



**Native Women's
Association of Canada**



**L'Association des
femmes autochtones
du Canada**

**ENVIRONMENTAL CONSERVATION AND
CLIMATE CHANGE OFFICE (ECCCO)**

**Toolkit - Impact of Climate Change on Indigenous Women,
Girls, Gender-Diverse, and Two-Spirit People**

NATIVE WOMEN'S ASSOCIATION OF CANADA

ENVIRONMENTAL CONSERVATION and CLIMATE CHANGE OFFICE (ECCCO)

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Introduction

GOAL

The overarching goal for our Environmental Conservation and Climate Change Office (ECCCO) toolkits is to enhance First Nations, Métis, and Inuit cross-cultural climate change literacy. What is climate change? Why is it important to look at climate change and the impact it has on women? How can exploring climate change through an intersectional, Indigenous, and gender lens help us better navigate the development of sustainable culturally relevant policy options, strategies for engagement, and tools of empowerment? By delving into these themes throughout this toolkit, we will enhance our co-constructed body of knowledge on gender and climate change.

OBJECTIVES

The objectives of our toolkits are to facilitate knowledge mobilization and shared learning pertaining to environmental climate change issues and the impact on Indigenous women and their communities. Our toolkits provide an opportunity for shared learning; as such, they are living documents whose ultimate aim is to produce a co-constructed and culturally relevant body of knowledge that evolves as each person, organization, and community utilizes it.

METHODOLOGY

To mobilize Indigenous gender-inclusive climate change knowledge, we need to create a shared language so that we are all using the same tools and information. This begins with something called ‘meaning making.’ How do we make meaning out of something? How and why does something become meaningful to us; for example, climate change? *Perhaps the things that are meaningful to us are the things we are drawn to try and understand.* At ECCCO, we are drawn to learn and better understand how we can contribute to sustainable climate change mitigation, in lockstep with advancing First Nations, Métis, and Inuit economic, social, political, and gender equality. Our toolkits seek to draw on First Nations, Métis, and Inuit traditional ecological knowledge, lived experience, and other knowledge discourses to advance social determinants of health and climate change mitigation and adaptation literacy. In order to unfold how climate change and gender inequality are interconnected, we will:

- examine what climate change is;
- explore the mechanics of how a bill becomes law in Canada;
- look at knowledge discourses and Intersectional disempowerment;
- examine climate change and gender; and
- make recommendations.

What is climate change?

Earth's climate is composed of the atmosphere, the hydrosphere (liquid water on Earth), the cryosphere (frozen elements), the land surface, and the biosphere, which encompasses all living things on land and in water. The Earth's climate has been impacted by industrial-era human activities, which contribute to greenhouse gas emissions. Greenhouse gases act like an insulating blanket on the planet, thus trapping heat in the atmosphere, which raises the global mean surface temperature (GMST) (Bush et al., 2019). Observable and measurable climate indicators include the reduction of arctic sea ice, increase in average global temperature, melting and thinning of land ice impacting rising sea levels, and increase in water vapour and ocean heat content into the atmosphere.

Climate Change at the Indigenous Community Level: Fast Facts

Climate + Women

The Nexus

As Mary Robinson, Ireland's former president and the former UN commissioner for human rights, said, "People who are marginalized or poor, women, and indigenous communities are being disproportionately affected by climate impacts."

Women experience disproportionate impacts

due to underlying socioeconomic, political, and legal barriers that limit their choices in the face of climate change.

BARRIERS INCLUDE



Discriminatory laws that limit female workforce participation.



Lack of voice in decision-making at the household, local, national, and international levels.



Limited access to financial resources and often lower pay.



2.5 times more unpaid work and care than men.



Restrictions on land ownership.



Lack of technology and capacity-building resources.

The Business Case

RISK



Climate impacts hit the poorest hardest and disproportionately affect women.

The gender barriers women face can also limit their adaptive capacity to climate impacts. This directly impacts a company's entire value chain, including through the workforce and local communities.

OPPORTUNITY

Climate resilience solutions with a specific focus on women can unlock multiple business benefits.



- Drive productivity and innovation, especially within sectors like agriculture and apparel.
- Protect raw materials, especially in agricultural supply chains.
- Increase financial stability and returns through solutions and investments that consider climate and gender equality.**
- Strengthen the resilience of local communities because women are well connected in their communities.
- Deliver multiple other co-benefits including stabilizing livelihoods, improving food security, and making progress toward closing the global gender gap.

- Indigenous people living in the Arctic region depend on hunting for polar bears, walrus, seals, and caribou, herding reindeer, fishing, and gathering not only for food to support the local economy, but also as the basis of their cultural and social identity. Concerns include the change in species and availability of traditional food sources, perceived reduction in weather predictions, and the safety of travelling during changing ice and weather conditions. All these pose serious challenges to human health and food security.

- In North America, some indigenous groups are trying to cope with climate change by focusing on the economic opportunities that it may create. For example, the increased demand for renewable energy using wind and solar power could make tribal lands an important resource for such energy, replacing fossil fuel-derived energy and limiting greenhouse gas emissions.

- The impacts of climate change, with its associated and unpredictable seasons are forcing Indigenous communities to adjust their traditions and adapt to this current reality. Environmental changes, such as changed migratory patterns, have forced Indigenous hunters to travel larger distances and incur greater supply costs, including gas.

- Indigenous communities are having to make changes in where and when they hunt, as unstable sea ice is having an impact on traditional migratory patterns of caribou, for example. The instability of sea ice also affects the safety of Inuit hunters during their travels to hunt for seal.

- To further preserve biodiversity and limit its degradation, indigenous people can and should play a leading role in the global response to climate change. In particular, Indigenous women play a vital role as stewards of natural resources. A greater inclusion of Indigenous communities and Indigenous women would represent further validation of the significance of their knowledge.

Mortality rates for women and men are often different in climate-related natural disasters. A 2006 study of 141 natural disasters by the London School of Economics found

that when economic and social rights are fulfilled for both sexes, the same number of women and men die in disasters. At the same time, when women do not enjoy economic and social rights equal to men, more women than men die in disasters. This gender discrepancy has come to light in a range of major disasters, such as the Asian Tsunami; Hurricane Mitch, Hurricane Katrina, and other storms in the Americas; European heat waves; and cyclones in South Asia (UN, 2007, 2009; ECCCO, 2020; BSR 2018).

A Primer: Knowledge Discourses and Intersectional Disempowerment

How does an idea or proposal become law in Canada? A government idea/proposal or ‘bill’ becomes law in Canada by being introduced in the House of Commons or the Senate. Once introduced, the bill goes through first, second, and third readings. To become law, it must then receive ‘royal assent’ (Kehoe, 1997). Please see endnote 1 in Appendix 1 for helpful legal process definitionsⁱ (Kehoe, 1997).

It is important to understand the mechanics of how ideas become proposals/bills and then laws as the macro-economic legal infrastructure impacts our micro-economic decision-making capacity in day-to-day life. Knowledge discourses build, normalize, and regulate these infrastructures (Lawrence, 2003, 3). Eurocentric colonial discourses of knowledge produce particular ways of thinking and meaning by creating dichotomies (for example, ‘masculine’ or ‘feminine’ when discussing gender and ‘white’ and ‘other’ when discussing race (Peterson and Runyan, 2010, 11–51). In the Canadian context, these colonial knowledge constructs conferred privilege and power on those who created it (white male settler society) and further entrenched these gender-oppressive, classist, and racist ideologies in the fabric of Canadian socio-political, cultural, and economic architectures. This dichotomization separates the ‘other’ (person, culture, community, body of knowledge, country), manufactures differences, constructs superior and inferior gender and race classifications, and legitimates the superiority of Eurocentric ideologies.

It is imperative when discussing colonial discourses of knowledge to draw attention to the role that scientizing knowledge has played in substantiating the superiority of Eurocentric knowledge and subordinating Indigenous traditional ecological knowledge in Canada. The targeted eradication of Indigenous people across Canada has its roots in the imposition of colonial knowledge. An example can be seen in a ‘scientific’ colonial tool of oppression called ‘the great chain of being.’ The great chain of being was a body of scientifically derived knowledge that classified human intelligence, and ultimately human worth, based on physiological and anatomical attributes; namely, through measuring the size and shape of craniofacial features (Marks, 2008, 68–73). White European males

were at the top (next to or below Christian/religious representations of angels, etc.); all other forms of humanity and life forms were considered as ‘other’ and thus deemed to be less worthy. Marks’ (2008) discussion of the great chain of being captures the oppressive, racist power of this scientific knowledge claim in a caption from *Vestiges of the Natural History of Creation*, the 1844 work of speculative natural history and philosophy by Robert Chambers:

“We have already seen that various leading animal forms represent stages in the embryotic [sic] progress of the highest—the human being. Our brain goes through the various stages of a fish’s, a reptile’s, and a mammifer’s brain, and finally becomes human. There is more than this for, after completing the animal transformations, it passes through the characters in which it appears, in the Negro, Malay, American, and Mongolian nations, and finally is Caucasian. The leading characters, in short, of the various races of mankind, are simply representations of particular stages in the development of the highest or Caucasian type. The Negro exhibits permanently the imperfect brain, projecting lower jaw, and slender bent limbs, of the Caucasian child, some considerable time before the period of its birth. The aboriginal American represents the same child nearer birth. The Mongolian is an arrested infant newly born.” (Marks, 2008, 61)

These ethnocentric genocidal ideologies are not relics of history, but can be seen in contemporary patterns of rampant gender, race, and class inequality and injustice. The pervasiveness and entrenchment of these patriarchal and racist discourses are active crises in the Canadian Indigenous context, and disproportionately impact Indigenous women. An example of this can be seen in the unequitable political discourse of governance and law. In Canada, of the 338 seats in the House of Commons, only 98 of those seats are represented by women, and out of that only four of those seats are held by Indigenous women. There are 105 seats in the Senate, of which 47 are represented by women and only six by Indigenous women.¹ The legacy of systemic and systematic exclusion, oppression, pointed gender-based subordination, and cultural eradication of Indigenous women in Canada is a deplorable crisis. The exclusion of Indigenous women’s representation² in the spaces where laws become enshrined, and built into the fabric of daily life, is a poignant example of structural

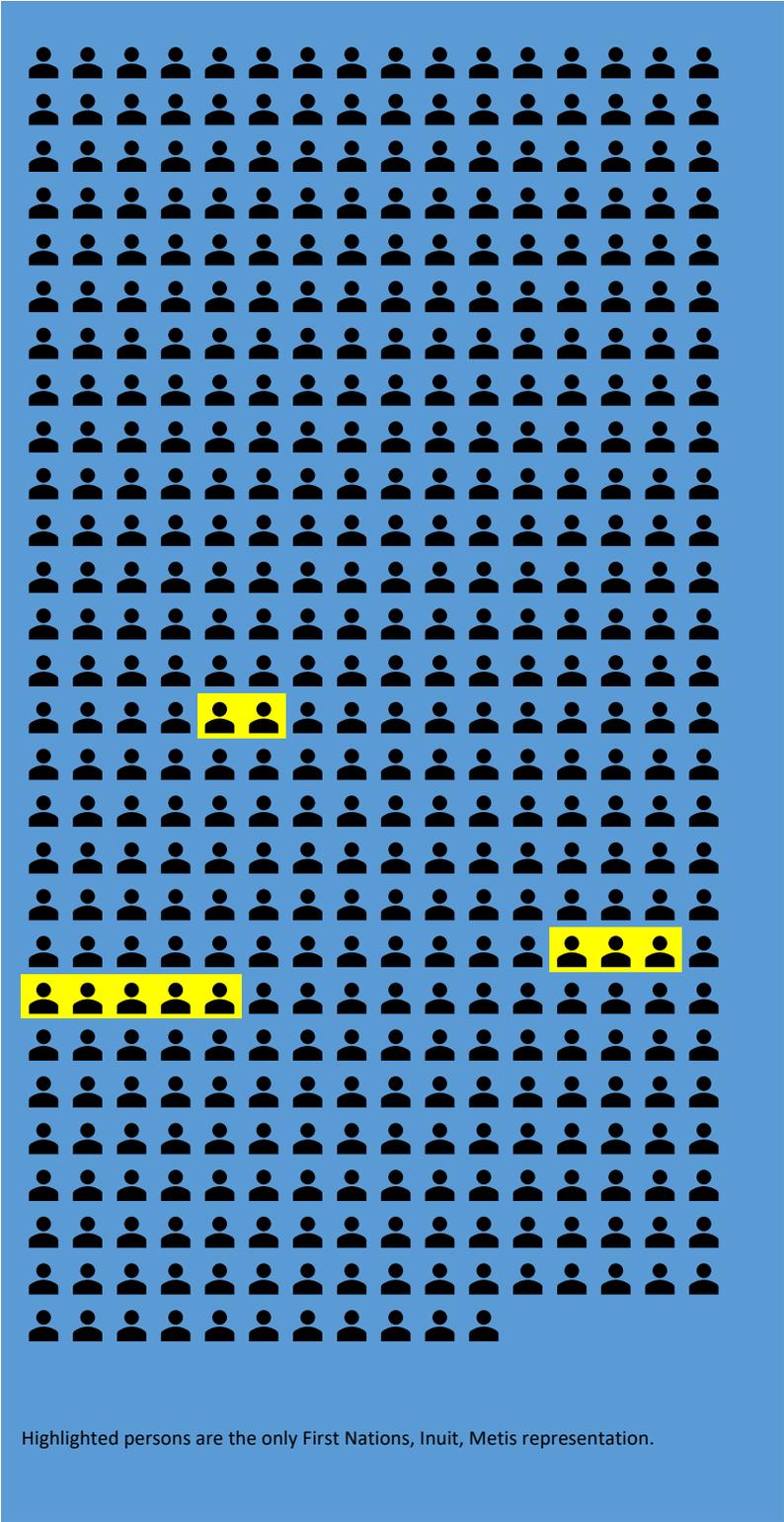
¹ It is important to also mention the lack of readily available and accessible information regarding Indigenous women’s representation in the House of Commons and the Senate. Each senator and MP had to be individually explored in order to determine Indigenous women representation. In contrast, access to Indigenous male, non-Indigenous male, and female parliamentarians was readily available through a quick internet search. This element of the research for the toolkit (i.e., the number of Indigenous women in the Senate and House of Commons) again highlights the unequal distribution of power and priority, and the ongoing devaluing of Indigenous women; why aren’t Indigenous women’s statistics of their representation in government as accessible?

² For discussion on barriers to women accessing places and positions of power in Canada, and recommendations to address these barriers, please see: Vecchio, *Elect Her: A Roadmap for Improving the Representation of Women in Canadian Politics*.

gender-based violence against Indigenous women. Mi'kmaq lawyer and activist Dr. Pamela Palmater echoes this:

“Canada has always targeted First Nations women for exclusion from the Indian Act as part of its overall Indian policy geared towards the elimination and assimilation of Indians. When colonial governments could no longer murder Indians or starve them or infect their blankets with smallpox, they tried residential schools to torture the Indian out of them. When that didn't work, they stole their children and had them adopted into white families. When Indigenous people kept making babies, the government engaged in the forced sterilization of Indian women and girls — often without their knowledge or consent...Knowing they could not eliminate Indians by force, the government designed the Indian Act to eventually legislate Indians out of existence. To speed up this process, they targeted Indian women and children for exclusion from both registration as Indians, and membership in their communities in a variety of ways. Indian women who married non-Indians lost their Indian status, as did their children. Daughters born to Indian men out of wedlock were excluded from registration. Indian agents, the government's representatives on reserves, could also protest the registration of children born to Indian women out of wedlock. In fact, the success of assimilation depended in part on targeting Indian women. In the words of the department in 1920: ‘It is in the interests of the Department ... to sever her connection wholly with the reserve.’ At every turn, Indian women and their children were treated as lesser or non-Indians.” (Palmater, 2019)

In total, between the House of Commons and the Senate where ideas can be made into law, there are 443 seats, with only 10 currently held by Indigenous women. This is what structural violence through an Indigenous gender lens looks like in Canada: it makes visible the inextricability between gender and



Highlighted persons are the only First Nations, Inuit, Metis representation.

power; gender inequality is about the unequal distribution of power and exclusion from the resources and infrastructures to bridge that gap. International feminist policy scholars Peterson and Runyan (2010) echo this: “It is important to stress the political nature of gender as a system of difference construction and hierarchical dichotomy production ... [G]ender is about power, and power is gendered ... [T]he structure of dichotomies produce patterns of thought that are stunted, static, oversimplified, and politically problematic” (Peterson and Runyan, 2010, 11–51).

Gender and Climate Change



Invest in Girls and Women to Tackle Climate Change and Conserve the Environment

THE WORLD TODAY

AN ESTIMATED
4
MILLION An estimated 4 million people die prematurely each year from household air pollution

18.8
MILLION 18.8 million people were displaced because of climate related disasters in 2017

2.9
BILLION 2.9 billion people in the developing world still use polluting fuels like wood, coal, and charcoal

ONLY 35% Only 35% of environmental sector ministries have a gender focal point

THE INVESTMENT CASE

Continuing to use solid fuels =

\$123
BILLION

in annual costs, encompassing:

+



health environmental economic

SOLUTIONS

 Participation of girls' and women in climate change mitigation and adaptation processes

 Integration of environmental conservation strategies within girls' and women's health programming

 Investment in technologies that enhance renewable and clean energy sources

 Secure land rights and inheritance rights for women



To join the campaign and for data sources, please visit deliverforgood.org

Fast Facts: Climate Change and Gender Inequality

- **Women are disproportionately affected by the impacts of climate change all over the world.** Women's traditional roles as the primary users and managers of natural resources, primary caregivers, and keepers of the home mean they are involved in and depend on livelihoods and resources that are put most at risk by climate change.
- **Women and girls are more likely to carry the burden of energy poverty and experience the adverse effects of lack of safe, reliable, affordable, and clean energy.** Indoor air pollution from using combustible fuels for household energy caused 4.3 million deaths in 2012, with women and girls accounting for six out of every 10 deaths.
- **Environmental degradation and climate change have disproportionate impacts on women and children.** Women often bear the brunt of coping with climate-related shocks and stresses or the health effects of indoor and urban pollution, which add to their care burden. As land, forest, and water resources are increasingly compromised, privatized, or 'grabbed' for commercial investment, local communities and Indigenous peoples, particularly women, whose livelihoods depend on them, are marginalized and displaced. Globally, women are 14 times more likely than men to die during a disaster.

Source: BSR; <https://www.bsr.org/en/>.

ADDRESSING GENDER EQUALITY IN CLIMATE CHANGE ADAPTATION

From principles to practice

The Paris Agreement under the United Nations Framework Convention on Climate Change established the first global goal for adaptation to climate change, highlighting the links to human rights, poverty eradication and sustainable development. It also upped the ambition on gender in climate action, acknowledging the importance of gender equality and women's empowerment and calling for gender-responsive approaches to adaptation and capacity building.

Now that these principles have been agreed upon by the global community, how do we put them into practice?

TAKING A GENDER-RESPONSIVE APPROACH TO ADAPTATION IS ABOUT:

WHO MATTERS?

Consideration of gender differences and marginalized groups in decision making promotes climate change adaptation investments that are used effectively and targeted where they are needed most.

In many countries, there are still considerable gender gaps in access to education, literacy and income-generating opportunities, placing many women and girls at a disadvantage, particularly when it comes to accessing information and investing in adaptation actions. For women and girls to realize their potential as agents of change in adaptation, these gaps must be overcome.

People's adaptation needs differ depending on their gender, socioeconomic status and how they sustain their livelihoods, among other factors. There are socially determined differences in roles, responsibilities and decision-making power, all of which influence vulnerability to climate change. Without an understanding of these dynamics—which are often influenced by gender—there is a risk that the people with the greatest need for adaptation will be left out.

Women remain under-represented in decision making in climate-vulnerable sectors, from the local to the national level, with marginalized groups facing additional barriers to participation. This has implications for how gender-responsive adaptation action in these sectors will be.

When adaptation is approached as a technical issue, the importance of including diverse stakeholders and actors working on sociocultural issues such as gender may be overlooked, as they may not be viewed as important to the process. Bringing in the knowledge of women, gender actors and representatives of marginalized groups to adaptation decision making is key to ensuring effective and inclusive adaptation action.

WHO DECIDES?

Equitable participation and influence by women and men, including representatives of marginalized groups, in climate change adaptation decision making builds capacities and creates the conditions for inclusive implementation.



WHO BENEFITS?

Assessing climate change adaptation results for women, men and marginalized groups promotes equitable benefits and brings unintended consequences to the surface.

The implementation of adaptation actions will not necessarily yield benefits for all members of society, and what constitutes effective adaptation differs depending on the perspective. Too often, the definition of results ignores the perspectives of women and of other groups whose voices are excluded.

Too much focus on quantitative measures of success is also unhelpful, because it may obscure social dynamics and processes of change and how these do or do not reduce vulnerability to climate change. Consideration of who is benefiting from adaptation investments, as well as why some people are left out, can help to avoid exacerbating existing inequalities and improve equity in outcomes.



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Gender-responsive climate change adaptation goes beyond consideration of women and men—it explores how views about gender and social norms influence vulnerability to climate change and how they intersect with other factors, such as age, race, ethnicity and sexual orientation. Adaptation efforts should promote gender equality and actively challenge practices that lead to inequality and marginalization.

► [READ MORE](#)

The NAP Global Network brings together practitioners and policy-makers from around the world to enhance national adaptation planning and action in developing countries. For more information, please visit our website:

napplobalnetwork.org @NAP_Network

- The relationship between gender and vulnerability is complex. Worldwide, mortality due to natural disasters, including droughts, floods, and storms, is higher among women than men (WHO, 2011).
- In Canada's Inuit population, females may be more vulnerable to the effects of diminished food supplies (Pearce et al., 2011).
- In the Paris 2003 heat wave, excess mortality was greater among females overall (Fouillet et al., 2006).
- In Bangladesh, females are more affected than males by a range of climate hazards, due to differences in prevalence of poverty, undernutrition, and exposure to water-logged environments (Neelormi et al., 2009).
- The effect of food insecurity on growth and development in childhood may be more damaging for girls than boys (Cook and Frank, 2008).
- Pregnancy is a period of increased vulnerability to a wide range of environmental hazards, including extreme heat (Strand et al., 2012), and infectious diseases such as malaria, foodborne infections, and influenza (Van Kerkhove et al., 2011).

All the highlighted sources need to be in Bibliography

Globally, Indigenous women experience intersectional and multi-dimensional disempowerment by, and exclusion from, key socio-political and economic centres of decision-making in the climate, energy, water, and food (WEF) nexus. This WEF nexus is generally understood as the interdependence between energy, climate, water, food, and political systems. It is framed through a technical/management challenge, and resource securitization/scarcity issue post-2007/2008 energy, food, and financial crises (Terrapon-Pfaff et al., 2018; Allouche, Middleton, and Gyawali, 2015). This WEF nexus discourse is said to have emerged in the international community in 2011 at the Bonn Conference, in response to climate change and population growth, urbanization, globalization, and the subsequent resource-related pressures (Pardoe et al., 2018; Allouche, Middleton, and Gyawali, 2015; Hoff, 2011), (Endo et al. 2017). Missing from the international 'WEF nexus' conceptual framework and literature is; an explicit recognition of Indigenous Traditional Ecological Knowledge (TEK), ecofeminist, gender equality, and social justice discourses which all have the demonstrated intersectional and holistic conceptualizations of ecological and social systems integration- long before the 'WEF nexus' language in 2011. The 'WEF nexus' is widely accepted internationally and "recognised as a conceptual framework able to support the efficient implementation of the Sustainable Development Goals" (Terrapon-Pfaff 2018).

It is of significant importance to note the lack of recognition Indigenous and gender knowledge discourses are given in the frame up of WEF nexus; not only is it a continuation of colonial and neoliberal capitalist mechanisms of othering, devaluing, and oppression, but it pushes already marginalized women and Indigenous populations (who are the most at risk for climate related vulnerabilities) further into the margins of chronic disempowerment³. It also significantly continues to decrease the collective human capacity to draw on the abundance of environmentally and socially equitable knowledge inherent in traditional Indigenous and gender knowledge.

Globally, systemic gender, class, and race inequality has produced and perpetuated poor social determinants of health for Indigenous populations. Indigenous people and women are the most vulnerable to, and disproportionality affected by climate change, and though all life is impacted by climate change issues, the solutions, risks, and impacts on livelihoods is not the same for everybody

³ In addition to being the most at risk and vulnerable to the impacts of climate change, globally women account for "70 percent of the world's approximately 1.3 billion living in absolute poverty (making less than 2\$ a day), two thirds of world's 800 million illiterates, and the majority of the world's refugees, HIV/AIDS sufferers, land mine casualties, and sex trafficking, rape, and domestic violence victims" (Peterson & Runyan, 2014, 168). Missing from Bibliography

(OHCHR 2016, Harris et al. 2018, IUCN 2009). Dr. Vandana Shiva a gender, social justice, and environmental scholar, advocate, and pioneer of ecofeminism, explains that climate change and its impact on woman are not two separate issues. Gender inequality and climate change are bound up, entrenched, and perpetuated by the same racist, patriarchal, colonial, sexist, marginalizing worldview, Vandana states “The same world view that does violence to the earth and treats nature as dead, is the same world view that treats women as a second sex” (Dr. Vandana Shiva’s Presentation at the Convention on Biological Diversity, Women’s Caucus, Hyderabad India, 2012). Anglo-European colonial worldviews produced and ‘scientized’ a knowledge discourse of class, race, and gender in order to manufacture hierarchical difference (i.e. great chain of being etc.). In Canada this ‘knowledge’ materialized and was executed with precise intentionality; in order to other, devalue and subordinate First Nations, Inuit and Métis. Make no mistake, the goal of the Canadian government was never to assimilate the Indigenous people of Canada into the population, but to exterminate them. The deployment of intrinsically ethnocidal ideologies that were enshrined in law and embedded into the legal, political, and economic social fabric of Canada was a strategic, purposeful, government-sanctioned genocide waged against all Indigenous people in Canada. This abhorrent ethnocentric campaign was actualized through federal legislative mechanisms, such as the *Indian Act*, residential school system, and the Sixties Scoop, and through the lack of or intentional underfunding to essential human rights and services, such as food, water, housing, and access to culturally sensitive health care and education. This has resulted in a multiplicity of poor psychosocial, physiological, and social determinants of health for First Nations, Inuit, and Métis people across Canada, of which Indigenous women, girls, and 2SLGBTQQIA bear a disproportionate burden (Canadian Centre for Policy Alternatives, 2019).

As climate change continues to alter the Earth’s ice, water, air, land, and soil composition, the impact will be seen and felt by all things living. Climate change will negatively impact those who are already vulnerable due to inadequate access to housing, health, food, and water (OHCHR, 2016), among other factors. Indigenous women, girls, and 2SLGBTQQIA in Canada are already marginalized from equitable access to housing, health care, food, and clean water by the very macro-economic architectures that are in place to provide these human rights and services. For decades, the Canadian federal legislative infrastructure has denied Indigenous women access to basic standards of living in a time of economic and natural resource abundance. As climate change worsens and resources become scarce (and even

more unaffordable to those entrenched in poverty by virtue of race and gender), it seems unlikely that the government would prioritize First Nations, Inuit, and Métis people's health and well-being during a time of scarcity when it never has in times of prosperity. With limitless power and funding, the exclusion campaigns against First Nations, Métis, and Inuit women have been methodical and persistent. The ramifications of colonialism and the continuation of its sexist and racist structural oppression through neo-liberal capitalist discourses cannot be understated.⁴ The impact on First Nations, Inuit, and Métis social determinants of health and health inequalities are rooted in these infrastructures, which are saturated in ideologies of subordination, unbridled resource extraction, patriarchy, gender inequality, and racism. The collective resiliency, adaptability, and determination of First Nations, Métis, and Inuit people to preserve and restore their culture, knowledge, language, and lands from the margins of dislocation is a true embodiment of the power of collective capacity and advocacy to fight for all life, for the environment, and for well-being, equality, and justice.

A statement delivered by Dr. Vandana Shiva to the European Union Parliament encapsulates the destructive ideologies driving gender and Indigenous inequity and the correlated climate crises, and the paramount importance of women as agents of change, as protectors of knowledge, and as guardians of sustainable ecological and social wellbeing for all:⁵ⁱⁱ

“When economics works against the science of ecology, it results in the mismanagement of the earth, our home. The climate crisis, the water crisis, the biodiversity crisis, the food crisis are different symptoms of this crisis of mismanagement of the earth and her resources. We mismanage the earth and destroy her ecological processes when we do not recognize nature's capital as the real capital and everything else as derived. If we have no land, we have no economy. Without nature and her ecological processes to sustain life on earth, the grandest economies collapse, and biggest civilizations disappear. We mismanage our homes when we ignore women's knowledge and contributions for caring for the earth and ensuring human well being, and discount the processes that disempower women through structures of inequality. The objective of capitalist patriarchy is to own and control the real wealth that nature and people produce, through a paradigm that sees nature as dead , mere raw material for exploitation , and women as a “passive” second sex , incapable of creating and producing. A fictitious “Creation Boundary” has been put in place, rendering women's creativity and knowledge invisible. Over five decades, my work has included making women's ecological knowledge, their knowledge of biodiversity, of water systems, of seeds, of food, of health, visible.” (Shiva, 2017)

⁴ In 2010, 388 billionaires controlled as much wealth as the entire bottom half of humanity. In subsequent years, the number of people who control the most wealth continues to drop: 2011 — 177 billionaires; 2012 — 159; 2013 — 92; 2014 — 80; 2016 — 62; 2017 — 8. By 2019, 5 billionaires controlled as much wealth as the entire bottom half of the global population. (Shiva, EU Parliament, Interparliamentary Committee Meeting: International Women's Day 2017; Shiva, UNRISD, 2018). These need to be in Bibliography

⁵ Please see endnote III for the full transcript of Dr. Shiva's speech.

Recommendations

1) Engagement

This toolkit is meant to be used as a primer; to build better understanding of the gendered power that is present in colonial knowledge discourses, how they are operationalized structurally, and the impact these ideologies have on climate change, gender inequality, and Indigenous health, particularly for Indigenous women. To more fully unfold the intersection between Indigenous and gender inequity, and climate change, and to further develop this piece of work, it is crucial to engage Indigenous people and stakeholders. The limited timeframe and resources of this initial draft could not support hosting focus group discussions or individual interviews. For this toolkit to evolve into a culturally sensitive tool of knowledge mobilization and empowerment, Indigenous women, girls, and 2SLGBTQQIA need to be involved in future iterations of this toolkit. Focus groups involving First Nations, Inuit, and Métis women, girls, and 2SLGBTQQIA people could be held. Key themes to explore in these discussions might be:

- Observed climate change
- Traditional ecological knowledge
- Personal narratives of gender, race, power, and the Earth
- Day-to-day impacts from climate change on women (increased energy/food/resource costs)
- Policy engagement
- Advocacy and communication platforms
- Civil disobedience and protest
- Climate degradation
- Advancing economic opportunities in a time of climate crises
- Mental health and addiction
- Social determinants of health

2) Literature Review

Given the multiplicity of intersectionality in exploring the gendered impacts of climate change; specifically, as it relates to Indigenous, First Nations, Métis, and Inuit populations, a comprehensive literature review is recommended. In conjunction with the focus group discussions, a mapping review of the literature could be conducted. A mapping review is “a rapid search of the literature aiming to give a broad overview of the characteristics of a topic area. Mapping of existing research, identification of gaps, and a summary assessment of the quantity and quality of the available evidence helps to decide future areas for research or for systematic reviews” (Booth, Papaioannou, and Sutton, 2012, 264). A longer-term project for ECCCO (NWAC) would be to conduct a comprehensive, systematic literature review of over 100,000 journals, books, and other reference sources. This will enable NWAC to design and develop a best practice resource

that specifically and methodically addresses the intersection between the climate degradation and gender

inequality crises' as it relates to First Nations, Inuit, Métis women, girls, and 2SLGBTQQIA.

3) Strengths based Approaches: Advocacyⁱⁱⁱ and Traditional Ecological Knowledge as tools of Empowerment

Residential schools operated in Canada for over 160 years from 1831 to 1996. The ramifications of colonial mechanisms of oppression have been briefly scoped in this paper. In future iterations of this toolkit, an advanced narrative discussion, mixed methods literature review, and focus group discussions that focus specifically on First Nations, Inuit, and Métis resistance, refusal, and re-storying⁶ from a strengths-based perspective would enhance this project.

Advocacy changes inequality. Sharing knowledge and lived experience is a tool of empowerment and an act of advocacy. Women, Indigenous stakeholders, and allies have the capacity, strength, and determination to change the knowledge systems and normative political discourses that perpetuate violence against Indigenous populations, women, and the Earth.

In 2007, Canada refused to sign the United Nations' Declaration on the Rights of Indigenous Peoples (UNDRIP). In 2016, after nine years of advocacy (and related protests, such as the Idle No More and Attawapiskat protests), along with heavy criticism from Indigenous stakeholders and allies (e.g., United Nations

“Indigenous students and parents resisted and protested the harsh regime in place at most residential schools. Some children refused to co-operate and sabotaged the operations of the kitchen or classroom, stole food and supplies, or ran away ... At least 25 fires were set by students as a form of protest. Their parents and political leaders protested the schools' harsh conditions and pedagogical shortcomings, though their objections were mostly ignored. By the 1940s it was obvious to both the government and most missionary bodies that the schools were ineffective, and Indigenous protests helped to secure a change in policy.” (Miller, 2019)

High Commissioner for Refugees [UNHCR] and Amnesty International), the Canadian government conceded and signed UNDRIP. Social movements and advocacy move! They move people, structures, ideologies, and policies, and help to transform inequitable normative discourses.

⁶ Indigenous scholar Dr. Brooke Madden writes a brief and succinct article highlighting the importance of “re-storying” the narratives of the colonial impact on Indigenous people; to include the stories of their collective resistance, resurgence, and resiliency (Madden, 2019) .

Traditional Ecological Knowledge (TEK) of First Nations, Inuit, and Métis people and the act of sharing this knowledge through generations is holistic intersectional empowerment; it is the axis of culture and Earth preservation. Where anglo-European knowledge is rooted in compartmentalization, dichotomization, and patriarchal hierarchy of politics, society, and culture as separate from the Earth, First Nations, Inuit, and Métis traditional knowledge is rooted in symbiosis, reciprocity, and a cyclical, intertwined connection between all lands and all life (Colorado, 1998; Scott, 1983, Deloria, 2001). Given the time-limited nature of this initial draft, it is not possible to do due diligence to capturing the breadth of First Nations, Métis, and Inuit traditional knowledge. For subsequent drafts of this toolkit, it is recommended that NWAC engage these communities through focus groups, semi-structured interviews, and participation (upon invitation) in traditional ways of life to enhance the traditional ecological knowledge section of this toolkit.

4) Case Studies: Indigenous Innovation and Response to Climate Change

Due to the time-limited nature and scope of this initial draft, an extensive literature review on case studies was not feasible. A section dedicated to First Nations, Métis, and Inuit climate change adaptation, mitigation, observable changes, etc., is strongly recommended for future iterations of this toolkit.

The following table highlight strategies for engagement and tools for empowerment in relation to climate change adaptation, mitigation, and economic opportunity. This table also captures real challenges and climate sustainability success stories from Indigenous communities, leaders, and individuals, and Indigenous traditional ecological knowledge and innovation to inform evidence-based climate/environmental decision-making and policy recommendations at the federal, provincial, territorial, and community levels. This table is intended to be a living document that will capture and share the entire narrative of an individual or community experience as it unfolds. It is important to both document and share ongoing challenges that don't feel like "success stories." The column titled

Possible Tools to Facilitate Change/Pathway is for adding problem-solving examples for ongoing challenges or tools to enhance future project outcomes.

Potential Challenge	Community Goal	Toolkit Theme	Possible Tools to Facilitate Change/Pathway	Success Story/Experiences ⁷
<p>The deterioration of water quality in Pond Inlet motivated the community to give five young Inuit the opportunity to conduct research on water quality, health, and climate change.</p>	<p>Building Capacity to Monitor the Risk of Climate Change on Water Quality and Human Health: A Two Year Journey Expanding Community-Based Leadership in Pond Inlet</p>	<p>Knowledge mobilization</p>	<p>N/A</p>	<p>The young people were able to integrate the Inuit experiential approach to training, based on observation, experience, and the sharing of knowledge between generations.</p>
<p>On Banks Island in Canada's High Arctic, Inuvialuit hunters and trappers have a close relationship with the natural world. As they travel over the tundra or harvest fish from the sea, they notice even the smallest changes to their environment. Recently, the changes have been significant and worrying. The climate has become unpredictable; the landscape unfamiliar. These changes tell local people that the climate is warming. The residents of Sachs Harbour wonder if they can maintain their way of life if these changes continue.</p>	<p>Develop an innovative method for recording and sharing local observations on climate change; to communicate the consequences of climate change in the Arctic (public awareness) and to understand the adaptive strategies that local people are using.</p>	<p>Gender Inclusivity</p>	<p>A point of great interest from this case study is that the Inuvialuit community respondents identified during the evaluation phase of the project (completion) that, although the project was inclusive generally, it could be <i>improved by having more women, more elders, and more youth.</i></p>	<p>During the two-year initiative, the project team produced a broadcast-quality video and published seven scientific journal articles to communicate the consequences of climate change in the Arctic and to understand the adaptive strategies that local people are using. The papers document the extent of Inuvialuit knowledge on climate change and explore how that knowledge can enrich scientific research in the Arctic. The video follows local people onto the land and sea as they take part in traditional activities. Their voices — and the beauty of a fragile and bountiful land — leave viewers with a clear understanding of what will be lost if climate change continues.</p>
<p>Co-develop a comprehensive climate change monitoring program that integrates Traditional Ecological Knowledge and science with a focus on species at risk and culturally significant ecology.</p>	<p>Integrating Traditional Knowledge and Science to Monitor the Implications of Climate Change on Culturally Significant and At-Risk Ecology of Indigenous Lands</p>	<p>Traditional Knowledge</p>	<p>Attain funding to support project</p>	<p>Stay tuned, this project is ongoing!</p>

5) Equal Political Representation/Experience of Barriers to Access

First Nations, Inuit, and Métis exclusion from the resources and infrastructures that have the capacity to effect change are violations of their human rights and dignity, and a continuation of colonial injustice. The development of sustainable culturally relevant policy options begins with inclusion and equal representation; particularly in the House of Commons and the Senate. Given the scope of this toolkit, it was not possible to review the literature on what barriers First Nations, Inuit, and Métis conceive there are to accessing the political realm nor how they feel about their respective political representation at the federal level, specifically as it relates to Indigenous women. Future iterations of this toolkit should encompass a focused literature review as well as community consultations.

Conclusion

NWAC has consulted with Indigenous women and gender-diverse leaders, youth, and Elders who comprise our board of directors and youth advisory council. This group of Indigenous women are from all four corners, inclusive of representation from First Nations, Inuit, and Métis communities. They have echoed much of what has been expressed throughout this toolkit; from observed changes at the community level, to the lack of inclusion at decision-making tables. When it comes to Indigenous women and climate change, these Indigenous leaders, Elders, and youth have highlighted the following:

- Indigenous women need our voice to be heard and we have to be present at decision-making tables to overcome huge barriers raised by large, multi-national corporations.
- Indigenous people should be able to apply for funds for independent environmental monitoring, to have the tools to challenge company experts, and Elders have much to offer.
- Indigenous women have challenges accessing government funding as it is difficult to meet all the criteria, or we are passed from one department to another.
- Communities are not keeping up with the need to have a greater focus on climate change. Examples of the failure to be prepared to respond to particular issues include large fires and mining.

⁷For more First Nations, Inuit, and Métis climate change-related case studies that received federal funding, visit <https://www.aadnc-aandc.gc.ca/eng/1546537342810/1546537435429>.

- In some areas, annual spring flooding displaces families, who then struggle to get compensation. The challenge: how can we raise awareness in the communities? Yes, we have to act at the individual level, but it is at the top where we need to be effective to stop the pollution.
- We need to ensure that our governments and other environmental and conservation groups understand our way of life and support us in mitigating negative environmental impacts.
- People most affected by climate impacts are the marginalized. We need to develop tools and resources to better equip those whose voices go unheard to be able to participate in all levels of climate change mitigation and adaptation
- We have compassion for mother earth and for one another. Women are going to be the ones to unify from coast to coast and in the territories
- In Nova Scotia, as the ice melts in the north, sea levels will rise and are expected to go up 6 feet. The Mi'kmaq communities will need to move within the next 60 years. An immediate change that can be seen is the shift in seasons. We used to be able to collect fiddleheads around the end of May but now (because of the two freshettes) and climate change, it is later. We can't get to certain areas until June or July. We are going to have to learn to grow things differently in order to survive. The river is saturated with glycozine as it is used by both industry and government – we are trying to put a stop to the spraying
- In the NWT, the problem of the rising sea levels will mean two communities will have to move. It is happening faster than anticipated – we are in crisis mode. We don't need more studies, we need action
- Our water is becoming polluted. If people go on the land, they need to take treated water with them. Furthermore, the water stewardship committee is led by men, and there is not one woman on it. We need to be part of this to make it effective
- In Cape Breton, we are not talking enough about the rising of the sea level and people are not aware of its impact. Women need to be in the lead: let's rise up. I want my little girls to live in a safe world
- People need to learn from each other, and set basic standards that will hold industry to better environmental practices

- Climate change is affecting winter roads and therefore increasing the difficulty of the transport of goods to northern communities
- Women have to be flown out of northern communities for self or child health care, and the weather often affects the ability to do so. The situation is exacerbated by Greyhound eliminating numerous routes

Climate change is impacting Indigenous women and their communities in a multiplicity of ways. The purpose of this toolkit is to further the dialogue about climate change, and to create a living document to be used throughout communities to mobilize knowledge with Indigenous women about Indigenous women's experiences, livelihoods and observations in relation to climate change. We are committed to the consultation process for the development of this toolkit, this is only the beginning. We believe that storytelling and experiential knowledge from Indigenous women and their communities holds tremendous climate change adaptation and mitigation resources across the country. Since time immemorial Indigenous women have been protecting the land, each other, and their communities as it is all interconnected. We hope that this toolkit will grow to become a way of capturing and sharing Indigenous women's traditional knowledge and used to advocate and impact climate change decision making at the community, provincial and federal levels.

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Appendix 1

Indigenous Community-Based Climate Monitoring Program

The Indigenous Community-Based Climate Monitoring Program is accepting applications from Inuit communities and organizations only for the 2019 to 2020 fiscal year.

This program provides funding for long-term climate monitoring projects in Indigenous communities.

Budget 2017 announced \$31.4 million over 5 years to implement this program.

About the Program

This program was developed in response to needs identified by Indigenous partners through engagement on the [Pan-Canadian Framework on Clean Growth and Climate Change](#):

- build capacity within Indigenous communities to monitor climate change impacts; and
- foster the co-application of Indigenous Knowledge and science.

The program provides funding to support Indigenous peoples in the design, implementation, or expansion of long-term community-based climate monitoring projects. Specifically, the program supports community-led projects to monitor climate and the environmental effects of climate change on traditional lands and waters. The program also facilitates access to tools and best practices, enhances collaboration and coordination among initiatives, and supports Indigenous participation in program oversight.

For example, eligible activities for funding include: community engagement, training and hiring of community members dedicated to the project, purchase and rental of monitoring equipment, assessing and managing data, monitoring key climate indicators, communicating climate monitoring results, and networking.

[Climate Change Preparedness in the North Program](#)

[First Nation Adapt Program](#)

[Northern Responsible Energy Approach for Community Heat and Electricity Program](#)

[Climate Change and Health Adaptation Programs \(North and South\)](#)

[Northern Contaminants Program](#)

[Canadian Centre for Climate Services](#)

[National Indigenous Community-Based Climate Monitoring Symposium](#)

[Crown-Indigenous Relations and Northern Affairs Canada home page](#)

[Indigenous Services Canada home page.](#)

Endnotes

Public Bills

These are proposals for laws that will affect the public in general. Most public bills are introduced by Government Ministers. Bills sponsored by the Government are numbered from C-1 to C-200 in order of presentation. If they are introduced first in the Senate, they are numbered starting S-1.

Private Bills

These are limited in scope: they concern an individual or group of individuals only. They confer a right on some person or group, or relieve them of a responsibility.

Policy Proposal

Most legislation originates with the Government. Policy proposal requiring legislation is submitted to Cabinet by Minister(s).

Cabinet

- Policy proposal is considered by the appropriate Cabinet committee and recommendations are made to the Cabinet.
- If Cabinet approves, the responsible Ministry issues drafting instructions to the Legislation Section of the Department of Justice.
- Draft bill is prepared in two official languages and approved by the responsible Minister.
- Draft bill is presented to Cabinet for approval.
- If approved it is ready to be introduced in Parliament.

Parliament

First Reading

First reading in either the Senate or the House of Commons. Bill is printed.

Second Reading

Second reading in the same House of Parliament. Members debate and vote on the principle of the bill. The House may decide to refer the bill to a legislative, standing or a special committee, or to Committee of the Whole.

Consideration in Committee

Consideration by the appropriate parliamentary committee (clause-by-clause study of the bill). Committee can summon witnesses and experts to provide it with information and help in improving the bill.

Report Stage

Committee reports the bill to the House clearly indicating any amendments proposed. House considers amendments and votes for or against them.

Third Reading

Debate and vote on bill as amended.

Once bill has been read 3 times in the House, it is sent to the Senate for its consideration.

Royal Assent

- Bill is presented to the Governor General for assent.
- The Governor General may assent to Bill in the Queen's name, withhold assent or reserve assent.
- When Bill is given Royal Assent it becomes law.

In Force

- Statute is in force:
 - upon Royal Assent, or
 - when it is proclaimed by the Governor General, or
 - on a day specified in the act
- Different sections may come into force at different times

(Source: Inba Kehoe, Government Documents, Queen's University, 1997)

ii **Women's Economic Empowerment : Let's Act Together** Dr. Vandana Shiva European Parliament , March 8, International Women's Day [this needs to be cleaned up – see how I edited other toolkit]

Women are *Shakti* . We are the embodiment of power in creative ,non violent form.

Women are the creator's of real wealth , which originally meant "the state of well being "-not money, not capital .

Women's Economic Empowerment is based on two simultaneous processes.

Firstly, removing the structures and processes of economic **disempowerment** that marginalise women and their contributions .Secondly , recognising women's economic contributions by making their knowledge and work visible in the real work of sustenance -care for the earth , and care for the human community. The creation of wealth as well being .The contemporary structures of the economy are based the convergence of two forms opposer in violent form - the violence of patriarchy , and the violent structures of the rule of capital .Capitalist patriarchy has shaped economies through war and violence -wars against nature and diverse cultures , and violence against women .

Separation is the characteristic of paradigms emerging from the convergence of patriarchy and capitalism-first nature is separated from humans, then humans are separated on the basis of gender, religion ,caste, class. This separation of that which is interrelated and interconnected is at the root of violence –first in the mind , then in our lives .It is not an accident that the inequalities of the past have taken on brutal form with the rise of the project of Corporate Globalisation. The number of billionaires controlling as much wealth as 50% of humanity has been rapidly dropping

2010 it was 388 billionaires

2011 it was 177

2012 it was 159

2013 it was 92

2014 it was 80

2015 it was 62

2016 it became 8

This is a recipe for extermination of those who work , and without whose work there is no food and no clothing .

Women , workers , farmers and Nature are made colonies in the dominant economic paradigm of capitalist patriarchy based convergence of two forms of violence -the power of patriarchy, and the rule of money .Economy of the 1% is patriarchal and anti women . The first challenge we face in women's economic empowerment is imagining

another paradigm. As Ronnie Lessem and Alexander Schieffer suggest “if the fathers of capitalist theory had chosen a mother rather than a single bourgeois male as the smallest economic unit for their theoretical constructions, they would not have been able to formulate the axiom of the selfish nature of human beings in the way they did” (Ronnie Lessem / Alexander Schieffer, *Integral Economies*, Ashgate/Gower, Farnham, U.K, 2010). It is time to recognise that caring and sharing are central to the economy as care and management of our common home , and the creation of wealth as well being .Both ecology and economics are derived from “Oikos” which means “home”. Ecology is the science of household, economics is supposed to be the management of the household. Women are the foundation of the economy as management of our home , the particular homes where we live , and our planetary home , the Earth. Think of the billions of women whose care and work sustains society and the economy whose work and contributions are not counted, and whose burden increases as the 1 % appropriates all resources and wealth, leaving women to sustain families and communities with fewer resources .But it is also patriarchal in its assumptions and instruments, and in its impact on real people living in real economies . The Big Money economy is based on the rules of the economic system excluding women and their work , and rewarding those who exploit the earth , women and working people. Capitalist patriarchy denies the creativity of nature , and hence the Rights of Mother Earth. In is therefore anthropocentric. But it is not all humans in the circle of being human. Women, Indigenous people, farmers and peasants , workers are also excluded by being defined as less than human .the Australian Aborigines were defined as part of the flora and fauna until very recently in the Encyclopedia Britannica. When economics works against the science of ecology, it results in the mismanagement of the earth, our home. The climate crisis, the water crisis, the biodiversity crisis, the food crisis are different symptoms of this crisis of mismanagement of the earth and her resources. We mismanage the earth and destroy her ecological processes when we do not recognize nature’s capital as the real capital and everything else as derived. If we have no land, we have no economy. Without nature and her ecological processes to sustain life on earth , the grandest economies collapse , and biggest civilisations disappear . We mismanage our homes when we ignore women’s knowledge and contributions for caring for the earth and ensuring human well being ,and discount the processes that disempower women through structures of inequality . The objective of capitalist patriarchy is to own and control the real wealth that nature and people produce ,through a paradigm that sees nature as dead , mere raw material for exploitation , and women as a “passive” second sex , incapable of creating and producing .A fictitious “Creation Boundary” has been put in place , rendering women’s creativity and knowledge invisible . Over five decades , my work has included making women’s ecological knowledge , their knowledge of biodiversity , of water systems, of seeds, of food ,of health ,visible .Another boundary is the “production boundary” on the basis of which , GDP and “growth” is calculated . The assumption made is “if you consume what you produce , you do not produce .”GDP was evolved during the war to mobilise resources for the war by diverting wealth from the maintenance of families , communities , and societies . It is not a measure not of “wealth “ as the state of well being .At the intellectual level “Growth” has emerged as the measure of money making . What it fails to measure is the destruction of life in nature and society . The poverty and exclusion of the 99% from the 1 % economy is linked to the growth paradigm, shaped by Big Money , for Big Money to grow bigger .

<http://www.resurgence.org/magazine/article250-how-wealth-creates-poverty.html>

<https://www.youtube.com/watch?v=7M3WJQbnHKc>

The poor are poor because 1% have grabbed their resources and wealth . Peasants are getting poorer because the 1 % are promoting an industrial agriculture based on purchase of costly seeds and chemical inputs , which traps them in debt, and destroys their soil, water, biodiversity , and their freedom .More than 300000 Indian farmers have committed suicide due to debt over the past two dec ads , with most of the suicides concentrated in the cotton belt . Monsanto has monopolised the cotton seed supply through its Bt cotton . I started Navdanya to resist these violent monopolies . The farmers varieties of organic cotton seeds that we have saved and distributed are now sowing Seed Freedom .Small farmers are not poor because they are unproductive .They are much more productive than the large industrial corporate farms . If farmers are getting poorer ,it is because the Poison Cartel now reduced to 3 -Monsanto Bayer , Dow Dupont , Syngenta Chem China - make them dependent on buying costly seeds and chemicals . Vertically integrated corporations linking seed to chemicals to international trade to processing of junk food ,are stealing 99% of the value they produce . They are getting poorer because “free trade “ promotes dumping , destruction of livelihoods and depression of farm prices .

The people of the South are getting poorer because the 1% impose profit making ,rent collecting ,privatization policies for health and education, transport and energy through the World Bank and IMF, thus haemorrhaging the poor of their

life blood .Women are experts in managing the commons and sharing resources. They are experts in the economy of care . They are experts in the circular economies of nature and sustainable and just societies .

Capitalist patriarchy has constructed linear extractive economies that leave nature and society poorer , while wealth concentrates in the hands of a few men .Real wealth is our capacity to create, produce and make what we and our communities need to ensure our well being .Well being is the original meaning of wealth, not money .Work creates wealth . As co creators and co producers with nature we protect the earth's wealth creating capacities and enhance our own .We create real wealth when we live as Earth Citizens .Life and its vitality in nature and society is based on cycles of renewal and regeneration of mutuality, respect and human solidarity. The relationship between soil and society, between nature and culture, is a relationship based on reciprocity, on the Law of Return, of giving back.

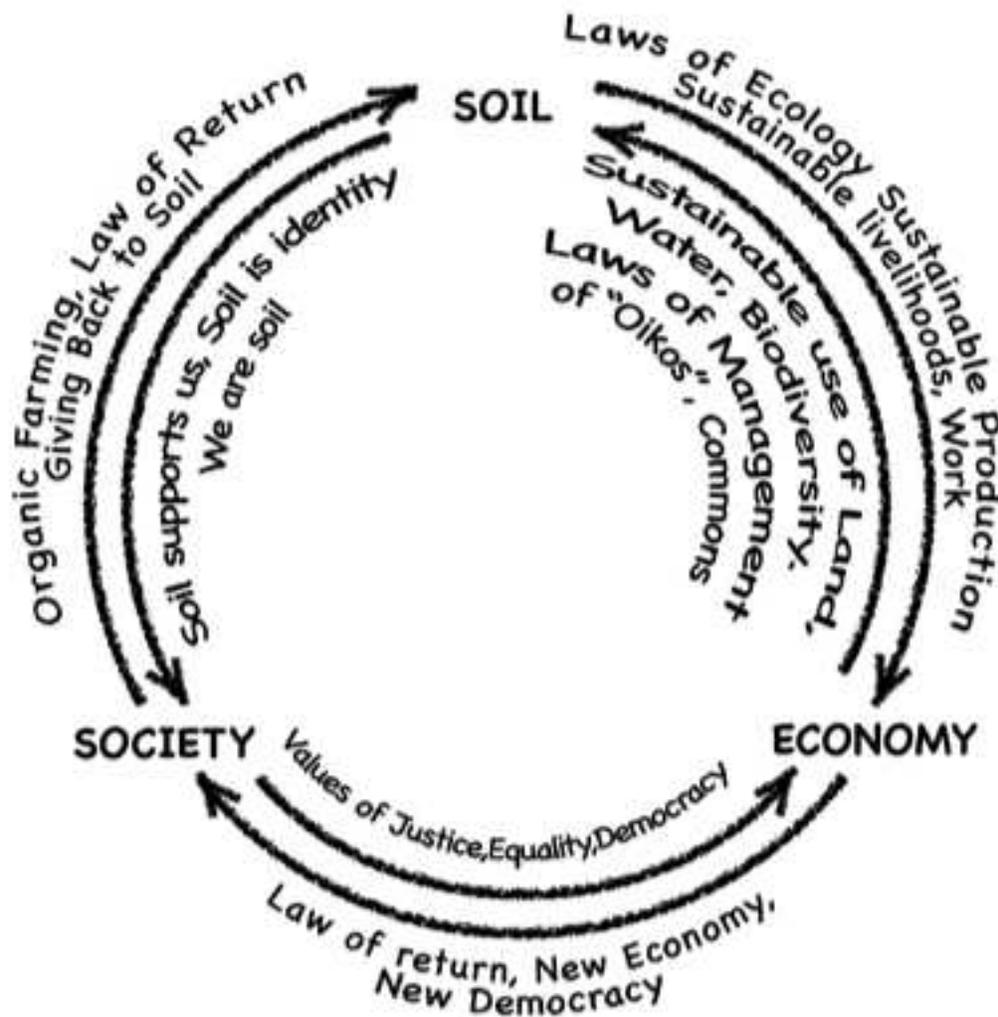
The ecological Law of Return maintains the cycles of nutrients and water, and hence the basis of sustainability. For Society, the Law of Return is the basis of ensuring justice, equality, democracy and peace.

Regenerative, renewable, sustainable economies that enhance nature's well being and ours are based on the law of return-of giving back in gratitude and deep awareness that we are the web of life and must take care of it .

They are therefore circular economies that are aware of, and maintain nature's cycles . All ecological crises are the rupture of nature's cycles, and the transgression of what have been called planetary boundaries .When we give back organic matter to nature, she continues to give us food .The work in giving back is our work . Giving us food is nature's complex work -through her soil, her biodiversity, her water, the sun, the air .In the circular economy we give back to society . Wealth is shared . Wealth circulates. In real economies, plants grow, soil organisms grow, children grow in well being and happiness. The circular economy on the other hand replenishes nature and society . It creates enoughness and well being for all .In the care of the Earth and society diversity of meaningful and creative work is possible . It is based on nature's law of return. In nature, there is no waste, no pollution .

When economies are circular, every being being, every place, is the centre of the economy, and nature and society evolve and emerge from multiple self organised systems, like the trillions of cells in our body .

Circular economies as living economies are by their very nature biodiverse, spanning from the intimate and local, to the global and planetary.



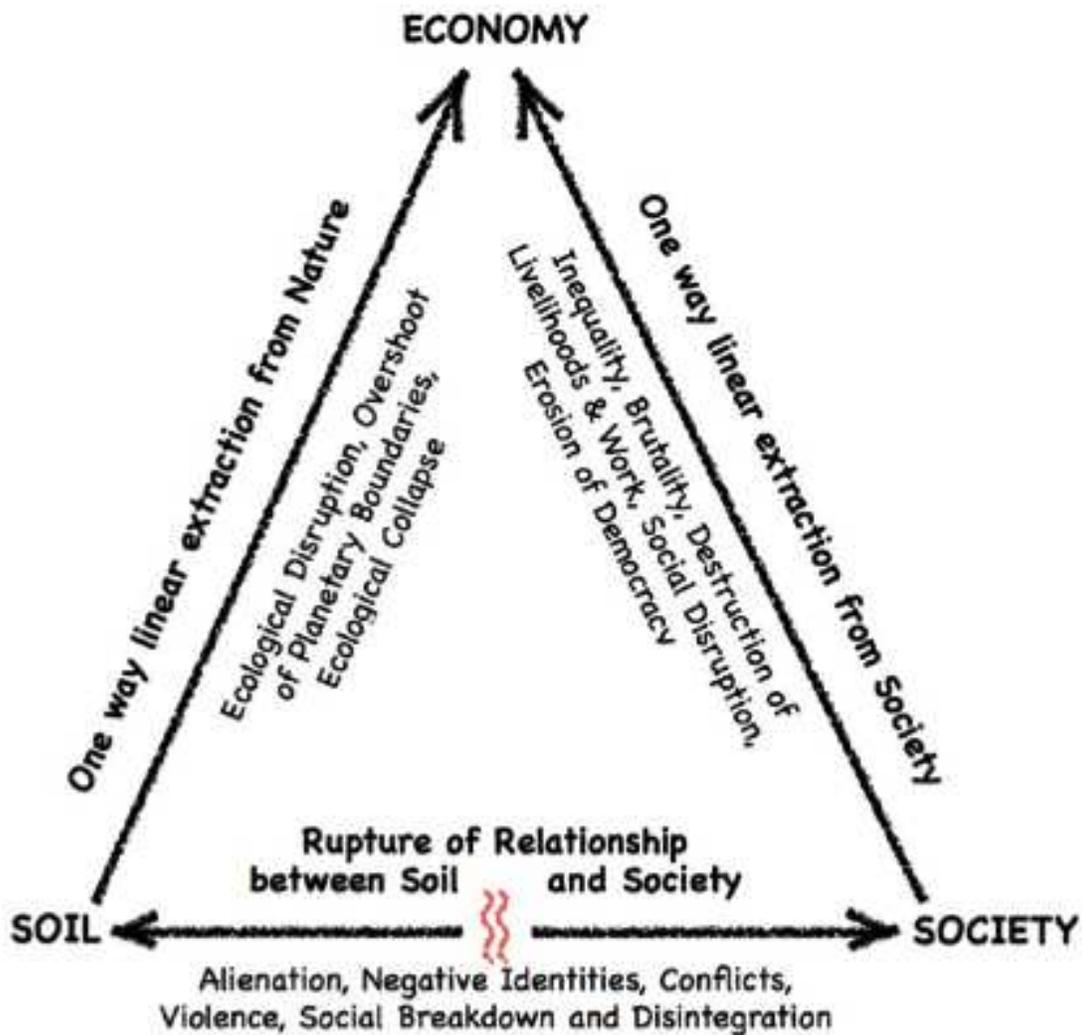
The circular logic of Law of Return, mutuality, reciprocity and regeneration [needs to be fixed – line spacing, etc.]

Just as self-organized systems evolve in and through diversity, self-organized economies are diverse.

However the economic paradigm based on a linear one-way extraction of resources and wealth from nature and society has promoted systems of production and consumption that have ruptured and torn apart these cycles, threatening the stability of the natural and social world.

The dominant model of the economy no longer has its roots in ecology, but exists outside and above ecology, disrupting the ecological systems and processes that support life. The unchecked conquest of resources is pushing species to extinction and led ecosystems to collapse, while causing irreversible climate disasters.

Similarly, economy, which is part of society, has been placed outside and above society, beyond democratic control. Ethical values, cultural values, spiritual values, values of care and co-operation have all been sidelined by the extractive logic of the global market that seeks only profit. Competition leaves no room for cooperation. All values that arise from our interdependent, diverse and complex reality have been displaced or destroyed. When reality is replaced by abstract constructions created by the dominant powers in society, manipulation of nature and society for profits and power becomes easy. The welfare of real people and real Societies is replaced with the welfare of corporations. The real production of the economies of nature and society is replaced by the abstract construction of capital. The real, the concrete, the life-giving gives way to the artificially constructed currencies.



The linear, extractive logic of exploitation, threatening ecological e social collapse

The linear extractive economy is based on extraction, commodification, profits .It has no place for the care of nature and community .It leaves nature and society impoverished, be it extraction of minerals, or extraction of knowledge through Bio piracy, or extraction of “genes” through genetic mining, or extraction

of data through “data mining”, or extraction of rents and royalties for seed, water, communication, privatized education and health care. It creates poverty debt, and displacement . It creates waste -waste as pollution, wasted resources, wasted people, wasted lives. In structures of control of capitalist patriarchy ,there is an increasing replacement of the real world of nature and her ecological processes , and real people creating real wealth ,with constructions and fictions . Reality disappears, and real resources and people can be exploited through constructs.

Real people are being increasingly substituted by corporations claiming personhood. Today the distancing of constructions from real sources of wealth creation has gone even further , with capital being substituted by “finance” , and the creation of tools and technologies that allow the rich to accumulate wealth while doing nothing .The tools of money making in the financial economy are based on speculation . And because of financial deregulation , the rich can speculate using people’s hard earned money from real work .Why do women lead ecology movements against deforestation and pollution of water, against toxic and nuclear hazards ?It is not due to any “essentialism”.I believe it is in part because in the sexual division of labour,women have been left to look after sustenance-providing food and water, providing health and care . When it comes to the sustenance economy , women are both the experts and providers.Even though women’s work in providing sustenance is the most vital human activity, a patriarchal economy which defines the economy only as the economy of the market place, treats it as non work. The patriarchal model of the economy is dominated by one number, the GDP ,which is measured on the basis of an artificially created production boundary (if you produce what you consume, you do not produce). When the ecological crisis created by an ecologically blind economic paradigm leads to the disappearance of forests and water,the spread of diseases because of the spread of toxics and poisons, and the consequent threat to life and survival, it is women who rise to wake up society to the crisis, and to defend the Earth and their lives, through their lives.Women are leading the paradigm shift to align the economy with ecology. After all, both are rooted in the word “oikos”-our home.

Not only are women experts in the sustenance economy. They are experts in ecological science through their daily participation in processes that provide sustenance.Their expertise is rooted in lived experience, not in abstract and fragmented knowledge, that is not connected to life, and cannot see the connectedness of the web of life. The rise of masculinist science with Descartes, Newton, Bacon led to the domination of reductionist mechanistic science and a subjugation of knowledge systems based on interconnections and relationships. This includes all Indigenous knowledge systems, and women’s knowledge.

The most violent display of mechanistic science is in the promotion of industrial agriculture, including GMOs as a solution to hunger and malnutrition. Industrial agriculture uses chemicals developed for warfare as inputs. Genetic Engineering is based on the idea of genes as “master molecules” giving unidirectional commands to the rest of the organism.

The reality is that living systems are self organised , interactive, dynamic. The genome is fluid.

As these issues move centre stage in every society, it is the alternatives women bring through biodiversity, and agroecology ,that offer real solutions to the food and nutrition crisis. As I have learnt over 45 years of my ecological activism and research and women and 30 years of building the movement Navdanya (www.navdanya.org), biodiversity produces more than monocultures, small family farms based on women’s participation provide 75% of the food eaten in the world. As Navdanya’s research based on the paradigm shift from the monoculture measure of “yield per acre “ , to “nutrition per acre” and true “Wealth per acre” shows , small farmers growing food ecologically with the biodiversity of their own seeds can feed two India’s and increase their incomes ten fold. Industrial agriculture only produces 25% of the food we eat while using and destroying 75% of the Earth’s resources- the soil, the water ,the biodiversity . As I wrote in Soil not Oil , industrial agriculture and globalised food trade contributes to 50% of the atmospheric pollution with Green House gases which are driving climate chaos .Through women and nature centred ecological agriculture which rejuvenates the soil ,we could address the problem of climate change while also increase

nutrition and health .Women centred tradition farming systems used more than 10000 species of plants . And with it was connected the knowledge of biodiversity , of processing , of nutrition and health .The food base has shrunk to 12 globally traded, nutritionally empty toxic commodities creating a life threatening disease epidemic .

When it comes to real solutions to real problems faced by the planet and people, it is the subjugated knowledge's and invisible work of women based on co creation and co production with Nature which will show the way to human survival and well being in the future. Economic Empowerment of women requires moving beyond the discourse of "development" and GDP as shaped by capitalist patriarchy to reclaim our true humanity as members of the Earth Family .And in this transition women are the leaders of how we should live together as one humanity on one planet, taking care of the Earth and each other.

Power of social movement, policy, and advocacy

- ⁱⁱⁱ In 2018, 60+ feminists from Canada, G7 countries and around the world came together to call on all G7 leaders to adopt an intersectional approach to decision-making to advance gender equality.
- They advocated for the input of racialized and Indigenous women in G7 decision-making and policy and program implementation.
- They asked leaders to adopt a new economic model that works for all women and provide better resources for feminist movements.
- They urged the G7 leaders to focus on issues such as inequality, gender parity, sexual and reproductive health and rights, climate change, and gender-based violence against women
- A well-functioning gender equality movement that takes a strong intersectional approach requires robust funding. From 2005-2015, the movement stalled due to lack of government funding. More than 30 women's organizations in Canada lost 100% of their funding. And Organizations that provide support to Indigenous women, immigrants, and refugees had their funding significantly reduced.
- In 2015, the federal government introduced the Gender Equality Policy, which prioritized gender parity in the federal cabinet and moved forward with the National Inquiry into Missing and Murdered Indigenous Women and Girls, as well other initiatives to address gender equality.
- Despite obstacles, social movements organized by diverse women have helped to mobilize people and impact public policy around equity. Some examples include:
- Idle No More: Formed in Saskatchewan by three Indigenous women and one ally, it quickly grew into an international movement that supports Indigenous people.
- Black Lives Matter: Started in the U.S. by three women, it has now spread into a global network. The Toronto chapter's work led to a coroner's inquest into the police shooting of Andrew Loku and the re-establishment of the provincial Anti-Racism Secretariat in Ontario.
- In 2005, Sisters in Spirit was launched by Native Women's Association of Canada (NWAC) to raise awareness about violence against Indigenous women and girls. Its work, alongside other Indigenous women's groups, brought about the National Inquiry into Missing and Murdered Indigenous Women and Girls

(Source: <https://canadianwomen.org>)

Glossary

Climate

In your place on the globe controls the weather where you live. Climate is the average weather pattern in a place over many years. So, the climate of Antarctica is quite different than the climate of a tropical island. Hot summer days are quite typical of climates in many regions of the world, even without the effects of global warming.

Weather is the mix of events that happen each day in our atmosphere including temperature, rainfall and humidity. Weather is not the same everywhere. Perhaps it is hot, dry and sunny today where you live, but in other parts of the world it is cloudy, raining or even snowing. Everyday, weather events are recorded and predicted by meteorologists worldwide.

Climates are changing

Because our Earth is warming, according to the research of scientists. Does this contribute to a warm summer day? It may, however global climate change is actually much more complicated than that because a change in the temperature can cause changes in other weather elements such as clouds or precipitation.

Carbon Dioxide Concentration—The atmospheric carbon dioxide concentration, at 398 parts per million volume (ppmv) in 2015, is now about 42% greater than the pre-industrial (1750–1800) value of about 280 ppmv, and higher than at any time in at least the last 160,000 years. Carbon dioxide is currently rising at about 1.8 ppmv (0.5%) per year due to human-caused emissions and currently accounts for approximately 84% of US GHG emissions.

Chlorofluorocarbons (CFCs)—Compounds of carbon that contain some chlorine and some fluorine. CFCs do not occur naturally; they are synthetic products used in various industrial processes and also as propellant gas for sprays. CFCs are typically used in refrigerants, solvents, foam-makers and for use in aerosol sprays. CFCs are significant contributors to ozone depletion and also contribute to global warming. Replacement chemicals called hydroflourocarbons (HFC) do not deplete the ozone, but are strong contributors to global warming. These chemicals are slated to be replaced with even newer hydrocarbon compounds with minimal global warming impact.

Atmosphere—The gaseous envelope surrounding a planet. The Earth's atmosphere consists of nitrogen (79.1% by volume), oxygen (20.9% by volume), with about 0.04% carbon dioxide, and traces of argon, krypton, xenon, neon, and helium, plus water vapour, traces of ammonia, organic matter, ozone, various salts, and suspended solid particles.

Base Year—The year used as a reference year to help understand future emissions.

Biomass—Technically, the total dry organic matter or stored energy content of living organisms in a given area. Biomass refers to forms of living matter (e.g., grasses, trees) or their derivatives (e.g., ethanol, timber, charcoal) that can be used as fuels.

Carbon Cycle—General term used in reference to the sum of all reservoirs and flows of carbon on Earth. The flows tend to be cyclic in nature. For example, carbon removed from the atmosphere (one reservoir)

and converted into plant tissue (another reservoir) is returned back into the atmosphere when the plant is burned or decomposes.

Carbon Sink or Reservoir—Within the carbon cycle, this is the physical site at which carbon is stored (e.g., atmosphere, oceans, Earth’s vegetation and soils, and fossil fuel deposits).

Carbon Dioxide—Carbon dioxide or CO₂, essential to living systems, is released by animal respiration, decay of organic matter and fossil fuel burning. It is removed from the atmosphere by photosynthesis in green plants. The amount of CO₂ in the atmosphere has increased by about 25% since the burning of coal and oil began on a large scale. Atmospheric carbon dioxide varies by a small amount with the seasons, and the ocean contains many times the amount of the gas that is in the atmosphere.

Environmental Degradation

The deterioration of the environment through depletion of resources, the destruction of ecosystems, habitat destruction, the extinction of wildlife, and pollution.

Science, Technology, Engineering, and Math (STEM)

Education that students learn by studying science, technology, engineering, and math — collectively known as STEM.

Sex refers to biological differences between women and men. These differences exist for reproduction purposes and are essentially fixed.

Gender refers to the socially constructed roles and responsibilities of women and men. The concept of gender includes expectations about the characteristics, abilities, and behaviors of women and men - what people believe women and men can and should do. These roles and expectations are learned and vary across different cultures. The roles expected of women in a rural community in the Solomon Islands may be different from those expected of women in a city in Samoa. The responsibilities of a man in Kiribati may be different from those of a man in Palau. Transgender groups and individuals should also be considered, as they may identify their gender role as being opposite to their sex. These roles and expectations can change over time, and can be affected by changes in economics, politics, technology, education, environment, the influence of other cultures and the media, mass advocacy, crisis, and conflict. An example of how gender can affect vulnerability to climate change is where a woman cannot attend training about climate change impacts because she is expected to cater for the training with other women). This limits the information she can access to help her make decisions on how best to manage climate change impacts. Another example is the expectation within a society that a man’s role is to provide for his family. If an event causes major losses in the main cash crop that men produce to make money for their families, they may feel significant stress, burden and social pressure to find another way to make money. In both cases, these roles (preparing meals and generating family income) are not ‘natural’; they are based on the society’s expectations of what men and women can and should do. <https://www.unwomen.org/>