratives one and two in this narrative element. Only one document contains narrative three in all narrative elements, and this was produced by an Indigenous government (IRC, 2016) (Fig. 3). Narrative three suggests that experiences of climate change are negative because of underlying social factors and inequities. This may be due to limited access to services and resources that enable flexibility or adaptability to changing environmental conditions, including, in a more acute sense, access to health services as well as broader structural factors. Only four documents contain this narrative, but those that do often refer to 'colonial legacies' as being responsible for negative experiences of climate change: "colonial legacies and persistent inequalities make Indigenous people living in Yukon especially vulnerable to the impacts of the changing environment" (Government of Yukon, 2020a, p. 3).

This narrative places emphasis on the process of risk creation, highlighting the role of social determinants and "Structural systems of oppression that result in health inequities ... underlying drivers of vulnerability to climate change" (Berry & Schnitter, 2022, p. 27). This

narrative reflects the social determinants, power and privilege that affect experience of climate change: "Vulnerability to health-related climate change impacts is often socially determined... it is important to acknowledge issues of privilege associated with the capacity and agency to act on climate change. There are systemic barriers that must be addressed to enable equal opportunities to act" (ECCC, 2018, p. 52). This narrative shifts the focus to "Structural systems of oppression that result in health inequities... Such systems of oppression include racism, heteronormativity, and colonialism. The health and well-being of Canada's Indigenous Peoples continues to be affected by Canada's history of systemic racism, colonization, and discrimination. This has included forced displacement from traditional territories, residential school experiences of abuse and neglect, and the disruption of traditional culture, language, and practices" (Berry & Schnitter, 2022, p. 46). This narrative focuses on inequalities and structural barriers, demonstrating that narratives can place emphasis on processes and root causes without necessitating the labelling of people or peoples as 'vulnerable'.

Specific issues, such as food insecurity in the context of climate change, were discussed in relation to these colonial legacies: "The legacies of colonial policies in northern and Indigenous communities in Canada have contributed to a reliance on market foods from the south" (ECCC, 2021a, p. 32). Colonial processes are also described as root causes of other social determinants of ill-health: "Historic and ongoing colonial processes imposed new social norms and legal rights... creating significant gender inequalities as well as discrimination against gender fluidity and homosexuality. In the context of climate change, gender intersects with other determinants of health — such as education, race, income, and social status — to create unique climate change vulnerabilities, resiliencies, and lived experiences" (Berry & Schnitter, 2022, p. 68).

In this narrative, proposed solutions are framed within the broader goal of Indigenous sovereignty and reconciliation, in which power shifts need to take place and Indigenous priorities need to be advanced: "the Government must continue to support co-development, collaboration, and Indigenous self-determination... improving food security, community health, clean energy, resilient infrastructure, and the protection of biodiversity" (ECCC, 2020a, p. 68). Equitably addressing the impacts of climate change and achieving reconciliation are framed as interdependent goals: "Supporting self-determined climate action is critical to advancing Canada's reconciliation with Indigenous Peoples, as is the leadership of Indigenous Peoples to achieve the foundational transformations required to address and mitigate the consequences of climate change" (Government of Canada, 2021, p. 7). The importance of Indigenous sovereignty over land, waters and food is particularly central in this narrative: "The ability of Indigenous Peoples to exercise autonomy over their lands and traditional foods is crucial for redressing the colonial narrative of socio-economic marginalization and health disparities... This autonomy is embodied in the concept of "food sovereignty" (Berry & Schnitter, 2022, p. 80).

This process is seen to enable the production of knowledge that encompasses different kinship systems and relationships to land, and which will be produced in more relational ways. Approaches to knowledge production are encouraged that "Embrace interdisciplinarity to produce science and knowledge that reflect the complexity and interconnections inherent in climate change and that encompass different kinship systems and relationships with the land" (ECCC, 2020b, p. 7). This does not necessarily mean combining knowledge types: "recognizing that Indigenous Knowledge is a distinct network of knowledge systems that cannot be integrated into western science but that there are spaces where the two can co-exist and co-create knowledge" (ECCC, 2020b, p. 7). The importance of respect in this process is highlighted in this narrative.

This narrative also outlines solutions that address the social determinants of health, but with a focus not only on direct material conditions, but also on regulation and policy instruments, including industry, development and colonial environmental governance, that

create inequities for Indigenous Peoples. This includes suggestions to "Review and amend regulations related to harvesting to make them consistent with current environmental realities... improve coordination between various regulatory entities, such as the GNWT Department of Environmental and Natural Resources and community Hunters' & Trappers' Associations, so eliminate regulatory inconsistency and miscommunication with harvesters... Reduce industrial and cumulative impacts that exacerbate harm to threatened species... Secure compensation from developers in the event of ... damage" (IRC, 2016, p. 18). This is suggested to go hand in hand with specific cultural programming, providing a clear narrative of what this could look like, including language resources, cultural committees, on the land learning, elders' centres, counselling and payment schemes for hunters. This narrative reflects the entanglement of physical, mental and cultural wellbeing in the context of climate change in more nuanced and specific ways than many other narratives.

Throughout narrative three, a couple of themes arise. One is the need to engender care in all actions designed to address the health dimensions of climate change. This includes the importance of "respect and care for the people, land, animals and environment," (IRC, 2016, p. 7). The second is a theme of 'innovation and resourcefulness', distinct from the narratives of technocratic innovation in narrative one, and which describes "Wisely using human, natural and financial resources through innovative partnerships and collaboration. This will maximize our climate change knowledge and our potential to successfully adapt" (IRC, 2016, p. 7). This narrative differs in that it centres the sustainable use of resources, as opposed to centring the human need, in proposed solutions and thus extends respect into ways of relating to such resources.

These themes stretch into the responsibilities reflected in narrative three, in which Indigenous leadership is accompanied with powershifting that advances tangible rights over land and resources. In this narrative there is space to move beyond the idea that only adaptation actions within Indigenous communities should be led by Indigenous Peoples, as implied in narrative two, for example. Instead, this narrative raises the idea that Indigenous leadership should be extended to encompass any action or adaptation that affects Indigenous communities, which could include any adaptations by federal, provincial or territorial governments that have national or regional impacts.

4.2. Balance of narratives in policy documents

These three narratives are qualitative summaries of key narrative threads running through the policy documents and have been constructed as part of the analysis, so they often do not exist in their complete forms within any one documents. Often, elements of one overarching narrative exist alongside others (even within one specific narrative element) in any one document (Fig. 3). Narrative one is present more frequently than all other narratives and is thus dominant in terms of how common it is. It is also important to look at the power balance of the different narratives within individual policy documents. Where an overarching narrative is present throughout the narrative elements of a policy document, it presents a more consistent and coherent narrative within that document, which has more power than narratives that are only present within one narrative element (Mroz et al., 2021). For example, within most individual documents, narrative one and two occur more regularly and consistently across the different narrative elements than narrative three, and this consistency gives them power within the overall narrative of any one document. Where narrative three is present in individual documents, it is rare for it to be present in all narrative elements (Fig. 3). In this way, we can observe narratives one and two exerting power over narrative three, which acts to drown it out and prevent narrative three from presenting a consistent and coherent narrative throughout any one policy document that could challenge narratives one and two. An impact of this is that where narrative three exists alongside elements of narratives one and two, solutions and proposed responsibility tend to be more in line with narrative one.

5. Discussion

Social determinants and root causes are profoundly important in shaping peoples' experience of climate change and health outcomes, and policy narratives that do not reflect this in the problem framing can collectively move the wider focus of policy action away from addressing the underlying causes (Lahsen & Ribot, 2021). We have carried out narrative analysis of policy documents, produced by the Canadian federal, provincial and territorial governments and focusing on climate change and health. We find that the dominant overarching narrative contained within these documents (narrative one) does not engage with the social determinants of health and root causes of disaster, and instead centres climate change as a driver of health outcomes in the framing of the problem (the 'scene' narrative element). In particular, it does not engage with the role of colonialism in shaping health outcomes in the context of climate change. Another common narrative (narrative two) acknowledges the role of inequity in unequal experiences of climate change, but also does not address the role of colonial legacies or power relations. These dominant narratives (narratives one and two) thus tend to focus explicitly on human vulnerability to climate change, using language that centres people as vulnerable, as opposed to centring the processes of inequality and colonialism.

It follows, therefore, that the proposed solutions (the 'act' narrative element) within these two narratives do not describe addressing the social determinants of helath or root causes of disaster. These focus on knowledge, innovation and resilience (narrative one) and partnership, engagement and funding for community action (narrative two). In both of these narratives, there is a lack of clear discussion around if and how proposed solutions might address the structural drivers of ill-health in the context of climate change and what power shifts will be required. Narrative one focuses on solutions that do not challenge the power relations of the status quo. The language used in proposed solutions in narrative two, however, is more ambiguous, not explicitly proposing either power shifts, or actions that reinforce the status quo.

Each of the solutions put forward are described in broad terms, which is common in policy due to the ongoing nature of policy negotiations and deliberations, and the complex nature of jurisdictional responsibility and autonomy for climate adaptation in Canada, where there is still some lack of clarity around how the federal government will work with other levels of government (Austin et al., 2015, 2018). In narrative two, however, the specific goals that the proposed solutions are designed to achieve are not made clear. For example, working in partnership is a frequently proposed solution in narrative two. However, this narrative does not make clear what the goal of the proposed partnership is, whether the partnership is a goal in and of itself, and whether it would be designed to lead to shifts in power relations between state government and Indigenous Peoples.

These narratives therefore include some specific areas of vagueness. Vagueness is not necessarily a negative thing, and can represent openness to possibility for transformative change, which may make space for plural narratives from the multi-stakeholder and rightsholder perspectives involved in the policy-making process, of which the 'policy document' only provides a limited snapshot. However, in a context of significant power dynamics between different narratives and the context of dominant narratives of climate change and health, vagueness can also risk concealing certain options for action, and vagueness around responsibility for proposed actions can fail to provide structures of accountability (Katz et al., 2020). For example, language around partnership, could be suggesting partnerships in which power relations are truly interrogated, but partnership does not necessarily address power relations in and of itself. In the end, therefore, vagueness can risk hiding the fact that no meaningful change is being proposed.

Jurisdictionally, it is important that responsibilities and mandates around policy-making are clear (Austin et al., 2015). The federal government, for example, does not dictate the specifics of what Indigenous governments or communities should be doing at a local level to address

health in the context of climate change. However, given that calls for Indigenous land rights and food sovereignty are well documented, it would be possible to maintain this approach within policy narratives while also incorporating narratives that call for power shifts necessary for this. Dominant narratives emerging in this review suggest that 'all sectors' or 'all levels of government' are responsible for action, which does not provide clarity around roles and responsibilities of governance in addressing the root causes.

Proposals for Indigenous Leadership in narrative two do appear to more closely echo what ITK have called for in the National Inuit Climate Change Strategy (ITK, 2019). Indigenous leadership around climate change has been demonstrated for decades (Huntington, 1998; ITK, 2017; Watt-Cloutier, 2015). Such leadership has pointed to the need for expanded Indigenous land rights and food sovereignty to address the risk of harm in the context of climate change, which will require power shifting from federal, provincial and territorial governments to Indigenous Peoples (Health Canada, 2022; Whyte, 2016). So, it is not clear whether narrative two is calling for change that involves shifts in power relations, or not. In fact, by not addressing such shifts in power, the narratives can conceal the power relations involved in policy making and the lack of power shifting in the proposed policy actions.

Ultimately, dominant narratives still frame climate change as the main, externalised threat to which people are 'vulnerable'. This risks externalising and depoliticising the impacts of climate change instead of highlighting their roots in social inequities and institutions. This means that we fail to identify the social and structural processes that put people at risk of harm and disaster in the context of climate change, and therefore miss the opportunity to tackle the root causes in proposed solutions,. Proposed 'solutions', therefore, fail to challenge broader power structures and drivers such as colonisation, and can lead to the adoption of superficial solutions that are likely to perpetuate inequalities and structural violence because they do not directly target structural inequalities (Lahsen & Ribot, 2021). One of the greatest risks with the general climate change discourse that is present in much of these policy documents is that it can detach the discourse around the experience of climate change from histories of colonialism, social justice issues and others, and present 'climate impacts' in isolation (Howitt, 2020). Many narratives portray climate change as an unprecedented, post-apocalyptic crisis, erasing the dystopic experiences of colonialism that Indigenous Peoples have already experienced (Callison, 2014; Whyte, 2018).

A theme across narratives one and two is the focus on Indigenous Peoples as the ones who need to adapt. This conceals, in this narrative, a role for governments in making changes to policy that can remove the barriers to Indigenous action at the community level. This 'responsibilising' is also represented in the 'agent' part of dominant narratives, in which responsibility is diluted between many governments, with federal government needing to display 'strong leadership' and placing a large emphasis on Indigenous Leadership, without describing what must be done at federal level to achieve this. As Howitt (2020) argues, a more nuanced approach to scale in these governance narratives is required to develop policy that can respond appropriately.

The question remains "how do we challenge the power of the dominant and dangerous policy narratives surrounding climate change and health?" This paper has been one attempt to do this through deconstructing this narrative and holding it alongside others, in particular narrative three, to show how more dominant narratives can actively conceal those that offer other ways of framing and imagining the relationship between climate change and health. Narratives such as narrative three have their own power, however, as they exist independently of, and despite, harmful dominant narratives that conceal colonial legacies. Narrative three in particular, reflects the entanglement of physical, mental and cultural wellbeing in the context of climate change in more nuanced and specific ways than many other narratives around solutions. It proposes a narrative around 'care', 'resilience', 'innovation'

and 'resourcefulness', for example, that can challenge the vague and often neoliberal use of these terms in the more dominant narrative. The fact that this narrative is present in some policy documents around climate change and health is a start. Holding space for these notions can also mean holding space for hope in the narratives that we tell about climate change and health. Kyle Whyte (2018) (referring to the work of Grace Dillon (2016b)) highlights how Indigenous stories of persistence and flourishing can challenge depoliticised narratives of mere survival.

There is a need to refocus the relational in wider narratives of climate change and health, in the understanding of root causes, solutions and responsibilities (Howitt, 2020). Howitt (2020) describes how Indigenous self-determination and self-governance are moderated by relationships internal and external to a particular Indigenous group, the latter of which can constrain the exercise of governance. As Zoe Todd writes, the violation of disaster can be an opportunity to "take stock of socio-political, economic and legal-governance responsibilities we hold to the lands, waters, fish, beavers, herons and other more-than-human beings" (Todd, 2017). These narratives put partnership based on "recognition, respect, and explicit commitment to justice" (Howitt et al., 2012) at their centre. There is also a need for narratives that connect past, present and future. Scholars including Stewart-Hariwara, Grace Dillon (Dillon, 2016a) and Kyle Whyte (2018) have written of the inseparable nature of past, present and future in Indigenous thought, as well as more fluid and non-linear ideas of time and narratives. The analysis in this paper has drawn primarily from Western literary theory based on linear concepts of time and narrative, and thus it is important to privilege work on narratives by scholars outside of this tradition, and others, to make space for new narrative structures.

Narrative three can provide some insights into the narratives we need to platform, both for their own value and to challenge dominant, harmful narratives. It is clear that narratives must reflect "sustained resilience, survival, adaptation and responsiveness", the fact that Indigenous Peoples have already been through destruction, and that climate change is a colonial legacy (Howitt 2020). This challenges both neoliberal, responsibilising 'resilience' narratives, as well as dominant narratives of impending human destruction and calamity. In doing so, plural narratives need to be respected and may offer powerful and ambitious visions of the future, where tensions are seen as opportunities for change (Gillard et al., 2016). However, ultimately what is needed is greater 'narrative agency': "the capacity to make choices about the telling of one's story and impose them on, relate with, and ultimately be in the world" (Bieger, 2018, p9), and this narrative agency is therefore inextricably entwined with Indigenous self-determination. Thus, communities also need to be given a central role in policy-making (Bravo, 2009).

This review has focused on governmental policy at federal, territorial and provincial scales, but policy is conceptualised, negotiated and implemented by many different groups at a range of scales (Tanner & Allouche, 2011). We have not analysed the narratives produced by other policymaking or policy-influencing groups and institutions that may be in conversation with, and responding to, the policy narratives that we have identified. Our intention has been to deconstruct the policy narratives produced by some of the institutional spaces that hold the most power, but future research should look to these other policy actors and influencers to broaden understanding of the diverse policy landscape and how policy narratives exist within hierarchies of power. This should include analysis of the ways that the dominant narratives identified here interact with and are aligned to broader, international policy narratives that address these issues, including international governance organisations. Additionally, we have focused specifically on narratives in policy documents and not on the actions that have stemmed from these policy documents nor the processes of the creation of these documents. Future research should explore how the policy making process impacts the narratives contained within policies on climate change and health and, in turn, the impacts of specific policy narratives on subsequent policy action.

6. Conclusion

Dominant overarching policy narratives in Canada that describe health challenges in the context of climate change fail to identify the root causes of these problems or suggest solutions to address them. In order to centre, in these narratives and proposed solutions, the processes that create unequal health impacts in the context of climate change, we need to be able to creatively tell and retell the story of climate change, so that we can understand and address the harmful structures and processes that shape health. Where powerful and dominant narratives prevail in discourse-setting processes such as policy, concealing more nuanced and plural narratives that engage with issues of power, the dominant narratives define solutions and constrain our ability to imagine other possibilities. This paper has attempted to challenge these harmful dominant narratives through deconstructing them and holding them alongside narratives that do engage with processes of power. This has highlighted problems with these dominant overarching narratives and revealed how they can actively conceal those that offer other ways of framing and imagining the relationship between climate change and health. Narratives surrounding climate change and health need to shift to represent Indigenous-defined notions of survival and resourcefulness, which highlight the roles of relationality at multiple scales, government accountability and reconciliation in pathways forward. This requires power shifting towards increased narrative agency for Indigenous Peoples.

CRediT authorship contribution statement

Katy Davis: Conceptualization, Writing – original draft, Methodology, Writing – review & editing, Formal analysis. Claire H. Quinn: Methodology, Writing – review & editing, Conceptualization. James D. Ford: Methodology, Writing – review & editing, Conceptualization. Melanie Flynn: Methodology, Conceptualization, Writing – review & editing. Anuszka Mosurska: Conceptualization, Writing – review & editing, Methodology. Sherilee L. Harper: Writing – review & editing, Methodology, Conceptualization.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Appendix A. Supplementary data

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Data availability

Data will be made available on request.

References

- Ahmad, A., 2018. Conceptualizing disasters from a gender perspective. In: Disasters: Core Concepts and Ethical Theories. Springer, Cham, pp. 105–117.
- Ajulo, O., Von-Meding, J., Tang, P., 2020. Upending the status quo through transformative adaptation: a systematic literature review. Prog. Disaster Sci. 6, 100103. https://doi.org/10.1016/j.pdisas.2020.100103.
- Aldred, T.-L., Alderfer-Mumma, C., de Leeuw, S., Farrales, M., Greenwood, M., Hoogeveen, D., O'Toole, R., Parkes, M.W., Sloan Morgan, V., 2021. Mining sick: Creatively unsettling normative narratives about industry, environment, extraction, and the health geographies of rural, remote, northern, and Indigenous communities

- in British Columbia. The Canadian Geographer / Le Géographe Canadien 65 (1), 82-96. https://doi.org/10.1111/cag.12660.
- AMAP, 2017. Adaptation Actions for a changing Arctic: Perspectives from the Bering-Chukchi-Beaufort Region. Arctic monitoring and Assessment Programme (AMAP).
- AMAP, 2018. Adaptation Actions for a changing Arctic: Perspectives from the Baffin Bay/ Davis Strait Region. Arctic monitoring and Assessment Programme (AMAP).
- Amorim-Maia, A.T., Anguelovski, I., Chu, E., Connolly, J., 2022. Intersectional climate justice: a conceptual pathway for bridging adaptation planning, transformative action, and social equity. Urban Clim. 41, 101053. https://doi.org/10.1016/j. uclim.2021.101053.
- Austin, S.E., Ford, J.D., Berrang-Ford, L., Araos, M., Parker, S., Fleury, M.D., 2015. Public Health Adaptation to climate Change in Canadian Jurisdictions. Int. J. Environ. Res. Public Health 12 (1), 623–651. https://doi.org/10.3390/ijerph120100623.
- Austin, S.E., Ford, J.D., Berrang-Ford, L., Biesbroek, R., Ross, N.A., 2019. Enabling local public health adaptation to climate change. Soc. Sci. Med. 220, 236–244. https://doi.org/10.1016/j.socscimed.2018.11.002.
- Austin, S. E., Ford, J. D., Berrang-Ford, L., Biesbroek, R., Tosun, J., & Ross, N. A. (2018). Intergovernmental relations for public health adaptation to climate change in the federalist states of Canada and Germany. Global Environmental Change, 52, 226–237. Scopus. Doi: 10.1016/j.gloenvcha.2018.07.010.
- Bambra, C., Gibson, M., Sowden, A., Wright, K., Whitehead, M., Petticrew, M., 2010. Tackling the wider social determinants of health and health inequalities: evidence from systematic reviews. J. Epidemiol. Community Health 64 (4), 284–291. https://doi.org/10.1136/jech.2008.082743.
- Bankoff, G., 2019. Remaking the world in our own image: Vulnerability, resilience and adaptation as historical discourses. Disasters 43 (2), 221–239. https://doi.org/ 10.1111/disa.12312.
- Barkin, S.M., Gurevitch, M., 1987. Out of work and on the air: Television news of unemployment. Crit. Stud. Media Commun. 4 (1), 1–20.
- Berry, P., Schnitter, R., 2022. Health of Canadians in a changing climate: advancing our Knowledge for Action. Government of Canada.
- Bevan, L.D., Colley, T., Workman, M., 2020. Climate change strategic narratives in the United Kingdom: Emergency, Extinction. Effectiveness. Energy Research & Social Science 69, 101580. https://doi.org/10.1016/j.erss.2020.101580.
- Bieger, L., 2018. Belonging and narrative: a theory of the American Novel. Transcript.
- Bravo, M.T., 2009. Voices from the sea ice: the reception of climate impact narratives. J. Hist. Geogr. 35 (2), 256–278. https://doi.org/10.1016/j.jhg.2008.09.007.
- Bruner, J., 2004. Life as Narrative. Social Research: an International Quarterly 71 (3), 691–710.
- Burke, K., 1945. A Grammar of Motives* New York. Prentice Hall.
- Burke, K., 1955, A Rhetoric of Motives, George Braziller, Inc. New York,
- Bushell, S., Buisson, G.S., Workman, M., Colley, T., 2017. Strategic narratives in climate change: Towards a unifying narrative to address the action gap on climate change. Energy Res. Soc. Sci. 28, 39–49. https://doi.org/10.1016/j.erss.2017.0
- Bushell, S., Colley, T., Workman, M., 2015. A unified narrative for climate change. Nat. Clim. Chang. 5 (11), 971–973. https://doi.org/10.1038/nclimate2726.
- Callison, C., 2014. How climate Change comes to Matter: the Communal Life of Facts. Duke University Press.
- Callison, C., 2014. Climate Change Communication and Indigenous Publics. Oxford Research Encyclopedia of Climate Science, 10.1093/acrefore/ 9780190228620.013.411.
- Cameron, E.S., 2012. 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. 22 (1), 103–114. https://doi.org/10.1016/j. gloenycha.2011.11.004.
- Caughey, A., Kilabuk, P., Sanguya, I., Doucette, M., Jaw, M., Allen, J., Maniapik, L., Koonoo, T., Joy, W., Shirley, J., Sargeant, J.M., Møller, H., Harper, S.L., 2022. Niqivut Silalu Asijjipalliajuq: building a Community-led Food Sovereignty and climate Change Research Program in Nunavut. Canada. Nutrients 14 (8), 1572. https://doi.org/10.3390/nu14081572.
- Chatwood, S., Bjerregaard, P., Young, T.K., 2012. Global Health—A Circumpolar Perspective. Am. J. Public Health 102 (7), 1246–1249. https://doi.org/10.2105/ AJPH.2011.300584.
- Cheek, W., & Chmutina, K. (2021). 'Building back better' is neoliberal post-disaster reconstruction. Disasters, n/a(n/a). Doi: 10.1111/disa.12502.
- Clark, D. G., Ness, R., Coffman, D., & Beugin, D. (2021). The health costs of climate change: How Canada can adapt, prepare, adn save lives (Costs of Climate Change). Canadian Institute for Climate Choices. https://climatechoices.ca/reports/ the-health-costs-ofclimate-change/.
- Cueva, K., Rink, E., Lavoie, J.G., Akearok, G.H., Guistini, S., Kanayurak, N., Stoor, J.P.A., Larsen, C.V.L., 2021a. From Resilient to Thriving: Policy Recommendations to support Health and Well-being in the Arctic. Arctic 74 (4), 550–558. https://doi.org/ 10.14430/arctic/3953.
- Cueva, K., Rink, E., Lavoie, J.G., Stoor, J.P.A., Healey Akearok, G., Gladun, E., Larsen, C. V.L., 2021b. Diving below the surface: a framework for arctic health research to support thriving communities. Scand. J. Public Health 14034948211007694. https://doi.org/10.1177/14034948211007694.
- Culler, J., 2014. On deconstruction. Cornell University Press, In On Deconstruction.
 Dillon, G., 2016a. Beyond the grim dust of what was. In: Nicholson, H. (Ed.), Love beyond the Body, Space & Time: an Indigenous LGBT Sci-Fi Anthology. Bedside Press.
- Driscoll, D.L., Dotterrer, B., Ii, r. a. b., 2013. Assessing the social and physical determinants of circumpolar population health. Int. J. Circumpolar Health 72 (S2), 21400. https://doi.org/10.3402/ijch.v72i0.21400.
- ECCC, 2017. Environment and climate Change Canada 2017–2020 Departmental Sustainable Development Strategy. Environment and climate change Canada.

- ECCC. (2017b). Strategy on Short-Lived Climate Pollutants 2017. Environment and Climate Change Canada.
- Eccc, 2018. Measuring progress on adaptation and climate resilience: Recommendations to the government of canada, expert panel on climate change adaptation and resilience results. Environment and climate change Canada.
- Eccc, 2020a. A healthy Environment and a healthy Economy. Environment and climate change Canada.
- Eccc, 2020b. Climate Science 2050: advancing science and knowledge on climate change. Environment and climate change Canada.
- Eccc, 2020c. Pan-Canadian Framework on Clean Growth and climate Change: Third Annual Synthesis Report on the Status of Implementation. Environment and climate change
- Eccc, 2021a. Achieving a sustainable future: Draft federal sustainable development strategy 2022 to 2026. Environment and climate change Canada.
- ECCC. (2021b). Achieving a sustainable future winter 2021 update, a federal sustainable development strategy. Environment and Climate Change Canada.
- ECCC. (2021c). Canada's Adaptation Communication to the United Nations Framework
- Convention on Climate Change. Environment and Climate Change Canada. Eccc, 2021d. Environment and climate Change Canada 2021–22 Departmental Plan. Environment and climate change Camada.
- Edgell, P., Hull, K., Green, K., Winchester, D., 2016. Reasoning together through Telling Stories: how people talk about Social Controversies. Qual. Sociol. 39. https://doi. org/10.1007/s11133-015-9321-4.
- Enrc, 2016. Federal Adaptation Policy Framework for climate change. Environment and Natural Resources Canada.
- Faas, A.J., Barrios, R., García-Acosta, V., Garriga-López, A., Mattes, S., Trivedi, J., 2020. Entangled roots and otherwise possibilities: an anthropology of disasters COVID-19 research agenda. Hum. Organ. 79 (4), 333–342.
- Feindt, P.H., Oels, A., 2005. Does discourse matter? discourse analysis in environmental policy making. J. Environ. Plann. Policy Manage. 7 (3), 161–173. https://doi.org/ 10.1080/15239080500339638.
- Fischer, F., Forester, J., 1993. The Argumentative turn in Policy Analysis and Planning. Duke University Press. https://doi.org/10.2307/j.ctv1220k4f.
- Ford, J.D., Willox, A.C., Chatwood, S., Furgal, C., Harper, S., Mauro, I., Pearce, T., 2014. Adapting to the Effects of climate Change on Inuit Health. Am. J. Public Health 104 (Suppl 3), e9–e17. https://doi.org/10.2105/AJPH.2013.301724.
- Foucault, M., 1972. The Archaeology of Knowledge: and the Discourse on Language.

 Partheon Books.
- Furgal, C., Garvin, T., Jardine, C.G., 2010. Trends in the study of Aboriginal health risks in Canada. Int. J. Circumpolar Health 69 (4), 322–332. https://doi.org/10.3402/ iich.y69i4.17672.
- Gee, J.P., Handford, M., 2012. Introduction. Routledge, In The Routledge Handbook of Discourse Analysis.
- Gillard, R., Gouldson, A., Paavola, J., Van Alstine, J., 2016. Transformational responses to climate change: beyond a systems perspective of social change in mitigation and adaptation. WIREs Clim. Change 7 (2), 251–265. https://doi.org/10.1002/wcc.384.
- GNWT. (2019). 2030 NWT Climate Change Strategic Framework. Government of Northwest Territories
- GNWT. (2021). NWT Climate Change Action Plan: Annual report 2019/20. Government of Northwest Territories.
- Northwest Territories.

 Government of Canada, 2021. Canada's 2021 Nationally Determined Contribution under the Paris Agreement. Government of Canada.
- Government of Yukon. (2020a). Health Effects of Extreme Weather Events and Wildland Fires: A Yukon Perspective. Office of the Chief Medical Officer of Health.
- Government of Yukon. (2020b). Our Clean Future, A Yukon strategy for climate change, energy and a green economy. Government of Yukon.
- Dillon, G., 2016b. Native Slipstream: Blackfeet Physics in the Fast Red Road. In: Stratton, B.J. (Ed.), The Fictions of Stephen Graham Jones: A Critical Companion. University of New Mexico Press.
- Greenwood, M.L., de Leeuw, S.N., 2012. Social determinants of health and the future well-being of Aboriginal children in Canada. Paediatr. Child Health 17 (7), 381–384. https://doi.org/10.1093/pch/17.7.381.
- Hajer, M., Versteeg, W., 2005. A decade of discourse analysis of environmental politics: Achievements, challenges, perspectives. J. Environ. Plann. Policy Manage. 7 (3), 175–184. https://doi.org/10.1080/15239080500339646.
- Hall, E.F., Sanders, T., 2015. Accountability and the academy: Producing knowledge about the human dimensions of climate change. J. R. Anthropol. Inst. 21 (2), 438–461. https://doi.org/10.1111/1467-9655.12162.
- Hankivsky, O., Christoffersen, A., 2008. Intersectionality and the determinants of health: a Canadian perspective. Crit. Public Health 18 (3), 271–283. https://doi.org/ 10.1080/09581590802294296.
- Harcourt, R., Bruine de Bruin, W., Dessai, S., Taylor, A., 2020. What Adaptation Stories are UK Newspapers Telling? A Narrative Analysis. Environmental Communication 14 (8), 1061–1078. https://doi.org/10.1080/17524032.2020.1767672.
- Harper, S.L., Edge, V.L., Cunsolo Willox, A., Rigolet Inuit Community Government, 2012. 'Changing climate, changing health, changing stories' profile: using an ecohealth approach to explore impacts of climate change on inuit health. Ecohealth 9 (1), 89–101. https://doi.org/10.1007/s10393-012-0762-x.
- Healey Akearok, G., Cueva, K., Stoor, J.P.A., Larsen, C.V.L., Rink, E., Kanayurak, N., Emelyanova, A., Hiratsuka, V.Y., 2019. Exploring the Term "Resilience" in Arctic Health and Well-being using a Sharing Circle as a Community-Centered Approach: Insights from a Conference Workshop. Soc. Sci. 8 (2), 45. https://doi.org/10.3390/socs/i8020045
- Healey, G., 2018. Exploring the development of a health care model based on Inuit wellness concepts as part of self-determination and improving wellness in Northern

- communities. Healther Determinants of Indigenous, Inner-City and Migrant Populations, Under-Served in Canada.
- Health Canada, 2022. Health of Canadians in a changing climate: advancing our knowledge for action. Health Canada.
- Herman, D., Phelan, J., Rabinowitz, P.J., Richardson, B., Warhol, R., 2012. Narrative theory: Core concepts and critical debates. The Ohio State University Press.
- Hewitt, K., 1983. Interpretations of Calamity, (1st ed.). Allen & Unwin.
- Howitt, R., 2020. Decolonizing People, place and Country: Nurturing Resilience across Time and Space. Sustainability 12 (15), 5882. https://doi.org/10.3390/ su12155882.
- Howitt, R., Havnen, O., Veland, S., 2012. Natural and Unnatural disasters: responding with respect for Indigenous Rights and Knowledges. Geogr. Res. 50 (1), 47–59. https://doi.org/10.1111/j.1745-5871.2011.00709.x.
- Huntington, H.P., 1998. Voices from the Bay: Traditional Ecological Knowledge of Inuit and Cree in the Hudson Bay Bioregion, compiled by Miriam McDonald, Lucassie Arragutainaq, and Zack Novalinga. Arctic 51 (2), 168–169.
- Iannantuono, A., Eyles, J., 1999. Environmental health metanarratives: an analysis of policy making in Ontario. Canada. Health & Place 5 (2), 139–156. https://doi.org/ 10.1016/\$1353-8292(99)00005-2
- Inuit Tapiriit Kanatami. (2014). Social Determinants of Inuit Health in Canada.
- Irc, 2016. Inuvialuit on the front line of climate change. Inuvialuit Regional Corporation.
- ITK. (2017). Nilliajut 2: Inuit Persepectives on the Northwest PAssage Shipping and Marine Issues.
- ITK. (2019). National Inuit Climate Change Strategy. https://www.itk.ca/wp-content/uploads/2019/06/ITK_Climate-Change-Strategy_English.pdf.
- Johnson, D., Parsons, M., Fisher, K., 2021. Engaging Indigenous perspectives on health, wellbeing and climate change. a new research agenda for holistic climate action in Aotearoa and beyond. Local Environ. 26 (4), 477–503. https://doi.org/10.1080/13549839.2021.1901266.
- Katz, A.S., Hardy, B.-J., Firestone, M., Lofters, A., Morton-Ninomiya, M.E., 2020. Vagueness, power and public health: use of 'vulnerable' in public health literature. Crit. Public Health 30 (5), 601–611. https://doi.org/10.1080/ 09581596.2019.1656800.
- Kelman, I., 2017. Linking disaster risk reduction, climate change, and the sustainable development goals. Disaster Prevention and Management: an International Journal 26 (3), 254–258. https://doi.org/10.1108/DPM-02-2017-0043.
- Kelman, I., Gaillard, J.C., Lewis, J., Mercer, J., 2016. Learning from the history of disaster vulnerability and resilience research and practice for climate change. Nat. Hazards 82 (1), 129–143. https://doi.org/10.1007/s11069-016-2294-0.
- Kelman, I., Mercer, J., & Gaillard, J. (2017). 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 (pp. 3–8). Routledge. Doi: 10.4324/9781315684260-1.
- Lahsen, M., Ribot, J., 2021. Politics of attributing extreme events and disasters to climate change. WIRES Clim. Change n/a(n/a), e750. https://doi.org/10.1002/wcc.750.
- Lavallee, L.F., Poole, J.M., 2010. Beyond Recovery: Colonization, Health and Healing for Indigenous People in Canada. Int. J. Ment. Heal. Addict. 8 (2), 271–281. https://doi. org/10.1007/s11469-009-9239-8.
- Lindroth, M., Sinevaara-Niskanen, H., 2017. Global politics and its violent care for indigeneity: Sequels to colonialism. Springer.
- López, N., Gadsden, V.L., 2017. Health Inequities, Social Determinants. And Intersectionality, Health Equity, p. 9.
- Marino, E., Schweitzer, P., 2016. Talking and not talking about climate change in Northwestern Alaska. In: Anthropology and Climate Change. Routledge, pp. 209–217.
- Marmot, M., Friel, S., Bell, R., Houweling, T.A., Taylor, S., Health, C., on S. D. of., 2008. Closing the gap in a generation: Health equity through action on the social determinants of health. Lancet 372 (9650), 1661–1669.
- Mattar, S. D., Mikulewicz, M., & McCauley, D. (2020). Climate Justice in the Arctic: A Critical and Interdisciplinary Climate Research Agenda.
- McGibbon, E., & McPherson, C. (2011). Applying Intersectionality & Complexity Theory to Address the Social Determinants of Women's Health. https://tspace.library.utoronto. ca/handle/1807/27217.
- Mercer, J., 2010. Disaster risk reduction or climate change adaptation: are we reinventing the wheel? Journal of International Development 22 (2), 247–264. https://doi.org/10.1002/jid.1677.
- Meredith, M., Sommerkorn, M., Cassotta, S., Derksen, C., Ekaykin, A., Hollowed, A., Kofinas, G., Mackintosh, A., Melbourne-Thomas, J., Muelbert, M.M.C., Ottersen, G., 2019. Polar Regions. Chapter 3, IPCC Special Report on the Ocean and Cryosphere in a Changing Climate.
- Mikulewicz, M., 2019. Thwarting adaptation's potential? a critique of resilience and climate-resilient development. Geoforum 104, 267–282. https://doi.org/10.1016/j. geoforum.2019.05.010.
- Mikulewicz, M., 2020. The discursive politics of adaptation to climate change. Annals of the American Association of Geographers 110 (6), 1807–1830.
- Mroz, G., Papoutsi, C., Greenhalgh, T., 2021. 'From disaster, miracles are wrought': a narrative analysis of UK media depictions of remote GP consulting in the COVID-19 pandemic using Burke's pentad. Medical Humanities 47 (3), 292–301. https://doi.org/10.1136/medhum-2020-012111.
- Nader, L. (1972). Up the Anthropologist: Perspectives Gained From Studying Up. https://eric.ed.gov/?id=ED065375.
- Naess, L.O., Polack, E., Chinsinga, B., 2011. Bridging Research and Policy Processes for climate Change Adaptation. IDS Bulletin 42 (3), 97–103. https://doi.org/10.1111/ j.1759-5436.2011.00227.x.
- Nixon, R., 2011. Slow Violence and the Environmentalism of the Poor. Harvard University Press.

- NRC, 2021. Canada in a changing climate: National Issues Report. Natural Resources
- O'Brien, K., Eriksen, S., Nygaard, L.P., Schjolden, A., 2007. Why different interpretations of vulnerability matter in climate change discourses. Climate Policy 7 (1), 73–88. https://doi.org/10.1080/14693062.2007.9685639.
- Oliver-Smith, A., 2019a. "What is a disaster?": Anthropological Perspectives on a Persistent Question. In *the Angry Earth*, (2nd ed.). Routledge.
- Oliver-Smith, A., 2019b. Peru's Five-Hundred-Year Earthquake: Vulnerability in Historical Context 1. In: *The Angry Earth*. Routledge, pp. 83–93. https://doi.org/10.4324/9781315298917-12.
- Oliver-Smith, A., Alcántara-Ayala, I., Burton, I., Lavell, A., 2016. Forensic Investigations of Disasters (FORIN): A Conceptual Framework and Guide to Research. Integrated Research on Disaster Risk (IRDR).
- Oliver-Smith, A., Alcántara-Ayala, I., Burton, I., Lavell, A., 2017. The social construction of disaster risk: seeking root causes. International Journal of Disaster Risk Reduction 22, 469–474. https://doi.org/10.1016/j.ijdrr.2016.10.006.
- Panic, M., & Ford, J. D. (2013). A review of national-level adaptation planning with regards to the risks posed by climate change on infectious diseases in 14 OECD nations. *International Journal of Environmental Research and Public Health*, 10(12), 7083–7109. Scopus. Doi: 10.3390/ijerph10127083.
- Pelling, M., 2011. Adaptation to climate Change. Routledge, New York.
- Pfeifer, P., 2020. Inuit, namiipita? climate change research and policy. Beyond Canada's Diversity and Equity Problem. Northern Review 49, 265–269-265–269.
- Phac, 2017. Science Narrative—Climate Change Impacts on the Health of Canadians. Public Health Agency of Canada.
- Polkinghorne, D.E., 1995. Narrative configuration in qualitative analysis. International Journal of Qualitative Studies in Education 8 (1), 5–23. https://doi.org/10.1080/0951830950080103
- Pörtner, H.-O., Roberts, D. C., Tignor, M., Poloczanska, E. S., Mintenbeck, K., A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem, & B. Rama. (2022). IPCC, 2022: Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press.
- Qikiqtani Truth Commission, 2010. Qikiqtani Truth Commission: Achieving Saimaqatigiingniq. Qikiqtani Inuit Association, Iqaluit, Nunavut.
- Raikes, J., Smith, T.F., Baldwin, C., Henstra, D., 2022. Disaster risk reduction and climate policy implementation challenges in Canada and Australia. Climate Policy 22 (4), 534–548. https://doi.org/10.1080/14693062.2022.2048784.
- Reading, C., 2015. Structural Determinants of Aboriginal Peoples' Health. In: de Leeuw, S., Greenwood, M., Lindsay, N. (Eds.), Determinants of Indigenous Peoples' Health in. Beyond the Social, Canada.
- Redvers, J., 2020. "The land is a healer": Perspectives on land-based healing from Indigenous practitioners in northern Canada. International Journal of Indigenous Health 15 (1), 90–107. https://doi.org/10.32799/ijih.v15i1.34046.
- Roe, E., 1994. Narrative Policy Analysis: Theory and Practice. https://doi.org/10.1215/9780822381891.
- Stoddart, M.C.J., Smith, J., 2016. The Endangered Arctic, the Arctic as Resource Frontier: Canadian News Media Narratives of climate Change and the North. Canadian Review

- of Sociology/revue Canadienne De Sociologie 53 (3), 316–336. https://doi.org/10.1111/cars.12111.
- Tagalik, S., Greenwood, M., de Leeuw, S., Lindsay, N.M., 2018. Inuit knowledge systems, Elders, and determinants of health: Harmony, balance, and the role of holistic thinking. Determinants of Indigenous Peoples' Health, Beyond the Social, nn 93-101
- Tanner, T., Allouche, J., 2011. Towards a new political economy of climate change and development. IDS Bulletin 42 (3), 1–14.
- Taylor, M., 2014. The political ecology of climate change adaptation: Livelihoods, agrarian change and the conflicts of development. Routledge.
- Thomas, N.A., Ersig, A.L., Nelson, L.A., Owen, B., Whyte, K.P., Wispelwey, B., Bratzke, L. C., 2025. Identifying Settler Colonial Determinants of Indigenous Health within the United States: a Discursive Paper. Public Health Nursing 42 (2), 890–898.
- Thornborrow, J., 2012. Narrative analysis. Routledge, In The Routledge Handbook of Discourse Analysis.
- Todd, Z., 2017. Fish, Kin and Hope: Tending to Water Violations in amiskwaciwâskahikan and Treaty six Territory. *Afterall: a Journal of Art.* Context and Enquiry 43, 102–107. https://doi.org/10.1086/692559.
- Truth and Reconciliation Commission of Canada. (2015). The Final Report of the Truth and Reconciliation Commission of Canada (Vol. 1). McGill-Queen's Press-MQUP. http://nctr.ca/assets/reports/Calls_to_Action_English2.pdf.
- Tschakert, P., Ellis, N.R., Anderson, C., Kelly, A., Obeng, J., 2019. One thousand ways to experience loss: a systematic analysis of climate-related intangible harm from around the world. Global Environmental Change 55, 58–72. https://doi.org/10.1016/j.gloenvcha.2018.11.006.
- Vincent, R.C., 2000. A narrative analysis of US press coverage of Slobodan Milosevic and the Serbs in Kosovo. European Journal of Communication 15 (3), 321–344.
- Vogel, B., Bullock, R.C.L., 2021. Institutions, indigenous peoples, and climate change adaptation in the Canadian Arctic. GeoJournal 86 (6), 2555–2572. https://doi.org/ 10.1007/s10708-020-10212-5.
- Walter, M., Andersen, C., 2013. Indigenous Statistics: a Quantitative Research Methodology. Left Coast Press.
- Watt-Cloutier, S., 2015. The right to be cold: one woman's story of protecting her culture. The Arctic and the Whole Planet. Penguin Canada.
- Whyte, K., 2020. Too late for indigenous climate justice: Ecological and relational tipping points. Wires Climate Change 11 (1), e603.
- Whyte, K.P., 2016. November 10). is it colonial déjà vu? Indigenous peoples and climate injustice. In: Humanities for the Environment. https://doi.org/10.4324/ 9781315642659-15
- Whyte, K.P., 2018. Indigenous science (fiction) for the Anthropocene: Ancestral dystopias and fantasies of climate change crises. Environment and Planning e: Nature and Space 1 (1–2), 224–242. https://doi.org/10.1177/2514848618777621.
- Whyte, K., Talley, J.L., Gibson, J.D., 2019. Indigenous mobility traditions, colonialism, and the anthropocene. Mobilities 14 (3), 319–335. https://doi.org/10.1080/17450101.2019.1611015.
- Wong, G., Breheny, M., 2018. Narrative analysis in health psychology: a guide for analysis. Health Psychology and Behavioral Medicine. 6 (1), 245–261.
- Yanow, D., 1993. The communication of policy meanings: Implementation as interpretation and text. Policy Sciences 26 (1), 41–61.