

Peer Review:

Falls under the following of the four categories:

2) Papers that are publishable with minor revision. These require detailed comments from the reviewer.

The research was adequate and there did not appear to be gaps in ideas or lacking evidence. But some concepts need some explanation for the wider audience, for example, terms like gender budgeting.

The paper was logically organized but maybe provide more explanation on how the paper is divided regionally, I make some specific comments about this.

There were not substantive errors in fact, but the Box 1 makes a reference to Hydro power in the prairies, whereas in Alberta and Saskatchewan we don't generate much power through Hydro, maybe a regional-cultural concern not properly addressed in the Livesmart BC reference.

The revisions I suggest are mainly based on my Indigenous feminist approach, as suggestions to improve the intersectional analysis, to better appreciate Indigenous knowledges and perspectives, and as an Indigenous person I show my appreciation of your work by sharing some of my own stories in the comments regarding ideas that really resonate with me.

Overall this paper is very important and timely, given the unveiling of climate changes policies and initiatives in the federal and provincial governments, due to the need for gender-based analyses, and also timely due to all the climate change weather events. As an feminist Indigenous scholar from Northern Alberta, this paper really resonated with me personally, since my community and neighboring communities have faced evacuations due to wild fires in our recent history, and it is often women left to do the caring work, paid work, and volunteer work during these disasters.

## **Gender and Climate Justice in Canada: Stories from the Grassroots**

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Submitted to the Canadian Centre for Policy Alternatives  
July, 2017

DRAFT – DO NOT QUOTE OR CITE WITHOUT PERMISSION

**ABSTRACT:** Climate change has gendered effects across Canada. Extreme weather events, warming cities, melting sea ice and permafrost, ice storms, floods, droughts, and fires related to climate change are directly and indirectly causing widespread economic and social impacts. Fossil fuel extraction, transport, and processing affect many people in Canada. Women and men have different experiences and views regarding climate change, and are affected differently as a function of their gendered social and economic positions. They also have different access to redress and to policy processes shaping public responses. Indigenous women, in particular, are on the front lines of climate injustice and are leading inspiring resistance movements.

This paper examines climate justice issues across Canada through a gender lens, using a literature review and interviews with researchers and activists to identify the major themes and knowledge gaps. The paper also summarizes preliminary results of grassroots research into how individuals, community-based organizations, women's groups and indigenous activists across Canada experience and articulate the gendered impacts of climate change, what their priorities are for action, and how they are organizing -- for example, by incorporating climate change education, outreach, networking, activism, and policy development into their work.

**KEYWORDS:** climate change, climate justice, gender, public participation, environmental education, women and work, green community development, intersectionality, international equity, income distribution, labour unions, civil society engagement, climate change adaptation.

## Gender and Climate Justice in Canada

### I. Introduction: Climate Change and Gender in Canada

Across Canada, from the Atlantic to the Pacific to the Arctic Oceans, climate change is affecting people's lives and livelihoods (see Box 1). Temperatures in Canada increased by more than 1.3 degrees C since 1948, a rate about twice the global average. Warming near the Great Lakes could be 50 percent higher than global increases, according to the Intergovernmental Panel on Climate Change, and like elsewhere in the world, extreme weather events are predicted to become more frequent and intense in Canada due to global warming (Aulakh 2013; Warren and Lemmen 2014).

For people in Canadian cities (where ice storms, floods and droughts, and power failures have become more frequent in recent years) and in rural areas, the Arctic, and resource-based communities (where fisheries, mining, forestry, agriculture, food systems and cultural life are all affected in various ways by climate change), environmental and economic impacts are intertwined with social effects.

Recent extreme weather events in Canada include:

- Forest fires in British Columbia in 2017 and around Fort McMurray, Alberta in 2016 (to date the costliest disaster for insurers in Canadian history, at an estimated \$9 billion)
- Torrential rainfalls in Toronto on August 19, 2005 (causing \$500 million in insured damage and \$34 million in costs for the City of Toronto) and July 8, 2013 (\$1.2 billion in damages; insured losses of \$850 million)
- An ice storm in Ontario and Quebec in December 2013 (\$200 million in insured losses),
- Flooding in Calgary in June 2013 (\$6 billion in damages),
- Canada's worst recorded ice storm in early January 1998 (\$1.6 billion in insured losses; estimated total economic costs \$5.4 billion),
- The worst recorded prairie drought in 2001–2002 (\$3.6 billion in farm losses),
- Flooding in 2017 (following drought conditions in 2012) which threatened St. Lawrence Seaway shipping,
- A major wind and rain storm in British Columbia in December 2006 (\$142 million in damage claims),
- Drought conditions throughout western Canada causing particularly extensive wildfires in 2004 and 2014-2015 (CBC 2017a; Canadian Climate Forum, 2013; Riversides 2013; Mortillaro 2013; National Post 2013; Lowrie 2017; Weese 2009; Steelman 2015).

**Commented [A1]:** It would be very timely to make mention of the BC wildfires of 2017, due to the extensive evacuation and impact.  
"BC man volunteers to fight wildfire in hometown" on CBC, had a very gendered interview.  
<https://www.youtube.com/watch?v=jYBIJBqNTmk>

[Insert one or more photos about here, and wherever possible throughout the report. Sample photos are copied at the end of this file.]

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Climate models indicate that extreme weather events are likely to increase in frequency and intensity in Canada in the coming years (Cheng et al. 2012). Box 1 summarizes expected impacts of climate change across Canada. The Insurance Board of Canada has stated that such disasters mean insurance rates will be increasing (CBC 2017b).

[insert Box 1 about here]

Until recently, it was rare for researchers to consider climate change impacts through a gender lens, and there are few papers that look at this issue in Canada. One notable exception is Elaine Enarson and Joseph Scanlon's study of the 1997 flood of the Red River in Manitoba, which documented in detail how "male lines of action and male voices" were "privileged... when couples were confronted by an extreme event" (Enarson and Scanlon 1999:118). The authors note, "Not simply a marker of 'difference', gender is a distributive system through which women and men are differentially empowered before, during, and after disasters.... (T)he disparate flood experiences of evacuated couples indicated that, under some conditions and to varying degrees, gender relations disproportionately disadvantaged women..... The invisibility of women's flood work, male power in disaster decisions, and the expansion of women's domestic work throughout the disaster cycle also suggest change at the interpersonal level toward less egalitarian relationships" (Ibid.). They call for research of various types to understand these patterns better: couple-focused research, comparative research, and studies of male power in disaster decisions, gender-specific disaster decisions and practices, the gendered division of labour in disaster work, gender issues in temporary accommodation, disaster mothering/caregiving, women's economic status and interests, gender issues in emotional responses, and women's voice in emergency management (Ibid.: 120-121).

Enarson and Scanlon conclude, "In our view, disaster theory and practice are advanced by an analysis of gender as a basis for power in the social construction of disaster vulnerability, response, and mitigation. To the degree that gender inequalities are found to be root causes of women's greater disaster vulnerability, both in wealthy societies and in the poor nations of the developing world, emergency management initiatives which address gender power and inequality in public policy, organizational practices, and interpersonal relationships have a significant part to play in mitigating disasters" (Ibid.: 121).

Kathleen McNutt and Sara Hawryluk in 2009 also found that the literature on gender and climate change in Canada was very limited, and that women's

participation in climate change policy debates has been minimal. Their overview of the reasons demonstrates that this is no oversight or coincidence (see Box 2).

[insert Box 2 about here]

Another blow to research and advocacy related to gender and climate justice came with Health Canada's 2012 decision to cut federal funding to six national organizations that studied the impact of government policies on women's health, including the National Network on Environments and Women's Health and the Canadian Women's Health Network (Smith 2012), forcing them to close down.

McNutt and Hawryluk state that "there is growing evidence that the differential experiences of climate change across Canada threaten social cohesion and undermine current policy commitments to social protection" (McNutt and Hawryluk 2009:116). They call for Canada to develop a gender-aware response to climate change by including women in decision-making, undertaking gender-based analyses, and mainstreaming gender into climate change integration at all stages of policy-making (Ibid.: 116-118).

The concept of gender is understood in ever more complex ways in recent years as transgender activists and academics challenge binary understandings of gender. The acceptance of gender as a continuum, and as a concept that is at least partly a social construction, doesn't negate the evidence that climate change impacts are different for those seen and defined as male and as female. Moreover, feminist scholarship and activism highlight the interactions among gender, race/ethnicity, poverty/economic class, dis/ability, and other social factors in exacerbating injustices of all kinds, including those related to climate change. Intersectionality – the compounding effects of various kinds of social difference beyond gender, such as ethnicity, income level, and dis/ability – is important in tracking the injustices related to climate change.

This paper assembles a nation-wide, justice-oriented overview of climate change impacts, action, and policy in Canada from a gender perspective. It builds upon a literature review of previous studies which have investigated the gendered effects of climate change in relation to specific sectors or geographical areas in Canada, as well as interviews with a range of activists and researchers. Like many studies of gender and climate justice in the Global South, this paper considers both *distributive justice* (work, money, resource access) and *procedural justice* (decision-making, leadership, political agency) as part of a dynamic view of how climate change affects women and men differently, and what they are able to do about it (Paavola et al. 2006).

Following a discussion of the definition of climate justice and related gender issues, the paper examines key climate change effects and their gender implications, region

**Commented [A2]:** Which is ironic, since both the Harper and Trudeau governments have bragged about using gender-based analyses approaches in Health Canada, and Trudeau specifically has touted himself as a feminist.

**Commented [A3]:** I can just see someone being upset as being listed as "other social factors", like indigeneity, geography, gender identity, family status, marital status. But that is a minor concern.

**Commented [A4]:** Yay! Glad to hear you take this approach.

by region across Canada and for the country as a whole. Existing studies, researchers, organizations and challenges are mentioned and summarized in this review. The paper's conclusion draws out gender and climate justice themes and, along the lines suggested by Rohr et al. (2008) and Terry (2009), outlines a strategy for building on gender justice to organize in Canada for local and global climate justice. Gender justice is a fundamental component of climate justice, and gender justice organizing, activism, techniques and lessons can help show the path to climate justice more generally (Perkins 2014; Perkins 2017).

## II. Gender Justice and Climate Justice

"Climate justice" is defined in various ways. For example, the Climate Institute says, "Climate Justice is a vision to dissolve and alleviate the unequal burdens created by climate change. As a form of environmental justice, climate justice is the fair treatment of all people and freedom from discrimination with the creation of policies and projects that address climate change and the systems that create climate change and perpetuate discrimination" (Climate Institute 2013).

The international organization Climate Justice Now! states:

- "Climate justice is based on the understanding that, while climate change requires global action, the historical responsibility for the vast majority of greenhouse gas emissions over the past 250 years lies with the industrialised countries of the North. Cheap energy – in the form of oil, coal and gas – has been the engine of their rapid industrialisation and economic growth.
- Communities in the Global South as well as low-income communities in the industrialised North have borne the toxic burden of this fossil fuel extraction, transportation and production. Now these communities are facing the worst impacts of climate change – from food shortages to the inundation of whole island nations.
- Genuine solutions include:
  - ✓ Leaving fossil fuels in the ground and investing instead in appropriate energy-efficiency and safe, clean and community-led renewable energy
  - ✓ Radically reducing wasteful consumption, first and foremost in the North, but also by Southern elites.
  - ✓ Huge financial transfers from North to South, based on the repayment of climate debts and subject to democratic control. The costs of adaptation and mitigation should be paid for by redirecting military budgets, innovative taxes and debt cancellation.
  - ✓ Rights-based resource conservation that enforces Indigenous land rights and promotes peoples' sovereignty over energy, forests, land and water.
  - ✓ Sustainable family farming and fishing, and peoples' food sovereignty" (Climate Justice Now! 2013).

At the Earth Summit in Johannesburg in August 2002, international environmental groups adopted the Bali Principles of Climate Justice, which set out both a rationale and principles for Climate Justice (see Box 3).

[insert Box 3 about here]

Another definition, focusing on people's access to policy decision-making processes, is provided by Chatterton et al.: "Climate justice refers to principles of democratic accountability and participation, ecological sustainability and social justice and their combined ability to provide solutions to climate change. Such a notion focuses on the interrelationships between, and addresses the root causes of, the social injustice, ecological destruction and economic domination perpetrated by the underlying logics of pro-growth capitalism" (2012:606).

Both at the local level and globally, climate change adaptation and response initiatives can downplay or suppress democratic, equity-enhancing politics (Few et al. 2014). For example, new regulations or laws may penalize older cars that are more polluting, without taking into account that low-income people who need a car for their work may not be able to afford a newer car. The climate justice literature discusses the principles of both *distributive justice* (global redistribution of resources and risks) and *procedural justice* (fairness in people's abilities to set policies and influence future outcomes) as essential elements of climate justice (Paavola et al. 2006). There are wider aspects of climate justice too: *intergenerational justice* (the rights of those who are not yet born to inherit a liveable Earth, and the responsibilities of some people alive now for the impacts of decisions and consumption which happened in the past), *interspecies justice* (consideration for non-human species and for protecting biodiversity), and *corrective, retributive, or restorative justice* (fairness in the measures taken to correct an unjust situation).

Women are generally the experts on the effects and priorities related to climate change at the grassroots level, because of its impacts on their paid and unpaid working lives, but they usually have subordinate or limited roles in policy and governance. This needs to change if the challenges of climate change are to be effectively met (Figueiredo and Perkins 2013). Women are not only "victims" of climate change, they are also stakeholders, leaders, and actors producing change. Facilitating their political voice, therefore, could have manifold benefits. "There is the potential, albeit largely untapped, to facilitate the integration of women's economic empowerment in mitigation and adaptation measures and thus be able to achieve several objectives simultaneously" (Bäthge 2010:4; Macgregor 2017).

[insert Fothergill quote in box about here]

A United Nations Food and Agricultural Organization study notes, “Experience in reviewing gender aspects in natural disaster management and development cooperation offer good suggestions for the development of policies to address the gender variable. The message is clear: while women are generally more vulnerable to impacts of climate change, in many cases they exhibit surprising resilience. Moreover, their responsibility for greenhouse gas emissions is relatively lower than the one of men (as some early data shows), but the differences narrow with increasing equality of opportunity” (Lambrou and Piana 2006:2). The authors call for gender differences to be acknowledged in climate policy and for “mapping of gender-specific emissions profiles, mitigative and adaptative capacity; assessment of impacts on changing status of women, (and)... development of new policy.... with regards to gender specificities” (Ibid.:20).

In Europe, however, a 2012 report found that “women’s involvement in climate change decision-making at national, European and international levels is still low” and that women are a low proportion of graduates in scientific and technological fields deemed important for climate change response (EIGE 2012: 3). It’s noteworthy that the moment an emergency is declared by government bodies (for example, when there is an extreme weather event or power outage caused by a storm), the institutions who take over are the ones that are the most top-down and male dominated: the army, police, power authorities, firefighters and disaster-relief organizations. This means that from a labour perspective, women are excluded from much of the paid work required to deal with climate change, while simultaneously being expected to shoulder new amounts and kinds of unpaid work. The “just transition” to green jobs and a green economy similarly can exclude traditionally-female jobs and ignore the gendered work impacts of policies aimed at addressing climate change (WEI 2015; Cohen 2017; Alston and Whittenbury 2013). Bringing explicit gender analysis and perspectives into climate change policy will not only make it fairer, but also more efficient and effective.

Moreover, “the world will fail to address climate change and its impacts until it understands and decides to address gender inequality.... Gender analysis aids in the understanding of climate change... [and] questions the allocation of power over natural resources, over economic opportunities and over decision-making processes (Buckingham and Le Masson 2017:2-8).

How are these trends and challenges, noted worldwide, specifically manifested in Canada? How does a gender justice perspective help to explain Canada’s experiences and approaches to climate change? What are Canadian women doing about climate change and its gendered impacts? The following sections examine Canadian regional, sectoral and national-level studies in exploring these questions.

### III. Gender and Climate Justice Across Canada

Agriculture, energy, forestry and mining exports account for about 58 percent of Canada's total exports – a relatively large proportion among developed countries -- and exports represent about 30 percent of Canada's GDP (Statistics Canada 2015). This means that land-based production – which is more affected by extreme weather events than factory/industrial production – is relatively important to Canada's economy and to the livelihoods of Canadians.

As in most other developed countries, the service sector makes up about two-thirds of Canada's economy. Services, too, are affected by the changing climate, as health and healthcare, education, government activity, supply chain management, tourism, insurance, telecommunications, engineering, and retail adjust to new risks and requirements brought on by higher temperatures, weather variability, and the energy transition away from fossil fuels. For example, stores are closing while online sales grow, but storms, fuel costs, and transportation disruptions can complicate deliveries. In the health sector, Lyme and West Nile disease, heat-related deaths, and even malaria are increasing in Canada, putting new demands on public health agencies, nurses, and hospitals. Insurance companies are particularly affected by new risks related to climate change.

On First Nations reserves and in the far north, remoteness, melting ice and permafrost and rising sea-levels, as well as long-standing effects of poverty / colonialism and the close ties between indigenous populations and the land, may magnify the effects of the rapidly changing climate. There are gendered impacts in all these sectors, with particularly severe outcomes in certain Canadian regions.

#### A. The Arctic

According to the Intergovernmental Panel on Climate Change (IPCC), the Arctic region is warming four times faster than the rest of the planet, and Arctic sea ice is disappearing rapidly. Melting permafrost releases methane, which accelerates climate change; melting snow darkens the land, so it absorbs more heat. By 2050, the Arctic Ocean is expected to be ice-free for 125 days per year, as compared to 50 days in 2014 (McDonald 2014). Polar bears, migratory birds, caribou and fish are all affected, so food sources are changing for Arctic people.

A number of studies have investigated the gendered effects of climate change in the Canadian Arctic. These have focused on such issues as food security, contaminants, health, and gendered cultural roles (Dowsley et al. 2010; Kafarowski 2006; Nallainathan 2008/2009; Kukarenko 2011; Beaumier, Ford and Tagalik 2014).

Beaumier, Ford and Tagalik found that Inuit women's food security in the community of Arviat is affected more by socio-economic-cultural factors than by climate change, due to the nature of the traditional food system there which is based on harvesting land mammals; however, a local dependency on a limited number of animals for diet increases sensitivity to potential future climate disruptions and

**Commented [A5]:** Please don't say "poverty/colonialism" as if they are the same thing. Colonialism and poverty are not the same thing, the high rate of poverty among indigenous peoples is due to the history of colonials. Its better to say "long standing effects of colonialism such as poverty". You might also want to mention that this "poverty" is because of the institutional racism Indigenous peoples face in the educational system and labour market, and also the segregation system under the Indian Act where half of First Nations peoples live on-reserves where public funding and public infrastructure is far behind Canadian standards.

**Commented [A6]:** This to me implies Inuit culture is to blame for women's food insecurity, and not climate change. Clarify socio-economic-cultural factors, what does it even mean? That sounds like a catch-all. Maybe clarify that Inuit women are losing access to the land, which has a negative impact on their traditional subsistence practices.

may reduce resilience, or the community's ability to handle fluctuations in weather and food availability (Beaumier, Ford and Tagalik 2014).

Dowsley et al. (2010) interviewed Inuit women in Qikiqtarjuaq and Clyde River, Nunavut about their perspectives on climate change. They divide the results into primary effects – on hunting, fishing and travelling – and secondary effects – changes in the use and condition of products like seal skins, and the psychological and social impact of going out on the land or the ice less often due to fear of dangerous conditions. Bunce's interviews, photovoice research, and focus groups with Inuit women in Iqaluit identified a number of factors which may affect individuals' adaptive capacity, including their backgrounds, health, education, social networks, financial resources, and cultural identity (Bunce 2016).

[insert Bunce quote in box]

Inuit women are often the mainstays of their families and communities, and are also providing significant leadership at the global level. "Maatalii Okalik, President of Canada's National Inuit Youth Council, was at the Paris Climate change talks in 2015. Nunavut Premier Eva Aariak officially represented Nunavut as part of Canada's delegation to the Conference of the Parties, COP-15, in Copenhagen. Mary Simon, President of the national Inuit organization Inuit Tapiriit Kanatami, was one of 17 'prominent' Canadians to serve as special advisors to Environment Minister Jim Prentice. Violet Ford represented the Inuit Circumpolar Council for Canada. Sheila Watt-Cloutier, the first Inuk Nobel Peace Prize nominee and prominent climate change activist, was a popular speaker at multiple events, including one on women's leadership in climate change initiatives. Janice Grey, an Inuk from Aupaluk, Quebec, was part of the Canadian Youth Delegation at Copenhagen" (Dowlsey 2010:160).

For women in particular, the secondary effects of climate change and resulting changes in human behavior are altering economic, social, and cultural life in Inuit communities. Nallainathan (2009) also documents these kinds of changes, reporting on the dependence of Inuit adults on hunting and fishing to meet their nutritional needs and the evidence that "in Nunavik, single-parent households headed by women have the least access to traditional foods and limited access to healthy alternatives" (Nallainathan 2008/2009: n.p.).

[insert Hirsch quote in box]

Mike Kim (2015) has investigated the links between climate change, food insecurity, and gendered labour roles in Inuit communities, noting the "sense of gender-blindness" (Ibid.:26) in climate change policies, and the growing stress on women's working lives and roles in connection to both country food and store-bought food.

## B. Fishing Communities

**Commented [A7]:** What did interviewees have to say about "hunting, fishing, travelling"? And what did they say about "going out on the land or the ice less"? The Bunce quotes on berrypicking are great but this summary does not do justice to the richness of the data. A lot to ask, I know, but as a qualitative researcher I feel a lots gets lost by listing factors and effects.

**Commented [A8]:** This seems like an important concept, can you explain it.

Rising sea levels affect all coastal areas in Canada, and are exacerbated by storm surges during extreme weather events, which are increasing in frequency and severity. On the north Yukon coast, sea levels are expected to rise up to 50 cm by 2050 (LiveSmart BC 2015).

A community-based research and education project on climate vulnerabilities in coastal New Brunswick (Signer et al. 2014) assembled and provided a wide range of information to local community members who participated in working groups to discuss and prioritize climate change adaptation recommendations. The project's report on its process and findings is comprehensive, but does not mention gender with regard to women's special vulnerabilities, work roles in times of crisis and in building community resilience, or contributions to community adaptation -- despite gender issues being raised by facilitators (Ibid.:67). However, the two Canadian jurisdictions that mention gender in their climate-related policies/plans and legislation are both in the Maritimes: Newfoundland and Labrador has a climate-related programme for girls, and Nova Scotia mentions gender in its sustainable transportation plan (Chalifour 2017:243; Ramessur 2014).

Marilyn Porter, in a paper on gender and fisheries citing examples from Newfoundland, says "There is now a body of writers within the relatively confined orbit of specialists in aspects of gender and aquaculture and fisheries who have begun the exploration of the neglect of gender, usually by drawing attention to the contribution of women to aquaculture and fisheries activities.... but we are not yet equipped with an overall understanding of gender and fisheries, or the ways in which globalization, climate change and other macro processes impact on women.... While we are so short of studies that focus on the speed and profound nature of the consequences for women brought about by economic and social changes, we find it difficult to connect the local situations with the more structural and global accounts of macro processes. There is, I believe, no short cut to developing a framework in which we can examine the interconnectedness as well as the specificity with which such changes play out in the lives women live in their social, cultural and economic specificity" (Porter 2012:5-6).

### C. Agricultural Communities

Most agricultural regions of Canada are becoming warmer, with longer growing seasons, but somewhat drier and with more variable weather. Mountain glaciers are melting, meaning that glacier-fed rivers in Alberta and British Columbia may soon dry up. Warmer summers could cause heat-wave livestock deaths, reduced milk production and reduced weight gain for cattle, and disease infestations (Agriculture and Agri-Food Canada 2014). Predicted impacts in the prairie provinces of Canada include water scarcity, more climate variability, major ecosystem changes, more common vector-borne diseases, and increasing drought threats to agriculture (SaskAdapt 2015).

A 2005 article by Wendy Milne in the journal Canadian Woman Studies points out that the impact of climate change on Canadian farms has made women more vulnerable economically. “In a context where changes in rural Canada have led to the reorganization of government work and plant closures, where the necessity of off-farm labour and relocation has increased women’s isolation, limited women’s ability to find paid work, and reduced access to needed social services and health care, it can be concluded that women will be unjustly exposed to the pressures of climate change” (Milne 2005:51). Citing additional studies, she details some of these pressures: limited and declining health services in rural areas, increased levels of illness, nutritional problems, food and water shortages, more responsibility for care-giving; women’s marginalization in agriculture and natural resource decision-making; high expenditures for heating and electricity by women living in poverty; technological innovations that are inappropriate for women’s lives; transportation problems in rural areas especially affecting women. “Including rural women in the climate change policy and strategy process not only ensures equity, innovation, and access to situated knowledges, but it goes a long way toward ensuring the very health of rural communities and peoples across the planet” (Ibid.:53). Most of these changes have been underway since the advent of large-scale farming and neo-liberal economic policies, but climate change is one more factor that is making life more economically precarious for farm women and farm communities altogether.

[insert Pearce quote in box]

Amber Fletcher’s research based on interviews with farm women and men in Saskatchewan illustrates what she calls their “highly gender differentiated experiences of climate change” (Fletcher 2017), and she advocates policy changes to address this, especially with regard to farm decision-making, education and information farmers can use in dealing with and planning for changing circumstances, mental health supports, and recognition of the impacts on women’s family and community roles.

#### D. Forest Regions

In Canadian forests, the interconnected effects of climate change include drought and increasing forest fires in the western boreal forest, the worsening mountain pine beetle infestation in British Columbia affecting up to 80 percent of the forest cover, and aspen dieback in the Prairies (Natural Resources Canada 2015; Livesmart BC 2015; Bentz et al. 2010).

Gender mainstreaming -- addressing gender in policy-making -- in the Canadian forest sector “remains weak” (Reed et al. 2014:996). A recent study on gender, climate change, and adaptive capacity in Canadian forest-based communities documents a number of ways in which attention to gender could improve climate change adaptation. These include data-gathering by gender, gendered analyses, increasing women’s voice and agency in decision-making, learning from experiences in the global South, and expanding research agendas to include differential access by

**Commented [A9]:** It wasn’t until this section, that I finally realized what you meant early on when you said it would be a regional analysis. At first I thought you’d divide your analysis by province, or rural vs. urban. But now I realize you mean geographical environmental regions. How did I miss this? Your analysis makes more sense now.

women and men to different kinds of capital within communities (Ibid.:999-1001; see also Klenk et al. 2012); participatory social research and planning processes with distributional impact, measurements, and community applications; gender mainstreaming in forestry and lessons from other countries; and community-based studies, education and discussion of collective climate change adaptation measures. The authors cite a range of earlier studies documenting the “highly gendered division of labour” in forest-based communities (ibid.: 997), with women and indigenous people facing differential access to jobs and leadership opportunities, and they conclude that more focused research is needed to understand the “differential vulnerability to, influence in, and adaptive capacity associated with climate change risks” (ibid.:999).

Keeping in mind that First Nations communities are often situated in forested regions, this study illustrates the need to look at the issue of women in Canada’s boreal forest regions through a lens of intersectionality. Intersectionality means acknowledging that individuals have multiple identities in terms of privilege or experience of oppression. Kaijser and Kronsell (2014) note that only by considering intersectionality can we have a more extensive understanding of climate change impacts. For indigenous women, their access to economic resources is often less than white women, so their vulnerability to climate change is greater. They are more likely to live in marginal housing, already have less access to clean drinking water and already have worse health outcomes than others in Canada.

Reed et al. state, “(T)here has been virtually no research in Canada or other postindustrial countries that explicitly links gender and related social characteristics of communities to adaptive capacity for climate change in the context of forest-based communities. Forest-based communities are frequently characterized as ‘vulnerable’ to the impacts of climate change and associated environmental risks without sufficient attention to how local knowledge may influence capacity positively, what is the continuum of impacts that affect individuals across a spectrum of socioeconomic differentiation, or how local institutions can provide appropriate responses. Significant challenges lie ahead. One is the misguided belief that factors affecting differential exposure and vulnerability of women and men to climate change as expressed in developing countries are not at play in Canada..... A gender focus can help sensitize researchers and practitioners to multiple social dimensions and create opportunities for more inclusive analyses and policies and practices. Feminist scholarship also more broadly encourages understanding of broad systemic forms of marginalization with a view to changing inequalities in social relations” (ibid.:1002).

Julie Drolet’s interviews with women in northern British Columbia forest-based communities also provide many examples of the different ways women and men are affected by, and respond to, climate change -- related to such things as disaster preparedness, food security, new childcare needs, community volunteering to help others, violence against women, isolation, and household planning / decision-making (Drolet 2015).

**Commented [A10]:** Wow this is a long list of recommendations, I had to read it twice, my head was spinning, could you divide this into two sentences. Or put it in a box or bullet points.

## E. Mining and Extraction

Mines across Canada are affected by climate change-related flooding, thawing permafrost (which can reduce the stability of mine walls, melt tailings dams, and shorten the season when ice roads can be used), and infrastructure damage due to extreme weather events (Perkins 1997). Remote mining communities have long been recognized as male-dominated work and social spaces. Maya Gislason et al. (2017) have begun to research the gendered impacts of boom-and-bust cycles in British Columbia's extractive industries on indigenous and non-indigenous women.

[insert Hemingway quote in box]

Fossil fuel extraction provides a clear window on climate justice issues for women in Canada. Women are both underemployed and underpaid in Alberta oil industry jobs (Hill et al. 2017; Lahey 2016). "Through both their paid and unpaid work, [women and visible minorities] support and maximize men's highly masculinized work in the oil industry, to the project of those men, oil executives (who are mostly men), and shareholders of oil corporations (who, again, are mostly men)" (Hill et al. 2017). Women's income inequality is higher in Alberta, where fossil fuel extraction dominates the economy, than in any other province: 41% compared to the national average of 33% (Lahey 2016). Racialized women face discrimination and marginalization in Fort McMurray based on their gender, race, religion and culture (O'Shaunessy and Dogu 2016).

Cancers in the First Nations communities of Fort Chipewyan and Fort McKay, downstream from tarsands extraction in Fort McMurray, are increasing and are more frequent in women (McLachlan 2014:12; Perkins 2017). Gender-based violence, including sexual, domestic, family, homophobic and transphobic violence, as well as disappearances of women and girls, have intensified in conjunction with extraction of the tarsands (Awâsis 2014:255; Konsomo and Kahealani Pacheco 2014; CBC 2016a; Zuckerman 2012). Indigenous women are six times more likely to be killed, and 2.5 times more likely to be victims of violence, than non-indigenous women (Canadian Women's Foundation 2014:7).

[insert Bernstein quote in box]

It is an oversimplification to simply point at the working class men who work in the extraction and mining industry and see them as the "problem." Historically as well as today, these are industries that provide well-paying though often dangerous jobs to (mostly) men who are from low income backgrounds and/or regions of the country. For these men, there are generally not many other job opportunities. Women who are spouses of these men may also be proponents of the extractive industries and vote and act accordingly as they rely on extraction-related paycheques for at least part of the family income. This is reflected in Gislason et al.'s research on the determinants of health in mining communities: "Amidst a growing

awareness of the significance of climate change as a driver of health issues and through gathering evidence of its myriad pathways of impact, the tenability of our dominant economic systems is being called into question and their culpability in accelerating anthropogenically driven climate change named. The impacts of large-scale intensive resource extraction projects on the health and well-being of actual people in the landscapes in which they live, work, play, and love moves us beyond dualisms such as ‘the environment versus jobs’ or ‘feeding families versus saving trees.’ Studying the health impacts of intensive resource extraction is a foundation-building opportunity that requires researchers to tackle system-wide issues if the goals are to bring about primary prevention, to reduce human pressures on the environment *and* to lessen existing risks for vulnerable populations” (Gislason et al. 2017:225).

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#### F. Quebec

A study by Rochette et al. in 2012 noted that some sectors of the Quebec economy would be more affected by climate change than others, especially agriculture, natural resource extraction (forests, mines), hydroelectric production and tourism. Through a literature review, interviews with women’s and environmental groups, and focus groups, the study explored women’s concerns and views regarding climate change and gender issues (Rochette et al. 2012:13). It found that many women’s groups were not particularly engaged with the issue of climate change, while environmental groups did not focus on gender questions. Documents from the government ministries most directly concerned with climate change showed no special attention to gender questions. Many interviewees were unaware of the links between gender and climate change, and many perceived climate change impacts as far off in time and space, highly technical and inaccessible. It appeared that the two subjects were in separate silos, except for environmental issues touching directly on women’s health. However, the study noted that women and men tend to have different carbon footprints, so a gender approach is important in climate policy (ibid.:16). The authors cite a 2006 Montreal study showing that 56% of women’s transportation trips were taken by car, while 62% of men’s were, and men drove farther than women did. Women constituted 54% of subway riders and 57% of bus riders (ibid.:36-37). Women tend to have less confidence in technological fixes for climate change (ibid.:33; Eyzaguirre 2008) and to be more impacted by carbon taxes or other energy tariffs (Ibid.:34; Chalifour 2010), so gender-blind climate change policies could exacerbate social inequalities. All of these factors show how important it is for women to be well-represented in climate policy discussions. However, in Quebec in 2010, women representatives made up only 28.8% of the provincial parliament, 29.3% of municipal councilors, and 16% of mayors (ibid.:41).

Commented [A11]: I get that you want to cite Rochette’s work, and that Quebec’s social policies often differ from the rest of Canada (especially gendered policies such as parental leave and universal childcare), but you should explain your analysis of regions, and how you singled out Quebec as the one province you discuss specifically.

A series of workshops led by Annie Rochette in 2014 in collaboration with the Réseau québécois des groupes écologistes and the Réseau des femmes en environnement began to address some of the education needs identified by the earlier study. These groups’ websites summarize their message:

*“Les campagnes de sensibilisation doivent tenir compte du fait que les femmes et les hommes ont différentes perceptions des changements climatiques et des solutions envisageables. Les campagnes de réduction doivent tenir compte du fait que les femmes et les hommes n’ont pas la même empreinte carbone. Le poids des mesures de réduction ne doit pas être porté de façon disproportionnée par les femmes. Les catastrophes naturelles causent une diminution de l’espérance de vie des femmes. Les femmes doivent à la fois se rétablir de ces catastrophes naturelles et continuer à assumer leurs obligations familiales et extérieures. Plus souvent responsables de leurs proches, les femmes vivent des stress plus importants que ceux des hommes pendant et après un événement météorologique extrême. De plus, les catastrophes naturelles sont souvent reliées à une augmentation de la violence envers les femmes, contribuant ainsi à augmenter leur insécurité”* (Réseau femmes environnement 2014). “Education campaigns should take account of the fact that women and men have different perceptions of climate change and its solutions. Carbon reduction campaigns should take account of the fact that women and men do not have the same carbon footprint. The weight of reduction policies should not be borne disproportionately by women. Natural disasters cause a reduction in women’s life expectancy. Women must both reestablish themselves following disasters and continue to carry their family and work obligations. Usually responsible for those around them, women cope with more stress than men during and after extreme weather events. Moreover, natural disasters are often linked to increases in violence against women, which heightens their insecurity” (Réseau femmes environnement 2014). Rochette’s workshop methods, and conclusions – mainly that environmental and women’s groups tend to operate in silos and not consider their areas of focus in relation to each other – are discussed in a recent book chapter (Rochette 2014). She says that the Fédération des Femmes de Québec (Quebec Women’s Federation) “has recently adopted the position that it must address the environmental, as well as the gendered, impacts of neoliberal economic policies.... (which) sets the state for the most significant women’s organization in Quebec to take positions and action on environmental issues, including climate change (Rochette 2014:261).

#### IV. Gender and Climate Justice: Canada in Global Context

Most of the issues noted in the growing international literature on gender and climate change are applicable in Canada. The following sections summarize some of these cross-cutting issues.

##### A. Health

Climate change has health impacts across the country. Freshwater shortages, worsening smog and heat stress are increasing in Canada (Public Health Agency of Canada 2015). Heat in combination with air pollution and humidity is a mortality risk factor for seniors, especially women (Rainham and Smoyer-Tomic 2003). A study of the 1995 Chicago heat wave found that elderly men were more at risk of dying because of their isolation; elderly women were more likely to have social

networks which gave them access to assistance. Most other studies of heat waves (in France, Korea, the Mediterranean) have found women to be at higher risk (Global Gender and Climate Alliance 2016:24). Women are more likely to die as a result of natural disasters (Neumayer and Plümper 2007; World Health Organization 2014:16) and to suffer gender-based violence related to disasters (IFRC 2007). Reported incidents of gender-based violence quadrupled after Hurricane Katrina in 2005; similar trends followed a 2014 earthquake in New Zealand and the Japan tsunami in 2011 (CBC 2016b; Canadian Women's Foundation 2014:3).

Climate change also has mental health impacts that are most pronounced during and after extreme weather events (Clayton et al., 2014). Pregnant women and their fetuses may be at special risk during extreme weather events; anxiety and stress can induce obstetric complications. Women may also be more vulnerable to psychosocial health impacts due to multiple demands they face following extreme events during the processes of moving, caring for families, cleaning up, resettling, and recovering (Toronto Public Health 2009:8; Duncan 2008).

In the Arctic, climate change drives transformations of living conditions and disrupts traditional lifestyles, contributing to mental and social stress and other health impacts which are more common in women and children; more interdisciplinary research is needed which allows complex social and ecological changes to be analyzed using a gender perspective (Kukarenko 2011).

[insert Howard quote in box]

The grave reproductive health impacts of fracking and other types of fossil fuel extraction and processing -- documented in Canada particularly in Treaty 8 territory near the Alberta tarsands and at Aamjiwnaang First Nation near Sarnia, Ontario -- are echoed globally (Klein 2016:428-430).

Since women make up the majority of health care workers, both formally and informally, these health impacts of climate change have implications for many women's home and work lives, besides their devastating implications for those women who are directly affected (WEI 2015).

Comments Klein, "Our economic system... does not value women's reproductive labor, pays caregivers miserably, teachers almost as badly, and we generally hear about female reproduction only when men are trying to regulate it" (Klein 2014:430).

## B. Risk

An Australian study includes excellent summaries of climate justice issues facing women which are also relevant in Canada: economic participation, housing, transport, food insecurity, mental health, disasters, heat waves, violence against

**Commented [A12]:** I don't think this quote is necessary, it seems a little misplaced here? Or put some lead in to note that the paid work women do is undervalued, and the unpaid work done by women on a daily basis is taken for granted, whether paid or unpaid the amount of work done by women will increase while it's value remains low in the market place.

women, women with disabilities, elderly women, environmental exposure, women and leadership (Weiss 2012). The study notes, “Climate change has been recognized as a ‘risk multiplier’, meaning that populations that are already disadvantaged will be worst affected. Women constitute a disadvantaged population due to the restriction of their lives by socialization into limiting gender roles... The disproportionately negative effects of environmental problems on women may be broadly summarized in three categories. Firstly, women are generally poorer than men, so for example, women are more likely to be unable to afford to renovate their homes to increase their energy efficiency resulting in higher energy bills, Secondly, women generally live longer than men, leaving them more likely to be vulnerable to the health problems and poverty associated with old age. This means that, for example, more women than men are at risk during heat waves because elderly people’s bodies are less able to cope with heat stress. Finally, the socially-constructed roles of women affect the responses they can make to environmental change. For example the focus on household recycling increases women’s workload as it is most commonly women who are in charge of household processes including cleanliness and food preparation.... These disadvantages, which arise from restrictive gender roles, interact with forms of discrimination such as sexism, racism and ageism, resulting in social conditions that put women at risk of environmental injustice” (Ibid.;3).

A United Nations report highlights some of the ways that disasters can lead to worse outcomes for vulnerable groups, “making bad situations worse for women. Meanwhile the potential contributions that women can offer to the disaster risk reduction imperative around the world are often overlooked and female leadership in building community resilience to disasters is frequently disregarded” (UN 2009:iv). It advocates the development of locally-appropriate “gender-sensitive indicators for disaster risk reduction” so that gendered impacts of disasters can be monitored (Ibid.:101).

[insert Enarson quote in box]

Balbus and Malina, writing about the United States, also identify key risk factors which may influence the health effects of climate change in Canada, and call for detailed data gathering and modeling to develop indices of vulnerability and assist public health planning (Balbus and Malina 2009). Special supports for women (and particularly indigenous women), who as noted are at special risk of abuse and violence in times of climate-related crisis, should be understood as vital parts of the crisis response.

The United Nations

### C. Responsibilities and Jobs

Climate change heightens the importance of pay equity, affirmative action, training of women and men for jobs across the spectrum of employment, and a broader view

**Commented [A13]:** This contradicts the statement above in the “health” section that elderly men suffer more during heat waves because they are more likely to be alone, and women are less likely to be affected because they have wider support networks.

**Commented [A14]:** Yes! Now my useless story: These quotes remind me of the wild fire evacuations that happened in Northern Alberta, near Slave Lake, my community of Bigstone Cree Nation was evacuated, our elder’s were put on a bus without there medication history, and the one pharmacy in town was closed and no one could get ahold of their records in Wabasca or Slave Lake, I think the evacuation happened on a Friday, there are a lot of female diabetics in my family, luckily my mom evacuated separately and I was able to get an emergency prescription from my Edmonton pharmacist, but then we were worried about all our other elder’s with multiple chronic conditions who couldn’t get their medication history, it got pretty scary when they were down to one more prescription of diabetic meds and heart meds. Talk about vulnerability, a bunch of indigenous elder’s hold up in a west Edmonton hotel waiting for their medication, amongst all the chaos of the evacuation. Not to mention the jurisdictional nightmare of Indian Affairs, Non-Insured Health Benefits, Health Canada, and Alberta Health Services. Luckily our indigenous leaders and community stepped up to help.

**Commented [A15]:** Yes totally, makes me think of an Indigenous woman I know that was a single mom, that got separated from her extended family during the Fort McMurray fire, and she ended up staying with a man with a history of abuse, which was not safe for her kids. The evacuation of Fort Mac was not well planned, people were sent everywhere, then moved locations as the fire moved along its path. Unfortunately evacuating is something we are getting used to in Northern Alberta, my community has taken turns being hosted and hosting nearby communities as the fires move between us in different years. Women in the evacuated community and hosting communities end up doing a lot of cooking, caring, volunteering, and organizing during these times.

of what work should be paid work and how much it should be compensated – traditional and long-standing labour market challenges. This parallels the heightened importance of income distribution, development and poverty reduction priorities in general, in times of climate change, and is true in both the global North and the global South.

As B  thge notes, for women to be able to assume a fair share of the jobs and responsibilities connected with global change, the following elements must be in place for them:

- access to education, training and upgrading
- access to and control over productive resources including access to land and ownership rights
- access to markets (land, labour, financial and product markets)
- access to services
- benefits from the use of public funds, particularly for infrastructure, and access to public goods
- means of enforcing claims for unpaid / reproductive work and redistribution/remuneration for such work
- the possibility of generating income from the use of their own labour (B  thge 2010:7).

At the World Social Forum in Tunisia in March, 2013, a workshop sponsored by the Friedrich-Ebert Foundation focused on “Just Transition from a gender perspective.” According to the organizers, “A transition to a future of enriched lives, a healthy planet and just societies still is possible....Without gender justice, there cannot be social justice” (Mayer 2013).

No less important than resource and energy-based work is the responsibility for skills-sharing and transmission for sustainable social reproduction and governance – largely traditionally female job roles such as teaching, childrearing, and community work (Perkins 2013a:929; Perkins 2013b). “Time and again, experience has shown that communities fare better during natural disaster when women play a leadership role in early warning systems and reconstruction. Women tend to share information related to community well being, choose less polluting energy sources, and adapt more easily to environmental changes when their family’s survival is at stake.... Integrating gender perspectives in the design and implementation of policies and laws also helps meet the gender-differentiated impacts of environmental degradation – shortage of water, deforestation, desertification – exacerbated by climate change” (ILO 2008:3).

#### D. Decision-making and Policy

Nathalie Chalifour (2017) identifies a number of ways in which gender frameworks could and should contribute to Canada’s climate change policies: increase the

**Commented [A16]:** Coming from a Northern Alberta First Nation, something about this global north and global south binary doesn’t sit right with me. My north can be a third world as the south. Abstractly I get what you are saying, its just funny to me as an Indigenous Northerner.

**Commented [A17]:** One thing I know about the wild fire evacuations is that the days are long, and a lot of hard work. A lot of public sector works in government administration and healthcare put in their fair share of overtime, and I’m assuming were compensated. Indigenous women who did a lot of the unpaid caring work, and organizing, did it as a duty, and were not compensated the same. And some of the Indigenous women I know that work in social work and healthcare, worked long days of paid work, then went back and did unpaid volunteer work during the evacuations. It was nice the Alberta government gave out debit cards to give families emergency relief. But class difference really came out during this time.

number of women in decision-making roles; consult with and include women's organizations, especially indigenous groups; examine health, care, transportation, food, and labour impacts of climate change and climate policies from an equity perspective.

The International Labour Organization calls for the following steps to be adopted:

“Actions to promote climate change adaptation and mitigation:

- Tapping into the vast knowledge and natural resource management abilities of women when devising adaptation and mitigation policies and initiatives for climate change.
- Mainstreaming gender perspectives into international and national policies.
- Ensuring that women and men participate in decision- and policy-making processes.
- Promoting participatory approaches in local and community planning activities.
- Creating opportunities at the national and local level to educate and train women on climate change, stimulate capacity building and technology transfer and assign specific resources to secure women's equal participation in the benefits and opportunities of mitigation and adaptation measures.
- Gathering new sex-disaggregated data and gender analysis in key sectors such as agriculture, tourism, forestry, fishing, energy and water usage to further understand how climate change impacts on women's lives.” (ILO 2008:5).

Naomi Klein points out that the type of ecological destruction that takes place in Canada can only exist if there are people and places that are “othered” and are the destination point for severe and negative environmental impacts and their health consequences. She notes that this has been part of the social and economic impacts of settler colonialism in this country and others [Klein, 2016].

#### E. Indigenous Voices and Leadership

The connection between gender justice and climate justice has been emphasized clearly in Canada by indigenous women, whose leadership in struggles against the pollution, endangered livelihoods, health impacts, and cultural destruction brought by fossil fuel extraction and processing is changing Canadian politics (Perkins 2017).

McNutt and Hawryluk note that “the Native Women's Association of Canada (has) presented a number of underlying principles regarding the environment, including respect for social structures, vulnerable languages and cultures, indigenous plants and medicines, hunting, fishing and trapping grounds, and areas of spiritual significance. Furthermore, NWAC emphasized that there must be a willingness to understand the unique spiritual connection of Aboriginal women to the

environment and to use this understanding to find a solution to global warming that benefits future generations. NWAC recommends that Aboriginal women must be engaged as full and effective partners with the ongoing implementation of policies that affect the environment. The spiritual significance of water to Aboriginal women requires policies for its protection and accessibility. In addition, Aboriginal peoples' and particularly women's – because of their primary care-giving roles – connection to the environment and spiritual connection to the land, habitats, and species, and their dependence on the environment as a source of sustenance and income must be considered in decision making" (McNutt and Hawryluk 2009:114-115).

[insert O'Reggio quote in box]

Indigenous authors have pointed out that cultural factors are an important part of First Nations women's activism to protect water, health, and livelihoods (Nixon 2015, Awadalia et al. 2015, Ellis 2015) and for some indigenous women, "their commitment to these responsibilities motivates them to serve as enablers of adaptation and mitigation efforts" (Powys White 2014:1). Speaking at the September 2014 People's Climate March in New York City, Lubicon Cree anti-tarsands activist Melina Laboucane-Massimo stated, "Violence against the earth begets violence against women.... When we don't deal with both of them we're not ever really going to resolve the issue of the colonial mind and colonial mentality and the values of patriarchy and.... capitalism that essentially exploit the land and exploit our women" (Gorecki 2014).

#### F. Women's Alliances for Action

The distinct impacts of colonialism and climate change on indigenous women, and their implications for feminist climate justice activism in Canada, are underscored by Anishinaabe / Cree activist Lindsay Nixon:

Indigenous feminists know that mainstream feminism predominantly represents white settler feminists who, more often than not, choose to ignore the ongoing processes of colonialism from which they actually benefit.... Ecofeminism that appropriates Indigenous environmental knowledges often fails to fully represent what environmental justice means to Indigenous communities. What is often ignored within these analyses is how neocolonial state violence, compounded by exposure to environmental contaminants, is embodied in very specific ways for Indigenous women and Two-Spirit peoples. It's true that Indigenous communities are disproportionately affected by environmental exposure, as their communities often share close proximity to mining sites, military bases, the release of pesticides, and other sites of environmental contamination (Hoover et al. 2012, 1645). However, Indigenous peoples have again and again described how solutions to the effects of environmental contamination need to extend far beyond the return of land which often streamlines settler solidarity movements. ....

**Commented [A18]:** Totally my bias being the daughter of social workers and nurses in my community, and as a labour researcher, but something needs to be said about the fact that many indigenous women work in many female dominated human service professions (teaching, nursing, social work, community development), and that this paid work experience needs to be tapped into building these initiatives.

If eco-feminists truly want to engage with Indigenous feminism to legitimize their own movements, they must first engage with their own positionality and privilege as settlers: a positionality on which the continuation of settler-colonialism and the ongoing genocide of Indigenous peoples are prefaced. Furthermore, Indigenous peoples don't need saviour feminists defining what strategies must be used to address environmental contamination within Indigenous communities. Environmental violence has far reaching consequences including those that can be seen in the reproductive lives of Indigenous peoples. What Indigenous feminists want from eco-feminists is simple: Sit down, be quiet, and listen" (Nixon 2015).

**Commented [A19]:** Amazing quote to have towards the end of this paper to tie it all together.

The report and toolkit *Violence on the Land, Violence on our Bodies* (WEA and NYSHN 2016), developed by the Women's Earth Alliance and the Native Youth Sexual Health Network, is a powerful indigenous-led research and action-oriented initiative to advance climate justice advocacy. It includes a sobering, illustrated, accessible account of the environmental violence wrought on indigenous lands and peoples, especially women, by colonial capitalist development, combined with a set of activities to spark community-based education, discussion, and strategies for action, resistance, and change. It documents the leadership of indigenous women working for self-determination in Canada and the U.S., and quotes a statement of the International Indigenous Women's Environmental and Reproductive Health Symposium (2010): "We recognize that our fundamental, inherent and inalienable human rights as Indigenous Peoples are being violated, as are our spirits and life giving capacity as Indigenous women. Colonization has eroded the traditional, spiritual, and cultural teachings passed down from our ancestors, our grandmothers about our sexual and reproductive health and the connection to the protection of the environment, our sacred life-giving Mother Earth. But...many Indigenous women are reclaiming, practicing, and celebrating these teachings. We commit to supporting these collective efforts now and in the future" (IIWERHS 2010: 2). The inspiring words, accomplishments, and approaches of many of these leaders are documented in the report – a gift and an invitation to those working for gender justice and climate justice.

## V. Conclusion

At the sectoral, regional, and national levels in Canada, research on gender and climate is sparse, and virtually all studies call for more research, better data collection, and more attention to the gender equity and justice implications of climate change.

The existing studies including gender analysis of climate change effects in Canada indicate that, as Terry (2009:7) notes, better equity-focused gender-disaggregated data is necessary to measure and acknowledge distributional impacts and inequities. Collaboration and interdisciplinary work including the fields of political ecology, public health, social work, disaster and risk management, economics,

**Commented [A20]:** When you talk about data do you also mean the stories and oral histories, and traditional knowledge of Indigenous women? "Data" is such a western positivistic and therefore colonial and patriarchal sounding term. Maybe say data and knowledges.

anthropology, sociology, ecology, toxicology, medicine, and gender studies is needed. Gender budgeting can serve as a model for considering various justice interests and priorities related to climate change, including those resulting from adaptation strategies (Terry 2009:12-13).

Commented [A21]: What is gender budgeting?

From the perspective of procedural justice, women's stronger risk perceptions, smaller carbon footprints, and protective environmental policy activities are useful in the struggle to strengthen climate change policies (Terry 2009:8-9); as their voices, political agency, and representation become stronger, women's perspectives and activism are crucial.

Indigenous women are providing strong and ongoing leadership in opposition to fossil fuel extraction, refining, pipelines, and transport across Canada (WEA and NYSHN 2016; Perkins 2017). Canada as a *producer* of climate change-generating fossil fuels is the first climate justice battleground, and indigenous women in particular are strong leaders in this struggle. The second climate justice battleground relates to Canada as a *consumer* of fossil fuels and generator of the resulting emissions, with their resulting chains of impacts including changing and volatile weather patterns, species extinction, and ecological and economic repercussions on agriculture, forestry, health, infrastructure, transportation, and other aspects of life in Canada.

The studies overviewed in this paper indicate that non-indigenous women in Canada are also beginning to make the links and understand the connections between their own experiences and those of women and men across the world in the face of climate change. Interviews with women's organizations and activists across the country underscore this point and provide many graphic examples, as noted throughout this report. A significant challenge is to (re)build women's capacity to organize politically in Canada as women and allies, advancing a gendered, critical political perspective grounded in their own lived experience, in order to build and strengthen this awareness and begin to work for procedural and distributional, as well as intergenerational and interspecies, climate justice. The struggles of climate justice and gender justice are interlinked in myriad ways, and these struggles require attention to decolonization, culture, and land (Mantyka-Pringle et al. 2015).

Both in terms of unfair distributional impacts on women, especially indigenous women, and in terms of their inequitable procedural, policy, and representational access, climate justice in Canada **are** elusive. For indigenous and other marginalized women in Canada, this is an especially urgent priority, and their activism is increasingly forceful and effective.

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Commented [A22]: Like what "other marginalized women"? Poor, visible minorities, mothers, grandmothers, new immigrants, rural, farmers? Who are these others that are getting 'othered' by climate change?

"No climate justice without gender justice" captures the message that climate change heightens existing vulnerabilities both locally and globally. In Canada as elsewhere, the time to address these inequities is long overdue.

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## PHOTOGRAPHS

NB: Except for the last two, I have not yet requested or obtained permission to use these images, which are posted on the internet at the URLs indicated.



Intense rainfall in Toronto on July 8, 2013 flooded the Don Valley, stranding a GO commuter train.

THE CANADIAN PRESS/Winston Neutel

<http://nationalpost.com/g00/news/toronto/commuter-go-train-partially-underwater-after-toronto-floods-passengers-evacuated-by-zip-line/wcm/33bf9252-c0b9-4984-a83a->



Commuter train passengers waited for hours as floodwaters rose (July 8, 2013).

Some even calmly filmed a water snake swimming among the seats  
(<https://www.youtube.com/watch?v=meu-p-GKNs0>).

THE CANADIAN PRESS/ho-Michael Li

<http://nationalpost.com/g00/news/toronto/commuter-go-train-partially-underwater-after-toronto-floods-passengers-evacuated-by-zip-line/wcm/33bf9252-c0b9-4984-a83a-582679300d4b?i10c.referrer=https%3A%2F%2Fwww.google.ca%2F>



Emergency personnel evacuated about 1,400 GO train passengers by dinghy on July 8, 2013.

Tom Hicken for National Post

<http://nationalpost.com/g00/news/toronto/commuter-go-train-partially-underwater-after-toronto-floods-passengers-evacuated-by-zip-line/wcm/33bf9252-c0b9-4984-a83a-582679300d4b?i10c.referrer=https%3A%2F%2Fwww.google.ca%2F>



A woman gets gets back in her car in flood water on Lakeshore Avenue West during a storm in Toronto on Monday, July 8, 2013. (Frank Gunn / THE CANADIAN PRESS)  
<http://nationalpost.com/g00/news/toronto/toronto-floods-photos-show-submerged-streets-nearly-floating-go-train-as-surprise-deluge-hits-city/wcm/b4f0885a-2046-446c-b2bf-c89dd69debd3?i10c.referrer=https%3A%2F%2Fwww.google.ca%2F>



Residents of the Abasand area in Fort McMurray, Alberta try to evacuate, as smoke rises behind them, on May 3, 2016. Photo: Sean Amato  
[https://www.ctvnews.ca/polopoly\\_fs/1.2886025.1462306980!/httpImage/image.jpg\\_gen/derivatives/landscape\\_960/image.jpg](https://www.ctvnews.ca/polopoly_fs/1.2886025.1462306980!/httpImage/image.jpg_gen/derivatives/landscape_960/image.jpg)



Fort Chipewyan high school students **Tasheena Campbell, Victoria Marten, Jessica Adam,** and **Shaye Voyageur** with their 2015 science project poster showing the impacts of tarsands extraction on the Athabasca watershed. The text says, "Data shows that kidneys and livers of various species of wildlife contain high concentrations of heavy metals and polycyclic aromatic hydrocarbons. The data analysis demonstrated that cancer occurrence in Fort Chipewyan was significantly higher for those who had worked in the Oil Sands and for those that frequently consumed traditional foods."  
Photo: P.E. Perkins

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Women activists from Elsipogtog First Nation holding a line against police during their anti-fracking protest in New Brunswick, 17 October 2013.

Photo: Jonah Mitchell, Twitter.

<https://twitter.com/jonahjmitchell/status/390863949870399489/photo/1>

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## Box I: SUMMARY OF CLIMATE CHANGE IMPACTS ACROSS CANADA

**The Prairies:** Most scenarios suggest that the semi-arid regions of the Prairies can expect an increase in the frequency and length of droughts. Average crop yields could fall by 10-30 per cent. Increased demand for water pumping and summer cooling and decreased winter demand due to higher temperatures, could push electrical utilities into a summer peak load position at the same time as hydropower production is reduced by decreased water flow. This could result in increased thermal power production with an increase in fossil fuel consumption and greenhouse gas emissions. Semi-permanent and seasonal wetlands could dry up, leading to reduced production of waterfowl and other wildlife species.

**The Arctic:** Future winter temperature increases of 5-7° degrees over the mainland and much of the Arctic Islands and modest cooling in the extreme eastern Arctic are projected. Summer temperatures are expected to increase up to 5° degrees on the mainland, and 1-2° degrees over marine areas. Annual precipitation is expected to increase up to 25 per cent. These changes in temperature and precipitation would reduce the tundra and taiga/tundra ecosystems by as much as two thirds of their present size. More than one half of the discontinuous permafrost area could disappear. Wildlife would also be affected, with many species in fish and streams shifting northward 150 km for each degree increase in air temperature and High Arctic Peary caribou, muskoxen, and polar bears running the risk of extinction.

**Eastern Canada:** Anywhere from 3-8° degrees C average annual warming is expected by the latter part of the 21st century, leading to fewer weeks of snow, a longer growing season, less moisture in the soil, and an increase in the frequency and severity of droughts. Atlantic Canada is particularly vulnerable to rising sea levels, whose impacts could include greater risk of floods; coastal erosion; coastal sedimentation, and reductions in sea and river ice.

**British Columbia:** Temperature increases of 1.3 to 2.7 degrees C are expected by 2050, causing longer growing seasons but more droughts; shifting infectious diseases and pests with effects on health, agriculture and ecosystems; and more frequent and more severe heat waves. At the same time, average annual rainfall is expected to increase by 2-12%, causing damage to buildings and infrastructure; up to 70% of glaciers may melt by 2100; and sea level will continue to rise along the coast.

Source: LiveSmart BC (2015).

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**Commented [A23]:** Only about 3% of power generated in Alberta comes from Hydro, in Saskatchewan they use about 20% Hydro power. Whereas "hydro" means electricity in Ontario and BC, in Alberta if you say "hydro" they would have no idea what you are talking about, now if you said "Atco Gas" then we are talking. About 40% of energy generated in Alberta comes from natural gas. This concern mainly applies to Manitoba where Manitoba Hydro provides more of the province's energy. So really this analysis of the Prairies is very eastern-centric.

Alberta relies more heavily on natural gas:  
<http://www.energy.alberta.ca/Electricity/681.asp>

## Box 2: CANADIAN GOVERNMENT INACTION ON GENDER AND CLIMATE CHANGE

### The Chretien & Martin Years, 1993–2006

Under the leadership of Jean Chrétien (Canadian prime minister from 1993 to 2003), the federal government largely overlooked the significance of gender in its response to climate change. This is not surprising given that the Liberal government dramatically restructured the institutionalized relations of women and the state, beginning with the abolition of the Canadian Advisory Council on the Status of Women, which had operated as an autonomous agency that advised the federal government about women's specific policy considerations, produced gender-sensitive research and recommendations, and educated the general public about women's policy concerns and program needs (Burt 1998). The Liberals also cut state funding to organizations that advanced women's equality, thus undermining the influence of 'femocrats' and gender experts in policy development and curtailing women-specific advocacy (Burt 1999). One of the most serious blows to the women's policy agenda was the loss of core funding the National Action Committee on the Status of Women, Canada's feminist umbrella organization. The government's decision to disinvest in women's equality significantly impaired the policy capacity of women's organizations and gender experts to engage in the climate-change debate. As a result, policy analysis related to climate change has been largely gender-blind, resulting in the failure to address women's vulnerability to climatic variations.

### The Harper Years, 2006–2015

Overall, the Harper government was blatantly hostile to women's policy claims. The Harper government decreased the already depleted commitment to women's equality by reorganizing the Status of Women Canada, closing 12 regional offices, cutting the operating budget by 43 percent, and removing the word 'equality' from its mandate. In addition, the Conservatives imposed new funding limits on women's advocacy groups, substantially decreasing funding for gender-based analysis and research. After these cuts a number of women's organizations, including the National Association of Women and the Law (NAWL), a once powerful advocacy group that promoted women's equality in Canada since 1974, were forced to close their doors. In addition, the Conservatives cancelled the national daycare program and the Court Challenges Program, while refusing to implement pay-equity legislation. In short, social investment in the equality of women [was] viewed as a bad investment lacking any identifiable return.

Source: McNutt and Hawryluk 2009:110-111.

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## Box 3: BALI PRINCIPLES OF CLIMATE JUSTICE

## Bali Principles of Climate Justice

29 August 2002

### PREAMBLE

Whereas climate change is a scientific reality whose effects are already being felt around the world;

Whereas if consumption of fossil fuels, deforestation and other ecological devastation continues at current rates, it is certain that climate change will result in increased temperatures, sea level rise, changes in agricultural patterns, increased frequency and magnitude of "natural" disasters such as floods, droughts, loss of biodiversity, intense storms and epidemics;

Whereas deforestation contributes to climate change, while having a negative impact on a broad array of local communities;

Whereas communities and the environment feel the impacts of the fossil fuel economy at every stage of its life cycle, from exploration to production to refining to distribution to consumption to disposal of waste;

Whereas climate change and its associated impacts are a global manifestation of this local chain of impacts;

Whereas fossil fuel production and consumption helps drive corporate-led globalization;

Whereas climate change is being caused primarily by industrialized nations and transnational corporations;

Whereas the multilateral development banks, transnational corporations and Northern governments, particularly the United States, have compromised the democratic nature of the United Nations as it attempts to address the problem;

Whereas the perpetration of climate change violates the Universal Declaration On Human Rights, and the United Nations Convention on Genocide;

Whereas the impacts of climate change are disproportionately felt by small island states, women, youth, coastal peoples, local communities, indigenous peoples, fisherfolk, poor people and the elderly;

Whereas local communities, affected people and indigenous peoples have been kept out of the global processes to address climate change;

Whereas market-based mechanisms and technological "fixes" currently being promoted by transnational corporations are false solutions and are exacerbating the problem;

Whereas unsustainable production and consumption practices are at the root of this and other global environmental problems;

Whereas this unsustainable consumption exists primarily in the North, but also among elites within the South;

Whereas the impacts will be most devastating to the vast majority of the people in the South, as well as the "South" within the North;

Whereas the impacts of climate change threaten food sovereignty and the security of livelihoods of natural resource-based local economies;

Whereas the impacts of climate change threaten the health of communities around the world-especially those who are vulnerable and marginalized, in particular children and elderly people;

Whereas combating climate change must entail profound shifts from unsustainable production, consumption and lifestyles, with industrialized countries taking the lead;

**We**, representatives of people's movements together with activist organizations working for social and environmental justice resolve to begin to build an international movement of all peoples for Climate Justice based on the following core principles:

1. Affirming the sacredness of Mother Earth, ecological unity and the interdependence of all species, Climate Justice insists that communities have the right to be free from climate change, its related impacts and other forms of ecological destruction.
2. Climate Justice affirms the need to reduce with an aim to eliminate the production of greenhouse gases and associated local pollutants.
3. Climate Justice affirms the rights of indigenous peoples and affected communities to represent and speak for themselves.
4. Climate Justice affirms that governments are responsible for addressing climate change in a manner that is both democratically accountable to their people and in accordance with the principle of common but differentiated responsibilities.
5. Climate Justice demands that communities, particularly affected communities play a leading role in national and international processes to address climate change.
6. Climate Justice opposes the role of transnational corporations in shaping unsustainable production and consumption patterns and lifestyles, as well as their role in unduly influencing national and international decision-making.
7. Climate Justice calls for the recognition of a principle of ecological debt that industrialized governments and transnational corporations owe the rest of the world as a result of their appropriation of the planet's capacity to absorb greenhouse gases.
8. Affirming the principle of ecological debt, Climate Justice demands that fossil fuel and extractive industries be held strictly liable for all past and current life-cycle impacts relating to the production of greenhouse gases and associated local pollutants.

9. Affirming the principle of Ecological debt, Climate Justice protects the rights of victims of climate change and associated injustices to receive full compensation, restoration, and reparation for loss of land, livelihood and other damages.
10. Climate Justice calls for a moratorium on all new fossil fuel exploration and exploitation; a moratorium on the construction of new nuclear power plants; the phase out of the use of nuclear power world wide; and a moratorium on the construction of large hydro schemes.
11. Climate Justice calls for clean, renewable, locally controlled and low-impact energy resources in the interest of a sustainable planet for all living things.
12. Climate Justice affirms the right of all people, including the poor, women, rural and indigenous peoples, to have access to affordable and sustainable energy.
13. Climate Justice affirms that any market-based or technological solution to climate change, such as carbon-trading and carbon sequestration, should be subject to principles of democratic accountability, ecological sustainability and social justice.
14. Climate Justice affirms the right of all workers employed in extractive, fossil fuel and other greenhouse-gas producing industries to a safe and healthy work environment without being forced to choose between an unsafe livelihood based on unsustainable production and unemployment.
15. Climate Justice affirms the need for solutions to climate change that do not externalize costs to the environment and communities, and are in line with the principles of a just transition.
16. Climate Justice is committed to preventing the extinction of cultures and biodiversity due to climate change and its associated impacts.
17. Climate Justice affirms the need for socio-economic models that safeguard the fundamental rights to clean air, land, water, food and healthy ecosystems.
18. Climate Justice affirms the rights of communities dependent on natural resources for their livelihood and cultures to own and manage the same in a sustainable manner, and is opposed to the commodification of nature and its resources.
19. Climate Justice demands that public policy be based on mutual respect and justice for all peoples, free from any form of discrimination or bias.
20. Climate Justice recognizes the right to self-determination of Indigenous Peoples, and their right to control their lands, including sub-surface land, territories and resources and the right to the protection against any action or conduct that may result in the destruction or degradation of their territories and cultural way of life.
21. Climate Justice affirms the right of indigenous peoples and local communities to participate effectively at every level of decision-making, including needs assessment, planning, implementation, enforcement and evaluation, the strict enforcement of principles of prior informed consent, and the right to say "No."
22. Climate Justice affirms the need for solutions that address women's rights.
23. Climate Justice affirms the right of youth as equal partners in the movement to address climate change and its associated impacts.
24. Climate Justice opposes military action, occupation, repression and exploitation of lands, water, oceans, peoples and cultures, and other life forms, especially as it relates to the fossil fuel industry's role in this respect.
25. Climate Justice calls for the education of present and future generations, emphasizes climate, energy, social and environmental issues, while basing itself on real-life experiences and an appreciation of diverse cultural perspectives.
26. Climate Justice requires that we, as individuals and communities, make personal and consumer choices to consume as little of Mother Earth's resources, conserve our need for energy; and make the conscious decision to challenge and reprioritize our lifestyles, re-thinking our ethics with relation to the environment and the Mother Earth; while utilizing clean, renewable, low-impact energy; and ensuring the health of the natural world for present and future generations.
27. Climate Justice affirms the rights of unborn generations to natural resources, a stable climate and a healthy planet.

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*Adopted using the "Environmental Justice Principles" developed at the 1991 People of Color Environmental Justice Leadership Summit, Washington, DC, as a blueprint.*

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**Endorsed by:**

CorpWatch, US	National Alliance of People's Movements, India
Friends of the Earth International	National Fishworkers Forum, India
Global Resistance	OilWatch Africa
Greenpeace International	OilWatch International
groundwork, South Africa	Southwest Network for Environmental and Economic Justice, US
Indigenous Environmental Network, North America	Third World Network, Malaysia
Indigenous Information Network, Kenya	World Rainforest Movement, Uruguay

This and other environmental justice documents can be downloaded from: [www.ejnet.org/ej/](http://www.ejnet.org/ej/)

Source: <http://www.ejnet.org/ej/bali.pdf>

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CCPA Study -- Interviews



**Diane O'Reggio, LEAF**

*Diane O'Reggio is Executive Director of the Women's Legal Education and Action Fund (LEAF), which works to ensure that Canadian courts provide the equality rights guaranteed to women and girls by Section 15 of the Canadian Charter of Rights and Freedoms – see [leaf.ca](http://leaf.ca).*

“I see so many implications of climate change for the legal rights of women in Canada. Many women, especially those living in poverty, are differentially impacted by environmental issues including extreme weather events.

One case that comes to mind involves an aboriginal woman who is homeless, but has been living in a shelter she built along her traplines. The provincial government is arguing she can’t do that. She faces personal security issues if she hitch-hikes across the North; as we know there is an epidemic of violence against aboriginal women. So women’s ability to obtain equal protection under the law is negatively affected by weather and changing environments, social patterns of violence, wage and housing discrimination, and other interrelated aspects of gender inequality.”



#### **Liz Bernstein, Nobel Women’s Initiative**

*Liz Bernstein is the Founding Director of the Nobel Women’s Initiative, an organization started in 2006 by six female Nobel Peace laureates to work for peace with justice and equality. Liz has led the organization in building strong relationships with Global South grassroots women’s peace and justice organizations to grow the global women’s peace movement.*

“Climate change is one of the greatest challenges and crisis of our time. It is the cause of so many problems that we have a responsibility to address. In the past, the Nobel Women’s Initiative focused on climate change advocacy on the international stage at forums such as the COPP meetings in Copenhagen. However, our current focus is on supporting local female activists who are addressing tarsands expansions in Canada and the United States. It is inspiring to be working with women who are addressing these issues. In 2012, we led a women’s delegation to the tarsands to follow the route of the proposed Northern Gateway Pipeline, to hear stories of women being impacted by the oil and gas projects. The women who

comprised the delegation have been creative in using a variety of campaign tools, media and legal tools to challenge tarsands expansion.

These women are doing so much with so little. They are the ones who are being directly impacted by tarsands development and they are the ones who are fighting the hardest. For us, doing climate justice work is about supporting these activists so that they can continue their efforts to share information and stop the tarsands. More information on the Nobel Women's Initiative's delegation to the tar sands is available in the report *Breaking Ground* (<http://nobelwomensinitiative.org/our-blogs/breaking-ground-women-oil-climate-change/>).



**Anna Bunce, Arctic Researcher**

*Anna Bunce completed her Master's thesis at McGill University in 2016, on the topic of "Gender and the human dimensions of climate change: global discourse and local perspectives from the Canadian Arctic." She has worked with the Climate Change Adaptation Research Group and Arctic North.*

"For my graduate research, I have been exploring how climate change has been impacting the health and food security of Inuit women in Iqaluit. A striking example of the impacts of climate change is related to Inuit women's abilities to pick berries. In Iqaluit, berry picking has traditionally been an important female-centered activity for Inuit women. It is an activity where they have a lot of control and autonomy. The women that I work with spoke about how berry picking is changing as a result of environmental changes. Berries are becoming small and seedy and the places to find good berries are changing. Not being able to go berry picking has been very hard for them. They told me about feeling a great sadness; not being able to pick berries has impacted their connection to the land and the feeling they get from providing for their families. Most of the women that I spoke to work wage-based jobs in Iqaluit, and therefore have fewer chances to spend time out on the land.

Berry picking has been an accessible way for them to maintain a connection to the land while working in Iqaluit. However, because of environmental changes, berries aren't as accessible as they used to be. Women have said that the good berry picking spots are further away now so they need access to skidoos or boats in order to get out and pick the berries.

Berry-picking provides a good example of the ways that climate change is impacting Inuit women, but these impacts need to be placed in the context of the other social issues that they face. In Iqaluit, issues such as childcare and a shortage of housing are having bigger immediate impacts to women. However I don't see these as separate issues from climate change, because the impacts from climate change are having an exacerbating effect on other issues. Climate change is an overarching umbrella issue."



### **Dawn Hemingway, Community Researcher**

*Dr. Dawn Hemingway chairs the Social Work Department at the University of Northern British Columbia in Prince George, BC. Her research focuses on community development in the North, women, and health. She serves on the Steering Committee of the Northern Women's Forum and Stand Up for the North, as well as on the Board of a local women's shelter, sexual assault centre, committee addressing homelessness and a child and youth mental health agency.*

"In a resource-dependent community, climate can be a contributing factor to boom and bust economic cycles. The boom and bust cycles have serious social implications in small communities. In the early 2000s, warming temperatures led to an outbreak in mountain pine beetle, which decimated forestry stocks in northern BC and resulted in a significant economic downturn for our local economy in Prince George. While the large multi-national forestry companies who were operating in northern BC saw a dip in their profit margins due to the pine beetle, it was our local communities' members who were hardest hit from job losses and mill closures. When an economic bust occurs the demand for social services increases but our rural communities lack the financial capacity to address the demand, leaving marginalized groups like women, under supported. Our communities must turn to provincial government for funding, but often the level of support provided by the government is inadequate to address the need.

Problems also arise in boom periods as well. A surge of economic activity in northern communities contributes to its own set of social issues. Housing costs go up, social and health services are maxed out by the flux in populations, and parents (typically the men in male/female families) leave home for extended periods of time to work on work camps, leaving the other family member, typically the female, to deal with all house-related tasks.

The inability of institutions to keep up with demand for social and health services during periods of both boom and bust has resulted in care-giving being downloaded on women at home, in volunteer roles, and paid positions, which is profoundly impacting women and their families.

Throughout it all, women living in rural communities in northern British Columbia have been a strong voice speaking out on behalf of their communities. We've established grassroots activist groups like Stand up for the North, and the Women's North Network, to mobilize, ask questions, and engage in conversation around the issues facing our communities. Maintaining control over our communities and our resources lies at the heart of much of our activism. Ensuring that timber rights to our forests remain out of the hands of multinational corporations, that the revenue that flows from our resources comes back to our communities, and that we maximize the use out of resources by engaging in manufacturing rather than

exporting our raw materials, ensures that our forests and our communities remain sustainable.”



**Courtney Howard, CAPE**

*Dr. Courtney Howard is the President-Elect of Canadian Association of Physicians for the Environment, which works to protect human health by protecting the planet, striving to educate health professionals, the public, and policy-makers about environmental health.*

"I work as an emergency room doctor in Yellowknife. After the Lancet declared climate change to be the biggest global health threat of the 21st century in 2009, it became clear that climate health needed to be central to CAPE's activities. Climate change is causing extreme weather events across the country, and they all have health implications--increased injuries from slippery sidewalks after freeze-thaw cycles in Ontario, increased cardiorespiratory problems during heat waves, and problems with water quality, crop yields, infrastructure, mental health and injury from the floods we've been seeing. In Yellowknife where I live, we're seeing very rapid change--we're already over 2 Degrees Celsius warmer than we were about 60 years ago. That has been causing a lot of problems with ice travel in the winters

because people depend on the ice roads for transportation to remote communities that are otherwise only fly-in. Ice travel means food provision, recreation, a sense of freedom for community-members. In 2014, though, we had hotter than normal temperatures and very little rainfall, which led to terrible wildfires. Our air quality health index, which is supposed to be measured on a zero-to-ten scale, was frequently over 10; it was 14 on my daughter's first birthday on August 2nd, and went as high as 39. On many days it was worse than Beijing's. People were asked to stay indoors off and on for over two months -- and in the Northwest Territories where the summer is so short, that really affected people's quality of life! People felt cooped up, bummed out--some who lived close to the edge of the fire have described post-traumatic-stress-disorder type symptoms to me from having the threat at their doorstep for so long. The air quality was so bad from a respiratory health point of view that even people who didn't normally have asthma were showing up in the emergency room wheezing and coughing. Meanwhile, asthmatics who often need puffers were needing steroids. I heard from our Chief Officer of Public Health that some pharmacies in town actually ran out of asthma meds during the fires. We've put in a grant to Health Canada to study the health effects -- hopefully we get funded because we need to quantify what happened to help make clear to people the severity of the problem.

I think many of us who are mothers have just realized that the generation whose lives will be profoundly impacted by climate change isn't a future one, but is made up of the little people we love who are running around right now. That terrified me initially, but I've since realized that there is no better treatment for anxiety than action, and there is no better source of courage than the Mama-Bear instinct. People need to know that a green energy transition is possible--a UN study found that Canada can reduce emissions by up to 90% by 2050 through energy conservation, moving to clean energy sources, and powering transport and heating with electricity. This decade is critical: the Intergovernmental Panel on Climate Change says we need to reduce emissions by 40-70% by 2050. Business-as-usual has us pointed at about 4 degrees Celsius of warming by 2100, a level at which many believe continued global human civilization may not be able to continue. There is no reason for us to go there. Stanford researcher Mark Jacobson has shown that the whole world could be powered by clean energy by 2030 if we put our shoulders to the task. Such studies show that we have the technology to make such a transition at an economically-viable cost, with better health outcomes through more active commuting and reduced air-pollution-related respiratory disease...not to mention helping to ensure a reliable food supply in 2050! All that is missing is the social and political will. I truly believe that as people realize that this is about OUR kids--the ones whose teeth we are brushing--as much as it is about the polar bears, and that a meaningful transition is possible, then they will mobilize.

I see my job as helping to make people aware of the health threats of climate change as well as the health benefits of making a transition to a green economy. Right now Canada's hockey moms haven't had great info on this; my goal is to change that. I don't know about you, but I wouldn't get between a hockey mom and a livable

future for her kid! I'm working within CAPE and with local MDs in the Northwest Territories to speak directly to MDs at conferences and to community members at a variety of gatherings, as well as pushing the policy agenda at the Canadian Medical Association. I speak publicly when I'm invited to, across the country (doing my best to combine trips to keep my carbon footprint down!) and I tweet and blog about climate change and its health effects.

There's been a massive upswing in awareness in the Canadian medical community of the health effects of climate change over the past couple of years, and as super-respected docs like Dr. James Orbinski come on board that will only grow. The next few years are going to be ones of incredible energy and, yes, conflict...but the Canadian population is fundamentally one of the most decent and well-educated on the planet. As my soft-spoken acquaintances become involved, write their decision-makers for the first time and slot themselves into protests in their boots and gore-tex jackets, their kids at their side with mini-signs and snacks, I know that we are going to get this done. The best thing I can do as an Emergency doc is try to prevent emergencies. And with this work, that is what I am doing."



**Elaine Enarson, Disasters Researcher**

*Dr. Elaine Enarson is an accidental disaster sociologist whose personal experience in Hurricane Andrew sparked extensive work on gender relations in disasters. She was*

*lead course developer of FEMA's social vulnerability course and initiated the Gender and Disaster Sourcebook project. After a teaching appointment in Manitoba at Brandon University's Department of Applied Disaster and Emergency Studies, Elaine returned to independent work based in Colorado where she continues international consulting and teaches distance education courses to graduate students in emergency management.*

"I'll speak from a disaster perspective, because that's what I generally do. I think both in terms of differences and inequalities. In the gender division of labour alone there are daily differences in our everyday lives; diverse groups of men and women are positioned differently in the face of hazards and are equipped with different sets of skills and capacities/resources to address them.

Look at who dies of extreme heat. There is a lot of evidence on who dies more frequently. In the U.S. and Canada more men die of extreme heat than women. But in Paris, in the extreme heat emergency in 1994-95, it was mainly women, particularly older women, and poor women, who died. We have to use an intersectional perspective and not always assume that gender relates only to women to really see what is happening.

Women are more likely to have to deal with putting food on the table, getting fuel and firewood and water, and maintaining energy in their lives. Managing natural resources also so often falls largely to women. In terms of climate, we also have vector-borne diseases which are going to be increasing, and that often leads to a burdening and challenging of women who are usually the primarily health-care and child-care providers, both formally and informally.

Then there is the destruction or challenge to traditional resource-based livelihoods, which brings up subjects like drought. Enormous burdens are falling on farm women who often take second and third jobs, and live in communities that are so hard-hit that women's community work, as well as their reproductive and volunteer work, and their paid work and care for others all multiply.

Then there's the question of violence. Any extreme situation -- and that's not exclusive to disasters or to climate or weather extremes -- seems to be often correlated with increases in reported domestic and sexual violence. We often don't even know what the actual frequency is. But in terms of the data collected from shelters, there's an increase in calls from women, mainly, who are seeking assistance in trying to deal with it. I'm thinking of a call I heard about from North Dakota, where a woman on her ranch was watching her partner watch the carcasses of their dead, bloated livestock float down the river and she was afraid she was going to be killed that night. She was calling a hotline miles and miles away.

So there's the increase in violence, there's the increase in domestic and community labour, there's all the emotional work that goes on in terms of displacement. That is

a highly gendered phenomenon, when people have to move a number of times from one place to another, from home to home, from a temporary and then a semi-permanent shelter, to a longer-term living situation, or even long-term displacement when some families can never go back when the land changes. We need to look ahead to this: How are we going to accommodate?

In British Columbia, where there is a pine beetle infestation, those forests are much more subject to fire. Wild fires are another area where we see the intersection of disasters and climate. In fires, women are excluded from policy decision-making and often from paid response roles.

The vulnerabilities in the moment of crisis relate to who makes the decision to move, who is able to evacuate, and the burden of labour that falls on women to pack up a household, move children, move parents, all the care-giving work that exponentially increases. At the same time, I find it so hard to listen to women speaking about how the supports they depend on from the men they love in their lives -- their fathers, sons, partners -- fall away because the men are so unable to cope, incapable or unwilling to ask for help, to take care of one another as men. You just don't see men reaching out to each other the way women do in similar situations. They are not able to reach out for help and can be incapacitated by sorrow. They may be sitting on the side of the bed sobbing as their wives are saying, "Please, ask your father for help; we need to get the livestock out of here." But they are just incapacitated by grief.

So the burden falls on women to keep things going, keep the farm or the home business going, while he has to move. I'm using gendered language but that is appropriate and consistent with what we know about how this works for couples. He may go to the tarsands and try to make money while she is working on the farm, working a second job and taking care of the family. Or maybe trying to move because you can no longer catch the fish because the water is polluted; the examples go on and on. Then there is the fundamental inequality piece, which is all the privileges that inhere to men and that exclude women from decision-making positions, even within the family. Disaster decision-making is highly gendered; it's not a neutral activity.

We talk about the exclusion of women from policy tables, but you have to trace that all the way down and back up again to and from the bedroom and the kitchen, where individual families are making decisions about whether and when to move, or evacuate, whether to send the kids away, whether to give up farming altogether. These are huge decisions that go back for generations, and women are not able to have an equal voice and are sometimes even ridiculed for panicking, for wanting to pack things up and get across the bridge and pick up the kids before the flood comes, when he's saying, "Well, it wasn't too bad last year." There is often a silencing of women's perspective on action and when it's needed.

These are sudden disasters that I'm talking about. When we think about climate the issues are even more deeply embedded, because those inequalities also shape fundamental decisions around resource management. There's a lot of literature about women being more sensitive to the costs of energy, to the impacts of the resources that we use, being much more open to cutting back, looking at greenhouse gases, recycling, carpooling, all the small steps; women are demonstrably more interested in doing those kinds of things. And yet at the policy tables, when you do have women, they are not likely to be women who are sensitive to gender. That's an important point. It has to be women or men who have a critical gender perspective -- not necessarily just a female body sitting at the table.

There's a resource of women who, because of the inequalities that they've grown up with, have a sensitivity to privilege and to loss and can bring that to the discussion, but may be silenced there as well. I think this is really important. There is an inequality around violence and around positions of decision-making and authority, formal leadership. Sometimes people are happy to say, "Isn't it nice that women have these dense networks and can help rescue people out of harm's way during Katrina or in terms of mutual support groups after a big fire." That's all great and wonderful, but it doesn't translate into the capacity to be leaders at the national or community level.

My strong sense is that indigenous communities have a different set of gender relations, a different power base for women. So I think that everything I've said is less true of them, perhaps with the exception of the violence piece; there's less exclusion of women from decision-making and leadership in indigenous communities, and that's important. That's one reason why internationally you see that strong energy coming from the grassroots and from indigenous women. It's important to acknowledge that, and it's so important to get all of the women's groups out there to take this on board. Women are such fantastic organizers and networkers! The social infrastructure is there for women to take this on and lead."



**Cindy Pearce, Forester**

*Cindy Pearce is a forestry resources consultant based in Revelstoke, British Columbia. She has worked with local, provincial and federal governments, industry and not-for profit organizations. In recent years her work has been substantially focused on climate change adaptation planning for forest based communities in the Columbia Basin of BC and across Canada.*

“Since 2006 I’ve been working on developing a guidebook for small rural communities on climate change adaptation, and testing it with a couple of First Nations communities, and also working on climate change adaptation for small towns.

I have some observations about the role of women. First of all, neither I myself, nor any of the practitioners I’ve asked this question, have ever seen a woman climate

denier. We've never been confronted with a woman who has argued that climate change is not happening. That's anecdotal, but I think it's telling.

My second comment would be that women tend to be more risk-averse, and really climate change adaptation and mitigation is all about risk aversion. From that one would expect that women would have a higher likelihood of seeing climate change adaptation and mitigation as priorities.

I've never worked with a group that's all men or all women, but my experience is that women can see the breadth of the implications for households and for safety pretty quickly. It's really good to have the women there because they get the first priorities, health and safety, on the table right away.

Small rural communities, nestled in forests, are very exposed to the weather; they don't have big infrastructure, they have forests and water are right on their doorsteps; when there's an extreme weather event, they have to live with it right away. There's no sheltering from it.

Women tend to pick those health and safety implications up faster; perhaps because of their broader responsibilities on the home front, they can understand those pieces quicker. We use impact mapping, so workshop participants go from looking at weather/climate impacts to the impact on the environment and on their community, and women can string that story together, thinking about the people, where often I find the guys will stop at the infrastructure.

The first and most important thing we ask is, Do you have an emergency plan, is it up to date, have you practiced it? Second, what's your capacity to deal with health implications? -- whether it's a boil-water advisory, a West Nile outbreak, a pandemic, or a smoke crisis and evacuation.

Once communities do identify what their vulnerabilities are, then we start to look at action planning. Unless it's an obvious short-term priority, this tends to get put on the back burner, because communities are just overwhelmed. The best thing that can happen to a community is that a neighbouring community has a crisis, so they really see they have to improve their own process.

Unfortunately our provincial government here, and certainly our national government, have provided support around wildfire protection and generally around emergency preparedness planning, but not on the scale that is probably needed to deal with the events we are faced with. We still have not built a robust process to ensure that people who are faced with a serious incident are left close to whole.

When you think about climate justice, you start off with who has the most capacity to adapt and cope. That's usually not the people who are in the lower income spectrum, or who are disabled or vulnerable in any way. In health care you focus on

the most vulnerable, but in a general climate change adaptation process, we flag it for them, and it's the women who see that and look for solutions, but nationally and provincially we're not really there yet.

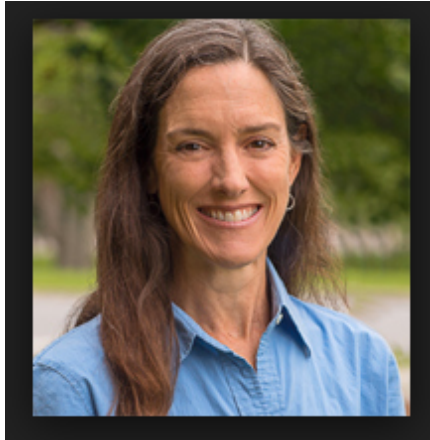
In my little town, we are surrounded by forests that are highly volatile in the worst drought years. We do have an evacuation plan, but as far as our citizens go, we haven't been prepared. They do a practice session, a mock-up scenario, they activate their emergency operations centre, they use their communications systems, but they don't contact people. They don't want to cause a lot of stress. But they could remind people to be ready for an evacuation.

In settler communities, they usually have a reasonable plan, even if they haven't practiced it recently. In the First Nations communities the situation is different, sometimes there is no evacuation plan -- and they are particularly at risk.

Normally in the workshops that we do, we start out talking about what do see happening in the landscape; we get 3-4 flipcharts of things people have seen -- loggers, gardeners, birders, backcountry skiers, as well as elected officials.

Then we compare that to change in the climate already, then present projections for the future; then we say, based on what you've seen so far, what do you think is going to happen? Then we do storytelling, from weather, to environment, to community. It's amazing how capable people are to do that. Then we send the charts to a technical specialist to say, have we missed anything? Normally they haven't missed anything. They look at that and go oi-yoi-yoi. Are we tracking on the high end or the low end? -- and usually we're tracking on the high end of the change. Then people start saying, how do we stop this? Normally our emissions, in little towns, are a pittance. We talk with them about, here's a list of things we could do, and how do you get family and friends in big cities to start making some changes there too.

At the lowest level is where people are making the changes because they are feeling it, they're living it. At some point, governments are not going to be able to afford the disaster assistance. We're going to run out of disaster funds. There's lots of graphs that show the disaster relief amounts that have been required in the last 10 years -- they are going off the charts, simply because the events are becoming more frequent. At some point, some rational person in the government is going to take a look at this and decide, we can't afford not to take action -- you pay now or you pay later."



**Alice Fothergill, University of Vermont**

*Dr. Alice Fothergill is a sociologist who studies disaster vulnerability, gender, and inequality. She has written books on women's experiences and social vulnerability in relation to Hurricane Katrina and the 1997 floods in Grand Forks, North Dakota.*

"The big study I did was years ago on women in the Grand Forks (North Dakota) flood in 1997. For more than 20 years now I've been studying vulnerability and inequality.

Here in Vermont, I did a workshop with our state legislators to talk about climate change and how it might affect people at the local level. We're not on the coast, but we had tropical storm Irene in 2011 that just knocked us off our feet, and that got people thinking about how vulnerable we are to storms. The flooding was so severe, and these little towns are all built in the river valleys, so the floods just raged through and destroyed many old, beautiful homes. Mobile home parks were also hit really hard. Afterwards, the mobile home park owners were adamant that they needed to be able to rebuild right away, so they did everything that was required, raised the homes 3 feet, and rebuilt on the same site. Policy makers are not sure what to do about that; we don't have enough affordable housing. We already know we have this problem, and it's kind of complicated because it has to do with how land has been designated, and the hundred-year floods are changing so the floodplain designations may be out of date. In some towns they are trying to change the flood insurance rules, but then some people can't afford the insurance... it's sort of a mess.

The woman who coordinated the state's recovery during and after Irene did a really good job. Sue Minter – she was appointed by the Governor. The state felt that what we did, we did well. Vermont is seen as a good role model for other states. The

Federal Emergency Management Agency, FEMA, offered disaster money but only if we rebuilt exactly according to what we had before, for example culverts under the roads, if we wanted to make them bigger FEMA had a rule and wouldn't give us any money. Vermont stood up to FEMA and I think they changed their policy. Sue Minter refused to rebuild the same size culverts. For a state like ours that was a big issue.

It's important to identify vulnerable populations before we have another storm, and make sure that planning includes more voices. Local women's groups should be at the table. The good news is I felt there is a lot of support for including groups that are underrepresented in the planning stages, really thinking through the connections. For example, on the issue of domestic violence, people who run domestic violence shelters really need to be at the table. I brought that up in terms of issues of vulnerability, because one thing that I saw, in both Grand Forks and in New Orleans after Katrina, was that in the craziness of the evacuation, sometimes they just release people from prisons. In Grand Forks they just let them all go. Some prisoners were also released in New Orleans. Authorities need to be able to warn domestic violence survivors in the community that 'he's in the community now, and he might be at the shelter where you're going.'

In Grand Forks I ended up interviewing people in domestic violence shelters; one had a terrible incident after the flood and another had terrible things happen right before the flood. Her batterer had been placed in a mandatory shelter and she was able to make it through the flood on her own, which she wouldn't have believed she could do.

Women do a lot of the caregiving and care for elderly people. Women were really trying to keep things focused on the children, getting them back into routines and school, creating normalcy for them. Drying out their photographs, being the family memory keeper, trying to salvage what made their house a home. Vermont is such a rural state, and roads were cut off from town to town so many communities were isolated; there was a lot of helping behavior, people helping each other.

Everyone in all of these towns convenes in villages at Halloween for trick or treat night, so reestablishing those traditions was important. But most of those village centres were flooded after Irene and most of the houses were gutted; no one had moved back in, but they decided to hold Halloween there anyway. There was a candy drive, people delivered carved pumpkins and candy to the houses where no one was living, people sat on their porches and gave it out, moms worked on kids' costumes in the midst of recovering from a flood; they wanted to maintain this tradition and keep things normal for the kids.

It is so powerful how important it is to people to be part of the community response and recovery. At one conference I went to there were disaster scholars who were talking about the "volunteer problem," people blocking the roads when so many

want to help. It's called convergence behavior. There are different ways of thinking about how people tend to want to contribute in some way when there's a disaster.

In Grand Forks, they needed sandbagging help, and women, teenagers, everybody could help with the sandbag line. I do remember a couple of women talking about how their husbands went to sandbag, but the women needed to stay home to take care of the kids so they couldn't go. Sometimes gender rules or gender roles can get more traditional in a disaster, and that can be frustrating for women.

There are effective ways of organizing the community response. In Vermont, in Waterbury, maybe 3 days after the disaster, there was a huge crowd, and they had all these supplies; they had organized childcare in the school so that mothers and fathers and grandparents could do cleanup work together. They didn't want kids doing the mucking out of the houses; teenagers ran arts and crafts in the school so they had a role; the younger kids were there, safe, for a few hours while their parents cleaned out their houses. What a brilliant model – it was fabulous. That is something that a town or area can do; they can do some planning, beforehand. There's enough work for everybody.

Also in Waterbury -- I think this was run by a lot of women -- they got a church to donate some space and every Saturday morning for about six months after the flood, they had a list of work that needed to be done to help people in the community, and they would match people who had skills and time with particular jobs, and provide supplies, and they'd serve you lunch when you got back. It was just a brilliant model, and you knew they were there every Saturday, and if you had any time to help you'd just go. I'm not sure if other towns did this too. The food part was so great, with a great hot meal in the church kitchen. Then we'd head out to do more work in the afternoon -- everyone had a way to participate."



**Rachel Hirsch, Arctic Researcher**

*Dr. Rachel Hirsch is the Projects Facilitator at the social Justice Research Institute at Brock University in Ontario, assisting faculty members with community-based research partnerships and methods to advance research and action on social and environmental justice. She carried out her own dissertation research in the Arctic.*

“I think many communities in the North, when they hear ‘climate change policy,’ it seems like this very top-down process, so they are not necessarily imagining their day-to-day interaction with a changing environment; they’re imagining a more complicated thing than they think people from the South mean when they ask about climate change. When I went to talk to people in Iqaluit about the big gaps in policy-making related to climate change, their response was, ‘Why are we talking about climate change?’ It’s food security that most people want to talk about when they think about environmental changes and their relationship with the land. The term ‘climate change’ is a very colonial, top-down, ‘from the South’ sort of concept, and often it’s framed in terms of CO2 levels, using a mitigation perspective,

so it seems so far from their realities. They are thinking about their day-to-day life, are they feeding their family, are they maintaining their traditional practices.

For women, there's another question too. In my experience, in the Canadian Arctic and sub-Arctic, this discussion is very male-dominated. A lot of the government officials that are focused on this issue are men. Also when people talk about the relationship with the land, and how accessing country foods is more difficult due to snow and ice conditions and extreme weather, this is seen as a male-dominated area. Even though food is very much a female-dominated area. So depending who you talk to you get a very different kind of framing, because there's still a sort of compartmentalization between what the men in the family do and what the women in the family do.

When I was in Labrador I was working with a youth hunter-mentoring program. There were very few women in the community who went hunting. The program managers had lived in the community for a long time and knew who the respected hunters were, the expert hunters who you would feel safe if your children went out hunting with. There was one female hunter but it was contentious to have a female hunter involved with the program. There were socio-economic and also class issues in the community, related to being able to afford all the things you'd need to be able to go hunting. The male-dominated households could do it; the female-led households and single parents were less able to hunt.

Climate change affects hunting because there is definitely an increased variability of weather and that impacts the uncertainty of the ice conditions you'd expect at different times of year, as well as your ability to navigate and read the land. An experienced hunter has at least 30 years of experience, so their ability to look at a patch of ice and say 'this is safe' is long-standing. But the observational measures they are using don't seem to be standing up any more. This devalues traditional experience because conditions are more variable.

The last Health Canada stats that I saw were that many of the communities were still getting at least 50 percent of their proteins from country foods; either the country food is supplementing, because food is too expensive in stores, or the other way around, it may be a household preference for country food. In Nunavut, a lot of the households abide by family traditions and prefer country food. In Labrador, intergenerational dislocation has been happening for longer than other regions in the Arctic because of earlier colonial settlement, so it goes in the other direction, where country foods are used to supplement people's diets when they can't afford store food.

When I was in Labrador, I was working with the community freezers to supply country food to communities. Some of the oldest ones are in Nunavik in Northern Quebec. They may have had provincial or regional government funding at first; there is core funding to support community freezers as a social support. The ones I was associated with in Labrador and Nunatsiavut have to constantly apply for

funding from the government; it's a mixture of different kinds of support. They usually have some sort of program to support hunters as they go out, then some large portion of the hunt goes back to the community as country food that people can come pick up from the community freezer. It's not a community kitchen; people just come and pick up the frozen meat and take it home for cooking. In Labrador it's free -- most of the freezers provide free meat to the community -- but sometimes there are pay options, so that you can pay if you're not a member of the community. The hunters get paid, but it's like a food bank so people can have access if they need the food. The hunters are being reimbursed in different ways; in Labrador they are sometimes compensated for their fuel and bullets, or sometimes with an hourly stipend.

This is all quite contentious actually, because community freezers can be and are viewed in multiple ways by the community -- as short term coping strategies and as a way to help rebuild people's hunting skills, since intergenerational knowledge exchange is really key in Labrador; whereas others criticize them as being colonial: white folks from the South come in and decide they will set up freezers, based on the idea that there should be social supports -- these are southern ideas. A key issue is, who holds the purse strings; should there be a charge for the meat itself? If there's money going out to the hunters, who's deciding how the finances will work?

In Nunavut there's a joint Inuit and non-Inuit government system, but it very much takes after European models where there are different units -- environment, resource and sustainability policy departments are separate from health and social service departments, as well as being separate from economics, finance, monetary flow, social supports etc. Among people that are more long-term invested in the community, there's a very different sort of perspective among those thinking locally from those thinking at a federal government policy scale. Those thinking locally are interested in poverty reduction as this complex multifaceted process that includes cultural traditions, what it means to maintain cultural, emotional, spiritual health, there's an interesting commission focused on poverty reduction in the North, there's a more complicated view of how the overall health of communities is influenced and maintained, that's positive, with less compartmentalization. But it seems like the health-focused people tend to be women and the environment, science and sustainability-focused folks tend to be men. Well, the climate change officer in Nunavut is Colleen Healey, so she's an exception. Her job's around education and communication on climate change. And in talking to her and others, there's not really a feminist dialogue that's present in these discussions, even though there's so much potential.

The Feeding My Family movement and website, which started in 2011 or 2012, is unprecedented -- it's an activist movement about food security, and it includes all sorts of aspects, the changing land and environment, climate justice, climate change, but they are all approached in an embedded way, meaning that all these issues, and human security in general, are seen as interconnected. They influence daily lives through many avenues -- maintenance of traditions, mental health, healthiness of

being on the land, what it means to be on the land, to address youth suicide, the land is the all-healer, but the land is changing, the land is sick. And people's relationships with the land are changing. This is different from most First Nations dialogue; I don't think in the south people talk about the land being sick. It's just that the relationship to the land is changing.

I think what is potentially gendered -- just a hunch, this is anecdotal -- is the rootedness of these larger environmental changes and how that affects people's day-to-day life experience, and if this were rooted in ideas of the family, that would be probably more of a female discourse. Women in general in policy circles are underrepresented, and even more so in less formal bodies, therefore women's views are underrepresented. On advisory commissions women are even more underrepresented. Gender roles are still so strong in the North. So it makes sense from that perspective that when you actually have an Inuk man or woman in an environmental role, the decisionmaking on environmental management, many of the co-mgt boards for wildlife resources are completely male dominated, the hunter-trapper organizations are completely male dominated.

If there were community organizing work so that people can realize the connections between local knowledge that they have and a more grassroots and perhaps more female way of seeing things.... People in the global south are doing this and people in Canada are too. There are local manifestations, but it's part of something way bigger; it requires a response that is both local and global. What would be non-alienating ways of doing this education?

The time and resources and capacity to co-produce that kind of knowledge is the key. When you have strong female players, they are so over-stretched, so to basically help them do their job in a way that can work, start from where they're at and produce some sort of common language that can be taken to other audiences....

One of my colleagues was a key organizer in the youth hunter mentoring program. A lot of these positions are kind of patchwork, created and funded through different research programs, so she had a position that was partly set up through the northern contaminants program, but then she was the coordinator for everything happening with the community freezer including getting this youth mentoring program up and running; she had many different masters, and different reporting requirements, some conflicting with each other; part of her salary came from Arctic net, part from the Nunatsiuvit program; she was basically doing the jobs of three people. In addition, there was family work and a double-triple workday at home. In her case, there were five children but most of them had children too, so she was responsible for feeding a big family, 15 people. The reason she's not involved any more is that she was so good and so respected, she was seen as a mother of the community, she was very much like that, she was having to make the money that was coming from this patchwork job stretch very far, which meant less resources and less money for leisure and more stress.... New babies, more grandchildren, intergenerational trauma, children not prepared to be parents, grandparents step in,

her family were more traditional in how they lived in the community, and eventually it just wasn't fitting with what she was expected to do in her day job, so the cognitive dissonance becomes great in those sort of circumstances."