

CASW: Climate Change and Social Work

**2020 Position Statement
Canadian Association of Social Workers**

Author: Kylie Schibli



Founded in 1926, the Canadian Association of Social Workers (CASW) is the national association voice for the social work profession.

CASW has adopted a pro-active approach to issues pertinent to social policy/social work. It produces and distributes timely information for its members, and special projects are initiated and sponsored.

With its concern for social justice and its continued role in social advocacy, CASW is recognized and called upon both nationally and internationally for its social policy expertise.

The mission of CASW is to promote the profession of social work in Canada and advance social justice. CASW is active in the International Federation of Social Workers (IFSW).





CASW: Climate Change and Social Work

Executive Summary

Climate change is one of the most significant problems facing the world today. Since the mid 20th century, human activity has been the most influential contributor to global warming and we are already experiencing the consequences in extreme weather patterns, including recurrent heat waves, excessive flooding, more frequent hurricanes, and droughts. In Canada, the impacts of climate change are most prominent in what is taking shape in northern communities.

Environmental changes affecting Inuit livelihood impact mental health and wellbeing requiring investment into the social determinants of health. Social workers have a very important role in humanizing climate change by highlighting the ways that it is intricately tied to social inequities and how that impacts individuals and communities at the most fundamental level – the right to be who you are. Despite the challenges facing northern communities, their ability to adapt through the support of Indigenous knowledges must be acknowledged and integrated into policy approaches that reflect their unique needs and cultural identities. As a profession founded in principles of social justice, CASW acknowledges the reality of climate change and encourages social workers to educate, advocate, and be the change they want to see in the world.

Global Warming and Climate Change

Climate change is one of the most significant problems facing the world today. From the raging wildfires in the Amazon and throughout Australia to the severe flooding in Venice and in and around Jakarta, the effects are being felt across the globe. The warming of the oceans as a result of climate change has been proposed as the reason for more frequent hurricanes and tropical storms leading to devastating consequences. Accordingly, scientists have decried the current situation a *climate emergency* with global temperatures rising at a faster rate than seen during pre-industrial times impacting climate patterns, our environment, and society.¹

These rapid climate changes are influenced by human activities that enhance carbon dioxide (CO²) and other greenhouse gas emissions through the burning of fossil fuels, including oil, coal, and natural gas (i.e. methane). The recent Emissions Gap Report released by the United Nations Environment Program² states that greenhouse gas emissions reached a record high in 2018. Furthermore, trees mitigate the influence through the absorption of CO² yet deforestation and changes to land use have altered this balance.³

The Amazon rainforest is estimated to have absorbed around 430 million tonnes of carbon each year since 1980, which amounts to more than four times the emissions of the UK in 2016.⁴ The remaining old-growth Amazonian forests made up of mature trees have been countering the effects of global greenhouse gas emissions – we have all benefitted from this pristine ecosystem and its value cannot be replaced by planting new trees.⁵ It is now under threat with government initiatives for economic development including commercial mining and agriculture calling for more deforestation and the removal of Indigenous tribes from their homelands.⁶ As clearly



expressed by UN Secretary-General António Guterres, “We will not overcome the climate emergency without safeguarding our planet’s very lungs”.⁷

The release of CO² essentially creates an atmospheric blanket that traps heat around the Earth’s surface area and enhances global warming, commonly termed the *greenhouse gas effect*. According to the Intergovernmental Panel on Climate Change (IPCC), global warming is defined as an increase in combined surface air and sea surface temperatures averaged over the globe and over a 30-year period.⁸ Since the mid 20th century, human activity has been the most influential contributor to global warming which has reached a 1°C increase since pre-industrial times – mostly attributed to the last few decades.⁹ We are already experiencing the consequences of global warming in extreme weather patterns, such as longer and recurrent heat waves, excessive flooding, more frequent hurricanes, and droughts. The IPCC warns that these patterns will increase if global warming reaches 1.5°C since pre-industrial times and will lead to catastrophic proportions at 2°C (refer to table 1 for an overview).⁸

The United Nations Paris Agreement which came into force November 4th, 2016, aimed to address this concern by strengthening countries to keep a global temperature rise well below 2°C. The Paris Agreement was inspired to address the global climate change threat which was initially raised in 1994 through the development of the United Nations Framework Convention on Climate Change (UNFCCC) of which 197 countries have ratified. The Paris Agreement represented the 21st conference since the UNFCCC, termed the COP21 (Conference of Parties 21). Presently, 187 out of the 197 Parties have ratified the Paris Agreement.¹⁰

Table 1. A summary of the various impacts of global warming at 1.5°C and 2°C as projected by the IPCC with risks and potential outcomes⁸

Climate Change Impact at 1.5°C and 2°C	Risks and Potential Outcomes
<p><i>Sea Level Rise:</i> The melting of glaciers and ice sheets from global warming is contributing to sea level rise which is projected to continue.</p> <p>Sea level is expected to rise beyond 2100 if global warming is maintained at 1.5°C, yet 10 million fewer people will be impacted by this rise than would be expected at 2°C.</p>	<p>Risks: increased saltwater intrusion, flooding, and damage to infrastructure.</p> <p>Outcomes: A loss to freshwater habitats and drinking water; the disappearance of small lowland islands and coastal habitats; and the mass migration of coastal communities heading inland.</p>
<p><i>Impacts on biodiversity and ecosystems:</i> The loss of species is much more significant with global warming reaching 2°C.</p> <p>6% of insects, 8% of plants and 4% of vertebrates are projected to lose over half of their ideal geographic habitat from climate changes for global warming of 1.5°C, compared with 18% of insects, 16% of plants and 8% of vertebrates for global warming of 2°C.</p>	<p>Risks: Nearly 1 million species are at risk of extinction, many within decades (IPBES, 2019). Tundra and boreal forests at high latitude require a cooler climate and are already experiencing degradation and loss from climate change. Tundra forests grow on permanently frozen soils, called permafrost, which is at risk of thawing.</p> <p>Outcomes: Changes to biodiversity have repercussions on our food, water, medicine, and health through the loss of ecosystem functions. The extinction and loss of species impacts our well-being.</p>



<p>Limiting global warming to 1.5°C rather than 2°C is anticipated to prevent the thawing of permafrost area in the range of 1.5 to 2.5 million km².</p>	
<p><i>Ocean temperatures and acidity:</i> Limiting global warming to 1.5°C compared to 2°C is projected to reduce increases in ocean temperature as well as associated increases in ocean acidity and decreases in ocean oxygen levels.</p>	<p>Risks: Global warming influences the presence of Arctic ice and the temperature of the ocean. As Arctic ice melts, the increase in water surface area absorbs heat from the sun increasing ocean temperatures. This induces a damaging cycle impacting the landscape and creating risks to marine biodiversity, fisheries, and ecosystems.</p> <p>Outcomes: the loss of coral reefs, and detrimental impacts to fisheries from the increase of climate related changes to the physiology, survivorship, habitat, reproduction, disease incidence, and risk of invasive species to marine life.</p>

Warnings attributed to climate change on human health and survival in response to global warming at 1.5°C and beyond fall under three broad categories:⁸

Health and livelihoods: Populations at increased risk of the devastating impacts of global warming of 1.5°C and beyond include disadvantaged and vulnerable populations, some Indigenous peoples, and local communities dependent on agricultural or coastal livelihoods. Illnesses and deaths attributed to heat and the incidence of vector-borne diseases, such as malaria and dengue fever, are projected to increase with warming from 1.5°C to 2°C.

Food security and water supply: Agriculture and farming is impacted by increases to temperature as the standard process is impacted by changes in seasonal temperatures. Yields of maize, rice, wheat, and potentially other cereal crops, are likely to decrease with smaller net reductions at 1.5°C compared with 2°C in sub-Saharan Africa, Southeast Asia, and Central and South America. The nutritional quality of rice and wheat is also likely to be impacted. Reductions in projected food availability are larger at 2°C than at 1.5°C of global warming in the Sahel, southern Africa, the Mediterranean, central Europe, and the Amazon. Livestock are projected to be adversely affected with rising temperatures, depending on the extent of changes in feed quality, spread of diseases, and water resource availability. Water scarcity will be less severe at 1.5°C compared to 2°C and may reduce the proportion of the world population impacted by up to 50%.

Human security, and economic growth: Countries in the tropics and Southern Hemisphere subtropics are projected to experience the largest impacts on economic growth due to climate change should warming increase from 1.5°C to 2°C. The combination of climate change related risks increases between 1.5°C and 2°C of global warming, increasing the likeliness of exposure leading to poverty in Africa and Asia. The risks across energy, food, and water have the potential to intersect which may reveal unanticipated hazards, exposures, and vulnerabilities that could affect increasing numbers of people and regions.



Nations who were historically the largest emitters of greenhouse gasses tend to be the most protected with the most devastating impacts of climate change disproportionately affecting poorer nations and marginalized communities who rely on the land for sustenance and survival.¹¹ Resource extraction through mining, deforestation and the burning of fossil fuels are all tightly linked with colonialism and reveal how the global North has exploited developing nations in the South. Globalization and international trade have compounded the inequities of climate change as industrialized nations engage in offshoring factories and manufacturing to poorer nations who then bear the brunt of the carbon emissions. OECD countries have been reducing their carbon emissions by outsourcing the manufacturing of goods to less developed nations.¹² International trade has also created a situation where the magnitude of carbon emissions of a country should take into consideration consumption patterns by exploring their degree of exports and imports.¹³

The Paris Agreement moved beyond the Kyoto Protocol by encouraging a collaborative approach. Specifically, the Paris Agreement highlights the role of developed countries to take the lead by undertaking absolute economy-wide reduction targets, while developing countries are encouraged to enhance mitigation efforts. The Least Developed Countries Expert Group (LEG) is expected to assist developing countries in their adaptation efforts as they move towards reducing emissions.¹⁴ Adoption of the Paris Agreement involves:¹⁵

Acknowledging that climate change is a common concern of humankind, Parties should, when taking action to address climate change, respect, promote and consider their respective obligations on human rights, the right to health, the rights of indigenous peoples, local communities, migrants, children, persons with disabilities and people in vulnerable situations and the right to development, as well as gender equality, empowerment of women and intergenerational equity.

Pre-existing social and economic inequalities both within and between countries need to be addressed as part of our strategy in tackling climate change – developed countries who have benefitted disproportionately from higher emissions through industrialization have an historical responsibility to lead the change.¹⁶ Furthermore, emission reductions that exploit developing nations and do not require a change in consumption patterns will do little to address the global crisis we are all facing. Most importantly, the rights of Indigenous peoples to live on their land without interference and with environmental protections needs to be respected. The conversation must shift from an environmental concern to include the inherent social and economic inequities contributing to the current situation.

Social workers have an ethical commitment to address social inequalities, calling for *climate justice*.¹⁷

Social Work and Climate Justice

In response to the climate crisis, social workers around the world have come together to work towards climate justice. According to the International Federation of Social Workers, climate justice acknowledges that although climate change impacts us all, “the burden of unsustainable consumption patterns has fallen disproportionately on the most vulnerable people in the world,



who typically have the smallest consumption patterns”.¹⁷ The Global Agenda for Social Work and Social Development was released around the same time as the United Nations Sustainable Development Goals (refer to Figure 1), and included the following themes: Promoting social and economic equalities; Promoting the dignity and worth of peoples; Promoting community and environmental sustainability; and Promoting the importance of human relationships.¹⁸



Fig. 1: United Nations Sustainable Development Goals¹⁹

The third theme, ‘Promoting community and environmental sustainability’, speaks directly to the need to address climate change and has emboldened social workers around the world to develop regional initiatives with local communities to work towards sustainable solutions.¹⁸

Social workers are ethically bound to address human rights which are interconnected with environmental rights and span a series of areas, including: Advocate with and for Indigenous peoples, knowledges and practices; Acknowledge the importance of place and environmental protection; Identify sociopolitical barriers and engage in community development; Recognize the impacts at the personal level as they relate to mental health and wellbeing.

In the following section, we will draw from these core areas to explore the state of climate change in Canada. The current situation will be described with respect to the social determinants of health.

Climate Justice in Canada and the Social Determinants of Health

A recent report led by Environment and Climate Change Canada²⁰ provides an overview of the current state of climate change in Canada. Overall, it was found that Canada’s climate has warmed and is bound to get warmer in the future. Specifically, the increases in mean temperature in Canada are nearly twice as high as those corresponding to the global mean temperature with



an increase of 1.7°C between 1948 and 2016. This increase jumps to 2.3°C when exploring northern Canada independently. It is likely that more than half of the warming in temperatures in Canada is attributed to human activities. This warming has resulted in various environmental impacts (refer to Table 2 for an overview), which have deleterious effects on Indigenous communities living in northern Canada.

Table 2. Findings and Projections from Canada’s Changing Climate Report²⁰

Climate Change Impact	Canadian Context
<i>Changes in Temperature and Precipitation</i>	Seasonal temperatures are expected to increase, with a much larger impact on winters in northern Canada. Extreme warm temperatures have become hotter with a decrease in cooler temperatures during the winter months. With an increase in emissions, this is likely to result in more precipitation over the winter in northern Canada and less rain over the summer in southern Canada. These changes have influenced the likeliness of extreme weather patterns including flooding and wildfires. In parts of western Canada, the risk of extreme fire weather has increased. Higher emissions will influence the occurrence of drought across the southern Canadian Prairies and interior British Columbia during the summer.
<i>Changes in Snow, Ice, and Permafrost</i>	Over the past three decades, the proportion of Canadian land and marine areas covered by snow and ice have decreased and permafrost temperatures have risen. Glaciers have thinned and there is a shorter season for Arctic lake ice cover. Canadian areas of the Arctic and Atlantic Oceans have experienced longer and more widespread sea ice-free conditions.
<i>Changes in Freshwater Availability</i>	The seasonal availability of freshwater is changing, with an increased risk of water supply shortages in summer. Warmer winters and earlier snowmelt will combine to produce higher winter flows in streams and rivers, while smaller snowpack and loss of glacier ice this century will combine to produce lower summer flows. Warmer summers will increase evaporation of surface water and contribute to reduced summer water availability in the future despite more precipitation in some places.
<i>Changes in Surrounding Oceans</i>	Oceans surrounding Canada have warmed, become more acidic, and less oxygenated, consistent with observed global ocean changes over the past century. Ocean warming and loss of oxygen will intensify with further emissions of all greenhouse gases, whereas ocean acidification will increase in response to additional carbon dioxide emissions. These changes threaten the health of marine ecosystems.
<i>Sea Level Change</i>	Coastal flooding is expected to increase in many areas of Canada due to local sea-level rise. Changes in local sea level are a combination of global sea-level rise and local land subsidence or uplift. Local sea level is projected to rise along most of the Atlantic and Pacific coasts of Canada and the Beaufort coast in the Arctic where the land is subsiding or slowly uplifting.



Furthermore, a report released by the Department of Fisheries and Oceans²¹ detailed the environmental changes taking place in Atlantic Canada's marine ecosystems. They included scientific research describing the three bioregions along the Canadian Atlantic Ocean, including Newfoundland and Labrador, the Scotian Shelf and the Gulf of St Lawrence. Surface water temperatures vary with air temperature, whereas deeper waters are influenced by currents. Accordingly, rising air temperatures associated with climate change and changes in currents are having significant impacts on physical processes such as sea ice formation and the species that live there.

Reduced sea ice, rising sea levels, changes to currents and greater ocean acidity are all influenced by the warming of ocean waters. These changes influence the health of Atlantic Ocean ecosystems and impact the survival of marine wildlife and migratory birds that rely on them for sustenance.

Climate change alters the fine balance across marine life as some species thrive in warmer waters, including invasive species, while others struggle, such as northern shrimp and snow crab in the Scotian Shelf. Some of the most devastating impacts are happening to microscopic organisms, phytoplankton, which are essential for supporting food sources for marine life and maintaining the health of Atlantic ecosystems. These changes have a direct impact on the livelihoods of coastal communities who rely on fishing, and aquaculture as the growth and survival of some species depends on cooler waters and the health of the Atlantic Ocean environment.

Advocate with and for Indigenous peoples, knowledges, and practices

Northern Canada

The impacts of climate change are most prominent in what is taking shape in northern communities across the Yukon, Northwest Territories, and Nunavut. These environmental changes are directly impacting the way of life of various Indigenous communities and exacerbating concerns related to the social determinants of health, including: food security; housing and infrastructure; and transportation. According to the Nunavut Climate Change Centre,²² Inuit communities in Nunavut rely on traditional hunting and fishing practices which have been threatened by weather conditions making travel on land increasingly difficult. Traditional routes are no longer accessible as a result of early melt with travel by snowmobile and dog team unsafe in the spring.

Northern communities rely heavily on ice roads which are built into the landscape during the winter months. These winter roads are sensitive to weather changes as they are built across bodies of water, including frozen rivers, lakes, and boggy ground with the use of compact snow.²³ Across the Northwest Territories, the department of transportation builds and maintains ice roads linking ten towns.²⁴ They are more affordable to build in comparison to permanent roads and allow for the transport of goods and necessities to remote communities.



Sub-zero ground temperatures are essential for ensuring adequate ice thickness for winter roads, yet, the impact of warmer winter temperatures associated with climate change is impacting their safety.²³ In some communities, the ice roads are opening two weeks later than usual and closing two weeks earlier, impacting people living in remote communities as they are forced to rely on basic goods, such as food and fuel that have been flown or shipped in and are much more expensive.²⁴ This also creates challenges for fixing homes and building infrastructure, such as schools, as larger vehicles are no longer safe to travel along the ice roads.²⁵

Furthermore, housing and infrastructure which was designed with permafrost conditions in mind is no longer suitable because of shifting foundations. Permafrost requires that ground temperatures remain below 0°C. With permafrost beginning to thaw, the soil becomes less stable and depressions (i.e. sunken land, holes) may appear.²⁴ Similar challenges are facing airport runways revealing cracked surfaces as a result of permafrost thawing and dramatic changes to the freeze-thaw cycles throughout Nunavut. This is especially concerning as much of the essential supplies and food that Nunavummiut receive arrives by plane.²²

These environmental changes affecting Inuit livelihood impact mental health and wellbeing requiring investment into the social determinants of health. As clearly outlined in the Calls for Justice 16.1 and 16.2 from the report, *Reclaiming Peace and Place*,²⁶ commitments by governments to provide housing protection, and address the economic needs of Inuit must be implemented along with services that ensure the protection and revitalization of Inuit culture. Working with Indigenous communities to address the social determinants of health, especially as they relate to climate change, requires governments to involve local communities in the decision-making process. Despite the challenges facing northern communities, their ability to adapt through the support of Indigenous knowledges must be acknowledged and integrated into policy approaches that reflect their unique needs and cultural identities.

Acknowledge the importance of place and environmental protection

Northern Indigenous communities have intimate knowledge of the land. For example, traditional knowledges of a small Inuvialuit (the Inuit of the Canadian western Arctic) community in Sachs Harbour, NWT, includes a comprehensive understanding of the progression of sea ice break-up and freezing across seasons. Since the 1990s, the Inuvialuit community in Sachs Harbour has been concerned of the changing sea-ice patterns associated with climate change as it was impacting seal hunting practices with travel becoming increasingly unsafe. Multiyear ice (ice that survives a minimum of two summer melt seasons) was less prominent meaning that travel was taking place on first year ice which is thinner and less safe.²⁶ Some Inuit hunters can detect the thickness and age of sea ice visually by focusing on its colour and texture which is crucial for traditional hunting practices.²⁷

These intimate understandings of the land reflect a deep cultural connection and have the potential to increase awareness and anticipate environmental changes triggered by climate change. Working towards adaptation planning requires an understanding of the barriers limiting community capacity, which are often influenced by social, cultural, and economic conditions.



Solutions need to be developed *with not for* Indigenous communities and will involve more than addressing the physical impacts of climate change.²⁸ In fact, the IPCC highlights ‘climate-resilient development pathways’, which aim to meet the UN goals of sustainable development, including climate adaptation and mitigation, poverty eradication and reducing inequalities.²⁹

The Pan-Canadian Framework on Clean Growth and Climate Change³⁰ highlights *measures to adapt to the impacts of climate change* as one of the pillars of the framework, stating:

This means making sure that our infrastructure and communities are adequately prepared for climate risks like floods, wildfires, droughts, and extreme weather events, including in particularly vulnerable regions like Indigenous, northern, coastal, and remote communities. This also means adapting to the impacts of changes in temperature, including thawing permafrost.

Emphasis is placed on the considerable impact of climate change on northern and coastal communities, especially in relation to the loss of infrastructure and the effects on health and wellbeing. Expanding the approach in this framework, social workers would also consider the historical, and socio-political circumstances that aggravate the ability for communities to access the social determinants of health. Understanding the human experience and how it relates to social justice is at the core of what social workers do. Inuit activist and Nobel Prize nominee Sheila Watt-Cloutier³¹ explains the importance of *humanizing* the issue of climate change. She explains how the losses associated with climate change get at the core of what it means to be Inuit:

We Inuit hunters, fishers and gatherers are connected culturally, nutritionally, emotionally and spiritually to the land, waters and ice. These are our universities. It is where we train our children to develop their character and life skills for the opportunities and challenges of life. Teaching wisdom on the land and the ice is the hallmark of Inuit culture. It is not only the ice that is at risk of being lost, but the wisdom that comes with it.

Identify sociopolitical barriers and engage in community development

It is important to highlight that there are diverse nations with unique cultures and different historical experiences within First Nations, Metis, and Inuit populations. However, the impact of colonialism is shared among Indigenous peoples and resulted in systemic racism and discriminatory policies targeting Indigenous ways of living.³² Indigenous peoples have been on this land since time immemorial, however, colonialism resulted in the dispossession of lands resulting in the forced allocation to reserves which presently accounts for a mere 0.2% of land in comparison to 98% belonging to non-Indigenous peoples.³³ The forced relocation, migration, and dislocation from lands characterizing Canada’s relationship with Inuit triggered a series of cultural, relational, and personal losses among families and communities.³⁴

Inuit live primarily in 51 communities across Inuit Nunangat which comprises 35% of Canada’s landmass and 50 percent of its coastline.³⁵ Inuit Nunangat is divided into four regions, including:



Inuvialuit Settlement Region (northwestern part of the Northwest Territories); Nunavut; Nunavuk (northern Quebec); and Nunatsiavut (Labrador).³⁵ The Inuit were historically a nomadic people who moved according to the seasonal cycle, however, beginning in the 1950s the Canadian government encouraged Inuit to settle permanently in Arctic communities as the potential for natural resource exploitation, particularly mineral and oil extraction, was discovered. In some instances, Inuit families living in northern Quebec were relocated further north into the High Arctic to Grise Fiord and Resolute Bay as Canada aimed to assert its sovereignty. They were promised an abundance of hunting opportunities and were told they could return to their homeland after two years if they wished – none of which was adhered to as Inuit families experienced extreme hardship without adequate shelter and resources.³⁴ The federal government formally apologized for the forced High Arctic relocation in August 2010.³⁶ This is but one of many examples where Canadian government policies and programs forced the relocation of Inuit disconnecting them from their families, their cultures, and their sense of place. The impacts of colonialism and the process of assimilation is much more recent in the context of the Inuit population.³⁷

The extreme injustices inflicting Indigenous communities have triggered the transgenerational transmission of trauma, especially in response to experiences with residential schools. The Truth and Reconciliation Commission³⁸ highlighted that the progression of residential schooling in northern communities was slower as there was little motivation to target these regions for non-Indigenous settlement. Later implementation and expansion of residential schools in the North, along with a higher proportion of Indigenous peoples, suggests that there are more Survivors and many living parents of Survivors given the more recent experiences. Despite some positive outcomes associated with residential schools as Survivors were involved with newly formed governments and the creation of the Nunavut territory, the recurrent patterns of harsh discipline, disease, abuse and disconnection from their families, communities and culture were pervasive throughout.

Many of the barriers facing Indigenous communities stem from historical injustices which have limited their ability to live as they choose. There are countless examples of the rights of Indigenous peoples being ignored, especially when it involves resource extraction on Indigenous title land.³⁹ The disregard shown towards traditional Indigenous forms of governance and knowledges reveals the inherent injustice entrenched in colonial systems.⁴⁰ The historical trauma that stems from colonialism needs to be considered in the context of climate justice with the implementation of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) at the forefront.⁴¹

Social workers identify the strengths and wisdom of others through empathic listening. It is time for those skills to be put into practice in our role as advocates for climate justice, as we work towards a just and sustainable future as expressed by Sheila Watt-Cloutier:⁴²

The Inuit still have much to teach the world about living harmoniously with the land and the vital importance of the Arctic ice. The world needs to reimagine and realign economic values with those of the Indigenous world and Inuit world, rather than



replicating what hasn't worked with the values of Western society. This holistic Indigenous wisdom needs to be adhered to as the world seeks solutions towards a sustainable world. Are you ready to listen?

Recognize the impacts at the personal level as they relate to mental health and wellbeing

The rise in environmental crises due to climate change exacerbates mental health issues and calls for increased access to care while working towards cleaner and more sustainable options. Exposure to environmental toxins, such as air pollution, highlights how environmental changes have direct impacts on mental health and wellbeing. Vulnerable populations such as young children are at increased risk of neurophysiological anomalies reminiscent of Alzheimer's Disease when exposed to high levels of air pollution commonly seen in megacities such as Mexico City, Jakarta, New Delhi, Beijing, Los Angeles, Paris and London.⁴³ Air pollution is estimated to kill around 1 million people every year with those most impacted living in marginalized populations in the Global South.⁴⁴ The most deleterious effects of exposure to environmental toxins is targeting poorer nations and marginalized communities.⁴⁵

The impact of flooding, wildfires, drought, and other extreme weather patterns affect people's homes, neighbourhoods, and communities. Families have been forced or have chosen to leave their homes and communities because of environmental disasters and unsafe living conditions. Climate change and environmental degradation has forced many families to relocate, known as *environmental migrants*.⁴⁶

The Plight of Environmental Migrants

Countries experiencing the greatest impact of climate change are facing food shortages, desertification, and extreme weather patterns putting people's lives at risk. According to the IPCC,^{8,29} desertification is expected to intensify in Asia and Africa; while the incidence of wildfires is expected to escalate across North America, South America, the Mediterranean, southern Africa, and Central Asia. Already we are seeing the vast migration of families looking for safer places to live in response to environmental changes and weather patterns that place them in precarious living conditions. According to the Internal Displacement Monitoring Centre,⁴⁷ 17.2 million displacements occurred in 2018 in 144 countries and territories because of extreme weather patterns, such as storms, particularly tropical cyclones, and monsoon rains. The Philippines, China, and India accounted for approximately 60% of these displacements. Droughts and wildfires accounted for approximately 764, 000 and 424,000 displacements, respectively. Drought conditions were identified in Afghanistan, Brazil, Burundi, Ethiopia, Iraq, Madagascar, Mongolia, Senegal, and Somalia whereas high temperatures and low precipitation increased wildfires in the United States, Australia, Greece and in other parts of southern Europe.⁴⁷

While these numbers are staggering, they are underestimates of the total impact of climate change on migration as they do not capture all the displacements that were triggered from slow changes in the environment, such as ocean acidification, desertification and coastal erosion. In response to the ongoing influence of climate change on people's livelihoods, there has been mounting pressure to integrate the effects of environmental disasters with refugee policy.⁴⁸



Progress in this direction is shown in the recent landmark ruling from the UN Human Rights Committee in the case of *Teitiota v. New Zealand* that people who have escaped the deleterious effects of climate change should not be sent back to their country of origin if their basic human rights, such as the right to life, would be put at risk.⁴⁹ This decision stresses the importance of international obligations for the protection of human rights for those most impacted from climate change and urges immediate action to engage in cooperation and support to prevent and mitigate environmental consequences. However, there is a risk with emphasizing the role of nature on migration without discussing the role of policies or politics.

Displacement occurs both between and within countries. In many tropical, arid, and semi-arid regions, rural residents are migrating to urban areas as farming and agriculture becomes increasingly difficult.⁵⁰ The environment should be considered in combination with socio-political power relations, economic inequalities, histories of colonialism, and gender relations when it comes to the influence of migration.⁵¹ Political instability, chronic poverty and inequality, and climate change all influence the frequency of displacement within and across countries. Many people who fled environmental disasters in countries such as Syria, Somalia, Iraq, and Yemen, had previously been displaced by conflict.⁴⁷ Witnessing these events may be extremely traumatic and deeply unsettling.

The sense of loss and isolation that comes from being uprooted from your home and community has the potential to trigger mental health concerns, especially when faced with financial hardship. The incidence of PTSD, depression and anxiety increases following a natural disaster as victims are left with emotional and financial burdens.⁵²

Eco-Anxiety and Ecological Grief

The fear from exposure to these atrocities, whether it be personally or through the various images depicted in the news and on social media, ultimately has consequences on mental health and well-being. The potential for vicarious trauma in response to fear associated with climate change has been termed *eco-anxiety* and demonstrates the indirect ways that changes to our environment might impact our mental health and wellbeing.⁵³ Eco-anxiety often surfaces when faced with existential questions relating to the future of the planet and ultimately the human species leading to feelings of hopelessness and despair. Furthermore, these fears may exacerbate pre-existing mental health concerns.

A report released by the *Lancet*⁵⁴ highlighted the consequences of climate change on children's health as they are likely to experience a world more than four degrees warmer than the pre-industrial average. This global warming increase is associated with a host of susceptibilities to illness, including: a heightened occurrence of the transmission of diseases and viruses; undernutrition and food insecurity; and impacts on health because of increased air pollution. Existential questions regarding the future of the next generation has resulted in women questioning whether to have children initiating a *birth strike* movement.⁵⁵ Children and youth around the world were propelled into action in response to existential questions regarding their



future, and the future of the next generation, which led to a global climate strike movement inspired by Swedish youth activist Greta Thunberg.⁵⁶

Youth activist Greta Thunberg describes how feelings of depression surfaced in response to the climate crisis and it was through eventually expressing her fears to his parents that she was able to transform her concerns into action. She is now world renown and has inspired countless children, youth, and adults to advocate for change and continues to pressure world leaders to implement real action. It is important to note that Thunberg has been diagnosed with Asperger's and previously struggled with selective mutism, yet, with the support of her family, she moved through her anxieties and mobilized community action. Her family credits her Asperger's diagnosis for clarifying her goals and strengthening her endless efforts and commitment.⁵⁷ She is a representation of how active listening and support has the potential to transform fear and loneliness to resistance and strength. Children and youth have started to rise up in response to these fears and are pleading with world leaders to listen to their concerns.

Artemisa Xakriabá, a 19-year-old Indigenous activist from The Xakriabá tribe in Brazil, has been speaking out against the disastrous consequences of political actions that have led to mass deforestation and raging wildfires in the Amazon. At the 2019 climate strike in New York she expressed in Portuguese, "We, the indigenous peoples, are the children of nature, so we fight for our Mother Earth, because the fight for Mother Earth is the mother of all other fights. We are fighting for your lives. We are fighting for our lives."⁵⁸

At just 27 years of age, Maatalii Okalik, the president of the National Inuit Youth Council attended the 2015 Paris meetings (i.e. COP21) to raise awareness of the climate change concerns facing Inuit youth. She has continued to emphasize the importance of traditional Inuit knowledge, language and experience for informing climate action and has reiterated Canada's responsibility for ensuring that the social determinants of health are addressed.⁵⁹

Closely related to eco-anxiety is *ecological grief*, which refers to feelings of immense sadness in relation to loss and anticipated loss of species, ecosystems, and landscapes as a result of environmental change.⁶⁰ Understanding the mourning and impacts on mental health and wellbeing that accompany ecological grief reveals the importance of ecodiversity and the various emotional, spiritual, and cultural connections that individuals and communities form with the land. Indigenous peoples refer to the land as an extension of self and feel interconnected with the natural world.^{34,61} The impacts of climate change have altered the way that many Indigenous peoples live, as previously described with Inuit populations, threatening the passing down of traditional knowledge and a sense of identity.⁶⁰

As we move forward and work towards sustainable solutions, we must also consider the distinct needs that come with eco-anxiety and ecological grief. There is also fear and anxiety surrounding these anticipated changes to livelihoods to address climate change. It is important that families who rely on employment from manufacturing, mining, and industry are provided support, compassion, and assistance. As we transition towards more sustainable solutions, a plan must be in place to protect the mental health and wellbeing of all.



The magnitude of the environmental impacts from climate change is beyond the scope of this paper and there are various outcomes for human development and health that have not been discussed. However, a common thread throughout is that the challenges facing individuals, families, and communities as a result of climate change reflect the social issues and injustices that social workers aim to address.

Integrating Climate Justice into Social Work Practice

The profession of social work is grounded in social justice. The CASW Code of Ethics⁶² emphasizes the importance of respecting the inherent dignity and worth of all persons, which encourages us to understand the person-in-environment. It is our role to work with individuals and communities to enhance resilience and support self-fulfilment. Climate Justice requires us to acknowledge the interconnectedness between humans and their environments, and to recognize that identity is shaped by cultural, social, political, and environmental conditions. Sheila Watt-Cloutier⁶³ provides a clear example of climate justice stating that the Inuit have *the right to be cold*. Social workers have a very important role in humanizing climate change by highlighting the ways that it is intricately tied to social inequities and how that impacts individuals and communities at the most fundamental level – the right to be who you are.

From the macro to the micro, social workers understand the value of empathic listening and we have a responsibility to ensure that the voices of those most impacted by climate change are heard, and that policy initiatives reflect the needs and desires of the community. Furthermore, sustainable development planning and initiatives should be centred around the views of marginalized communities alongside those of experts to ensure that the needs of the present community are met while anticipating the impacts on future generations.⁴⁴ Indigenous theory involves an intermixing of past, present, and future, and “factors in seven generations past and the seven generations into the future.”⁶¹ We all have a responsibility to reflect and learn from our past, integrate these lessons into our present lives and consider the impacts on the future.

Social workers have the skills and abilities to form connections and build relationships, which are essential as we work towards climate justice. Collaborating with community members, other health professionals, government, and policy developers along with other crucial stakeholders is important as we work towards building more sustainable solutions while addressing social inequities.

At an individual level, we are all personally responsible for respecting our environment. The IFSW Climate Justice Program provides three ways in which social workers can implement while striving for Climate Justice:

1) Educate—ourselves and others

Social workers should educate themselves on the science of climate change and be actively involved in policy discussions. Without an understanding of the basis for the disparities associated with climate change and the complex losses, social workers will be unable to provide effective counselling and support aimed at mitigating the effects of climate change by



empowering action and collective support.⁶⁴ Social work educators have an ethical responsibility to ensure that future social workers are learning about climate change in curriculum by mapping skills sets to ways that they can be used to promote environmental justice.⁶⁵

Social workers' comprehensive understanding of the importance of the social determinants of health for improving human health and wellbeing outcomes provides insight into how climate change related events are intensifying many of the pre-existing inequalities and conditions harming individuals, families, and communities. It is important that we emphasize that catastrophic events from climate change are not the *cause* of inequalities, and those most impacted already tend to be living in vulnerable conditions related to poverty, including but not limited to: precarious working and living conditions; food and water insecurity; limited access to social services and health care; socio-political inequities related to race, gender, ability, sexuality, and age; to name a few.¹¹

2) **Advocate**—for changes in policies and practices

Social workers have a responsibility to address all forms of oppression, including those that are influenced by environmental degradation to privilege a few at the expense of others.⁴⁴ Dominelli^{44,64} refers to this as *greening social work* and emphasizes the unique role social workers play in raising consciousness and mobilising action among individuals and communities living with the consequences of climate change. In this way, green social work addresses human rights and social justice with the goal of protecting the environment to enhance well-being.

3) **Be the Change We Wish to See in the World**—by reducing our harmful impacts that lead to climate injustices and supporting projects that create local solutions in communities most impacted by climate injustice.

Most importantly, social workers are notorious for finding hope in the direst of circumstances – we are trained in revealing the strength and opportunities for growth hidden within each and every individual. Social workers have a commitment to empower those most marginalized through a joint effort to work towards a just society as expressed by Paulo Friere:⁶⁶

Only by abolishing the situation of oppression is it possible to restore the love which that situation made impossible. If I do not love the world—if I do not love life—if I do not love men—I cannot enter into dialogue.



References

1. Ripple, W. J., Thomas, C.W., Newsome, M., Barnard, P., & Moomaw, W. R. (2020). World scientists' warning of a climate emergency. *BioScience*, 70(1), 8–12. <https://doi.org/10.1093/biosci/biz088>
2. United Nations Environment Programme. (2019). *Emissions gap report 2019*. UNEP, Nairobi. Retrieved from: <http://www.unenvironment.org/emissionsgap>
3. Posner, E., & Weisbach, D. (2010). *Climate change justice*. Princeton, New Jersey: Princeton University Press.
4. University of Leeds. (2017, February 20). *Carbon uptake by Amazon forests matches region's emissions*. Retrieved from: <https://phys.org/news/2017-02-carbon-uptake-amazon-forests-region.html>
5. Phillips, O., & Brienen, R. (2017). Carbon uptake by mature Amazon forests has mitigated Amazon nations' carbon emissions. *Carbon Balance and Management*, 12(1), 1–9. <https://doi.org/10.1186/s13021-016-0069-2>
6. Benassatto, L. (2020, January 17). Brazil's answer to Greta Thunberg wants help protecting Amazon rainforest and its tribes. *The National Post*. Retrieved from: <https://nationalpost.com/pmnen/entertainment-pmn/brazils-answer-to-greta-thunberg-wants-help-protecting-amazon-rainforest-and-its-tribes>
7. United Nations. (2019, September 23). *As wildfires, heatwaves sweep globe, urgent action key to stopping alarming rate of deforestation, secretary-general warns at alliance for rainforests event* [Press release]. Retrieved from: <https://www.un.org/press/en/2019/sgsm19755.doc.htm>
8. Allen, M.R., O.P. Dube, W. Solecki, F. Aragón-Durand, W. Cramer, S. Humphreys, M. Kainuma, J. Kala, N. Mahowald, Y. Mulugetta, R. Perez, M. Wairiu, and K. Zickfeld, 2018: Framing and Context. In Masson-Delmotte, V., P. Zhai, H.-O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J.B.R. Matthews, Y. Chen, X. Zhou, M.I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, and T. Waterfield (eds.). *Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty*. In Press. Retrieved from: <https://www.ipcc.ch/sr15/chapter/chapter-1/>
9. NASA Earth Observatory. (2020, January 29). *World of change: Global temperatures*. Retrieved from: <https://earthobservatory.nasa.gov/world-of-change/global-temperatures>
10. United Nations. (2020). *Paris agreement - status of ratification*. Retrieved from: <https://unfccc.int/process/the-paris-agreement/status-of-ratification>
11. Alston, M., & Drolet, J. (2015). Social work, climate change and global cooperation. *International Social Work*, 58(3), 355–363. <https://doi.org/10.1177/0020872814556824>



12. Judl, J., Koskela, S., Mattila, T., & Jouttijarvi, T. (2011). The climate change implications of offshoring Finnish pulp production to South America. (Report). *The International Journal of Life Cycle Assessment*, 16(9), 878–885. <https://doi.org/10.1007/s11367-011-0308-4>
13. Peters, G. P., & Hertwich, E. G. (2008). CO2 embodied in international trade with implications for global climate policy. *Environmental Science & Technology*, 42(5), 1401–1407. Retrieved from <http://search.proquest.com/docview/69148959/>
14. United Nations Climate Change. (2020). *Least developed countries expert group*. Retrieved from: <https://unfccc.int/LEG>
15. United Nations Framework Convention on Climate Change (UN FCCC). (2015). Report of the Conference of the Parties on its twenty-first session, held in Paris from 30 November to 13 December 2015. (p. 2). FCCC/CP/2015/10/Add.1. Retrieved from: <https://unfccc.int/documents/9097>
16. Saran, S. (2015, November 23). Paris climate talks: Developed countries must do more than reduce emissions. *The Guardian*. Retrieved from: <https://www.theguardian.com/environment/2015/nov/23/paris-climate-talks-developed-countries-must-do-more-than-reduce-emissions>
17. International Federation of Social Workers (IFSW). (2020). *Climate justice program: Introduction*. Retrieved from: <https://www.ifsw.org/social-work-action/climate-justice-program/introduction/>
18. Moonga, F. (2018). Sustainable Community Development Practices through Environmental Protection in Zambia. (p. 144-45). In M. Powers & Rinkel, M. (Eds.). *Social work promoting community & environmental sustainability: A workbook for global social workers & educators* (Vol. 2). Rheinfelden, Switzerland: IFSW.
19. United Nations. (2015). *Sustainable Development Goals*. Retrieved from: <https://sustainabledevelopment.un.org/sdgs>
20. Bush, E., Gillett, N., Bonsal, B., Cohen, S., Derksen, C., Flato, G., Greenan, B., Shepherd, M., & Zhang, X. (2019). Canada’s changing climate report – executive summary. *Environment and Climate Change Canada, Government of Canada*. Retrieved from: <https://changingclimate.ca/CCCR2019/chapter/executive-summary/>
21. Fisheries and Oceans Canada. (2018). Canada’s oceans now: Atlantic ecosystems 2018. Retrieved from: <http://dfo-mpo.gc.ca/oceans/publications/soto-rceo/2018/atlantic-ecosystems-ecosystemes-atlantiques/index-eng.html>
22. Nunavut Climate Change Centre. (n.d.). *Climate change impacts*. Retrieved from: <https://www.climatechangenunavut.ca/en/understanding-climate-change/climate-change-impact>
23. Smith, L. (2011). Agents of change in the new north. *Geography and Economics*, 52(1), 30-55.
24. Gardiner, K. (2019). Canada’s ice roads are melting too soon. *Atlas Obscura*. Retrieved from <https://www.atlasobscura.com/articles/canada-frozen-rivers-ice-roads>



25. Levin, D. (2017, April 19). Ice roads ease isolation in Canada's North, but they're melting too soon. *The New York Times*. Retrieved from: <https://www.nytimes.com/2017/04/19/world/canada/ice-roads-ease-isolation-in-canadas-north-but-theyre-melting-too-soon.html>
26. National Inquiry into Missing and Murdered Indigenous Women and Girls (MMIWG) (Canada). (2019a). *Reclaiming Power and Place: Final report of the national inquiry into missing and murdered indigenous women and girls* (Vol. 1). Ottawa: Privy Council Office.
27. Nichols, T., Berkes, F., Jolly, D., & Snow, N. (2004). Climate Change and Sea Ice: Local Observations from the Canadian Western Arctic. *Arctic*, 57(1), 68–79. <https://doi.org/10.14430/arctic484>
28. Pearce, T., Ford, J., Duerden, F., Smit, B., Andrachuk, M., Berrang-Ford, L., & Smith, T. (2011). Advancing adaptation planning for climate change in the Inuvialuit Settlement Region (ISR): A review and critique. (Report). *Regional Environmental Change*, 11(1), 1–17. <https://doi.org/10.1007/s10113-010-0126-4>
29. IPCC. (2018). Summary for Policymakers. In Masson-Delmotte, V., P. Zhai, H.-O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J.B.R. Matthews, Y. Chen, X. Zhou, M.I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, & T. Waterfield (Eds.). *Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty*. Geneva Switzerland: World Meteorological Organization.
30. Government of Canada. (2016). *The pan-Canadian Framework on clean growth and climate change: Canada's plan to address climate change and grow the economy*. (p. 3). Retrieved from: <https://www.canada.ca/en/services/environment/weather/climatechange/pan-canadian-framework.html>
31. Watt-Cloutier, S. (2018, October 22). It's time to humanize climate change issues, says Sheila Watt-Cloutier. *Canada's National Observer*. Retrieved from: <https://www.nationalobserver.com/2018/10/19/opinion/its-time-humanize-climate-change-issues-says-sheila-watt-cloutier>
32. Fast, E., & Delphine, C-V. (2010). Historical trauma, race-based trauma and resilience of indigenous peoples: A literature review. *First Nations Child and Family Review*, 5(1), 126–136. Retrieved from: <https://fpcfr.com/index.php/FPCFR/article/view/181>
33. Manuel, A. & Derrickson, R. (2017). *The reconciliation manifesto: Recovering the land, rebuilding the economy*. Toronto, ON: James Lorimer & Company Ltd.
34. Qikiqtani Inuit Association. (2010). *Nuutauniq mobility and Inuit life, 1950 to 1975*. Iqaluit, Nunavut: Qikiqtani Inuit Association.
35. Inuit Tapiriit Kanatami. (2020). *About Canadian Inuit*. Retrieved from: <https://www.itk.ca/about-canadian-inuit/#nunangat>



36. Government of Canada. (2010). *Apology for the Inuit high arctic relocation*. Retrieved from: <https://www.rcaanc-cirnac.gc.ca/eng/1100100016115/153478649162899>
37. Crawford, A. (2014). “The trauma experienced by generations past having an effect in their descendants”: Narrative and historical trauma among Inuit in Nunavut, Canada. *Transcultural Psychiatry*, 51(3), 339–369. <https://doi.org/10.1177/1363461512467161>
38. Truth and Reconciliation Commission (TRC). (2015a). *Canada’s residential schools: The Inuit and northern experience, the final report of the truth and reconciliation commission of Canada* (Vol. 2). Retrieved from: <http://nctr.ca/reports.php>
39. Alfred, T., Coulthard, G., Diabo, R., Jacobs, B., Laboucan-Massimo, M., Manuel, A., Manuel, K., McNeil-Seymour, J., Palmater, P., Pasternak, S., Schabus, N., Sinclair, M., & Venne, S. (2017). *Whose land is it anyway? A manual for decolonization*. McFarlane, P. & Schabus, N. (Eds.). BC: Federation of Post Secondary Educators of BC. Retrieved from: https://fpse.ca/decolonization_manual_whose_land_is_it_anyway
40. Monchalin, L. (2016). *The colonial problem: An Indigenous perspective on crime and injustice in Canada*. North York, Ontario, Canada: University of Toronto Press, Higher Education Division.
41. Truth and Reconciliation Commission (TRC). (2015b). *Calls to action*. Retrieved from: <http://nctr.ca/reports.php>
42. Watt-Cloutier, S. (2019, October 2). If we protect the Arctic, we save the planet. *The Globe and Mail*. Retrieved from: https://www.theglobeandmail.com/opinion/article-if-we-protect-the-arctic-we-save-the-planet/?utm_medium=Referrer:+Social+Network+Media&utm_campaign=Shared+Web+Article+Links
43. D’Angiulli, A. (2019, September 25). Air pollution in global megacities linked to children’s cognitive decline, Alzheimer’s and death. *The Conversation*. Retrieved from: <https://theconversation.com/air-pollution-in-global-megacities-linked-to-childrens-cognitive-decline-alzheimers-and-death-105722>
44. Dominelli, L. (2013). Environmental justice at the heart of social work practice: Greening the profession. *International Journal of Social Welfare*, 22(4), 431–439. <https://doi.org/10.1111/ijsw.12024>
45. Watts, J. (2018, May 1). Air pollution inequality widens between rich and poor nations. *The Guardian*. Retrieved from: <https://www.theguardian.com/environment/2018/may/01/air-pollution-inequality-widens-between-rich-and-poor-nations>
46. Powers, M. C. F., Schmitz, C. A. Nsonwu, C. Z., & Mathew, M. T. (2018). Environmental migration: Social work at the nexus of climate change and global migration. *Advances in Social Work*, 18(3), 1023–1040. <https://doi.org/10.18060/21678>
47. IDMC. (2019). Global report on internal displacement. Retrieved from: <https://www.internal-displacement.org/global-report/grid2019/>



48. Rodríguez, A. (2019, July 4). Why immigration and climate change policy must intersect. Citizens for Public Justice. Retrieved from: <https://cpj.ca/environmental-displacement-why-immigration-and-climate-change-must-intersect>
49. UNHRC. (2020, January 24). Briefing note: UN Human Rights Committee decision on climate change is a wake-up call, according to UNHCR. Retrieved from: <https://www.unhcr.org/news/briefing/2020/1/5e2ab8ae4/un-human-rights-committee-decision-climate-change-wake-up-call-according.html>
50. Clark, N., & Bettini, G. (2017), Floods of migrants, flows of care: Between climate displacement and global care chains. *Sociological Review*, 65(2), 36-54.
51. Piguet, E. (2013). From primitive migration to climate refugees: The curious fate of the natural environment in migration studies. *Annals of the Association of American Geographers*, 103(1), 148-162.
52. Focus on climate change and mental health. (2018). *Nature Climate Change*, 8(4), 259–259. <https://doi.org/10.1038/s41558-018-0128-7>
53. Pihkala, P. (2018). Eco-anxiety, tragedy, and hope: Psychological and spiritual dimensions of climate change. *Zygon*, 53(2), 545–569. <https://doi.org/10.1111/zygo.12407>
54. Watts, N., Amann, M., Arnell, N., Ayeb-Karlsson, S., Belesova, K., Boykoff, M., Byass, P., ; Cai, W., Campbell-Lendrum, D., Capstick, S., Chambers, J., Dalin, C., Daly, M., Dasandi, N., Davies, M., Drummond, P., Dubrow, R., Ebi, K. L., Eckelman, M., & Ekins, P. (2019). The 2019 report of The Lancet Countdown on health and climate change: ensuring that the health of a child born today is not defined by a changing climate. *The Lancet*, 394(10211), 1836–1878. [https://doi.org/10.1016/S0140-6736\(19\)32596-6](https://doi.org/10.1016/S0140-6736(19)32596-6)
55. Hunt, E. (2019, March 12). BirthStrikers: Meet the women who refuse to have children until climate change ends. *The Guardian*. Retrieved from: <https://www.theguardian.com/lifeandstyle/2019/mar/12/birthstrikers-meet-the-women-who-refuse-to-have-children-until-climate-change-ends>
56. De La Garza, A. (2019, September 20). Hundreds of Thousands Demand Climate Action in Massive Youth-Led Strikes Around the World. *Time*. Retrieved from: <https://time.com/5682404/global-climate-strike/>
57. Watts, J. (2019, March 11). Greta Thunberg, schoolgirl climate change warrior: ‘Some people can let things go. I can’t’. *The Guardian*. Retrieved from: <https://www.theguardian.com/world/2019/mar/11/greta-thunberg-schoolgirl-climate-change-warrior-some-people-can-let-things-go-i-cant>
58. 19-year-old indigenous climate activist Artemisa Xakriabá: “We fight for mother earth”. (2019). Democracy Now! Retrieved from: https://www.democracynow.org/2019/9/23/brazil_indigenous_climate_activist_artemisa_xakriaba



59. Thompson, J. (2017, February 7). The Arctic's Emerging Young Leaders: A Powerful Advocate for Inuit Youth. *News Deeply*. Retrieved from: <https://www.newsdeeply.com/arctic/community/2017/02/07/a-powerful-advocate-for-inuit-youth>
60. Cunsolo, A., & Ellis, N. (2018). Ecological grief as a mental health response to climate change-related loss. *Nature Climate Change*, 8(4), 275–281. <https://doi.org/10.1038/s41558-018-0092-2>
61. Absolon, K. (2019). Indigenous Wholistic Theory: A Knowledge Set for Practice. (p. 23). *First Nations Child and Family Review*, 14(1). 23–42. Retrieved from: <https://fpcfr.com/index.php/FPCFR/article/view/370>
62. Canadian Association of Social Workers. (2005). *Code of ethics*. Retrieved from: <https://www.casw-acts.ca/en/Code-of-Ethics>
63. Watt-Cloutier, S. (2016). *The right to be cold: one woman's story of protecting her culture, the Arctic and the whole planet*. Toronto, Ontario: Penguin.
64. Dominelli, L. (2011). Climate change: social workers' roles and contributions to policy debates and interventions. *International Journal of Social Welfare*, 20(4), 430–438. <https://doi.org/10.1111/j.1468-2397.2011.00795.x>
65. Holbrook, A., Akbar, G., & Eastwood, J. (2019). Meeting the challenge of human-induced climate change: reshaping social work education. *Social Work Education*, 38(8), 955–967. <https://doi.org/10.1080/02615479.2019.1597040>
66. Friere, P. (1970). *Pedagogy of the Oppressed: 30th anniversary edition*. (p. 90). New York: The Continuum International Publishing Group Inc.