



Call to Action on Climate Change and Health: From Canada's Health Professionals to Canada's Federal Political Parties

February 5, 2019

This Call to Action comes from doctors, nurses, medical officers of health and public health professionals across Canada.

We are calling on all federal political parties in Canada to see **climate change** as we, and the World Health Organization, see it—as **“the greatest health threat of the 21st century.”**¹ We are asking you to see **climate solutions** as we, and the prestigious medical journal, *The Lancet*, see them – as **“the greatest health opportunity of this century.”**² Many of the policies needed to fight climate change will produce immediate health benefits, reduce healthcare costs, and improve social cohesion and equity in our communities.

We are calling on each of you to make meaningful and effective action on climate change a central theme of your party's platform as you prepare for this year's federal election.

Climate change is already harming the physical and mental health of Canadians.

Cardiorespiratory impacts from worsening air pollution due to wildfires left many Canadians coughing and cooped up inside in recent summers.^{3 4} Emergency evacuations and population displacement from wildfires and floods have been associated with trauma and post-traumatic stress disorder.^{5 6} In the Canadian Arctic, where temperatures have increased by up to 3°C from the 1950s,⁷ health risks are increasing from food insecurity resulting from decreased access to traditional Indigenous foods.⁸ Meanwhile, Lyme disease has spread into new regions in Canada⁹ and more intense and prolonged pollen seasons have the potential to exacerbate hay fever and asthma.¹⁰

Over the last two decades, Canada has seen a dramatic increase in the costs of extreme weather events such as hurricanes, floods, and wildfires. The Insurance Bureau of Canada reports that claims for natural disasters such as floods and wildfires have grown from \$400 million per year in previous decades to approximately \$1 billion per year today, while government funding for flood damage and other disasters has increased steadily from about \$100-million per year two decades ago to \$2 billion per year in 2013-14.¹¹

Climate change became a reality for many Canadians in the summer of 2018. In Ontario, temperatures exceeded 30°C for 21 days,¹² a huge increase over the 30-year average of 13.5 days per year that held until 2005,¹³ while in Quebec, the only province which monitors heat-related deaths in real-time, extreme heat claimed the lives of more than 90 people.¹⁴ British Columbia declared a provincial state of emergency as it fought to contain nearly 600 wildfires,¹⁵ while Ontario saw the number of wildfires double from a 10-year average of 716 to 1312.¹⁶ In addition, millions of people in Canada were exposed to levels of air pollution rated as “high risk” and “very high risk” for days or weeks because of smoke from wildfires.¹⁷ Articles on eco-anxiety, ecological grief and solastalgia began appearing with regularity in mainstream media.^{18/19}

The health impacts of climate change on a global scale are already devastating. The 2018 *Lancet Countdown on Health and Climate Change* report found that 712 extreme weather events occurred around the world in 2017, resulting in \$326 billion (US dollars) in economic losses; nearly a three-fold increase in economic losses over 2015. It reported that 157 million more people were exposed to heat waves in 2017 than were exposed in 2000, and that 3.4 billion weeks of work were lost due to extreme heat. It noted an increase in insect- and water-borne diseases in some regions of the world and a decrease in agricultural yield potential in the 30 countries for which data were available.²⁰ The 2017 *Lancet Countdown* report identified undernutrition as the largest health impact of climate change in the 21st century.²¹

Adaptation policies can help reduce the health impacts associated with some elements of climate change, but current levels of emissions are taking us to place where healthy adaptation is potentially impossible. Business-as-usual emission trajectories have the world on course for 2.6 to 4.8°C of warming by 2100.²² In 2018, the *Lancet Countdown* report concluded that: “Trends in climate change impacts, exposures, and vulnerabilities demonstrate an unacceptably high level of risk for the current and future health of populations across the world,” and that both human lives, and the health systems upon which people are dependent, will be at risk unless steps are taken to significantly reduce climate emissions and increase our resilience to the climate change that is now inevitable.²³

In 2015, Canada joined 193 other countries when it signed the Paris Agreement, pledging to keep global warming well-below 2°C, while aiming for 1.5°C. Important steps have been taken by the provincial, territorial and federal governments over the last several years to address climate change, but our work is far from complete. The Auditor General of Canada found that climate emissions in 2020 are projected to be 111 MT (megatonnes) greater than Canada’s 2020 target of 620 MT.²⁴

In addition, we now know that we much do much more if we are to avoid the most catastrophic effects of climate change. The 2018 report of the Intergovernmental Panel on Climate Change (IPCC) painted a bleak picture of the world’s future with 2°C of warming. While it concluded that 1.5°C of warming will amplify many of the climate-related health impacts that we are already experiencing at 1°C of warming, it found that the impacts of 2°C of warming would be far greater. For example, a 1.5°C target would protect several hundred million more people from climate-related poverty by 2050 than would a 2°C target.²⁵ The World Health Organization agrees; it found that impacts from undernutrition, migration and climate-related infectious disease will be significantly less at 1.5°C of warming than with 2°C of warming.²⁶

We have 12 years to act. To prevent global warming from reaching 2°C, the IPCC concluded that collectively we have to cut climate emission by 45% by 2030 and to zero by 2050.²⁷ The members of parliament elected in 2019 will be responsible for setting the targets needed and creating the

policies and programs needed to realize them. This is a tremendous responsibility.

The good news is that many of the policies needed to fight climate change will produce significant and immediate health benefits and healthcare savings across Canada. With chronic exposure to fine particulate air pollution resulting from the burning of fossil fuels responsible for 7,100 premature deaths and \$53.5 billion in health-related costs per year,²⁸ climate solutions directed at cars, trucks, coal plants, industry, and oil and gas extraction, would save many lives, reduce rates of heart disease, asthma and lung cancer, and cut healthcare costs for the people of Canada, while reducing climate emissions. With chronic diseases costing Canada about \$200 billion per year in treatment and lost-time,²⁹ increased levels of physical activity resulting from investments in public transit, cycling and walking,³⁰ as well as the promotion of diets rich in plant-based proteins³¹ would save lives, reduce rates of heart disease, Diabetes and cancer, and cut healthcare costs, while reducing climate emissions.

We have seen how the United Kingdom reduced its climate emissions by 41% between 1990 and 2016 thanks to cross-party support for the Climate Change Act which led to long-term, legislated targets with policies subject to continuous evaluation by an independent scientific body,^{32/33/34} while see-sawing policies in Canada have seen emissions increase from 603 MT to 704 MT during that same period.³⁵ We are looking for a similar response in Canada; for a target-based, policy-driven plan with cross-party support.

We are running out of time. By the time today's toddlers are in high school, our window for the most effective action will have closed.

We are the adults in charge at this critical moment. As those in positions of leadership, we have an opportunity to make the changes needed to avoid catastrophic climate change. In fact, we are the last generation that will ever have this opportunity. We must treat climate change like the public health emergency that it is.

Actions Needed

1. **We call on all federal political parties to develop effective and evidence-based climate action plans that demonstrate how Canada will achieve the emission reductions needed to do its fair share to keep global warming below 1.5°C.** This includes:
 - a. Establishing the scientifically sound emission reduction targets needed for 2030, 2050 and 2080, as well as emissions monitoring and transparent emissions reporting mechanisms;
 - b. Implementing the combination of policy instruments (i.e. regulations, carbon pricing, funding programs) that are needed to dramatically reduce greenhouse gas emissions from all sources across Canada, including schools and healthcare institutions;
 - c. Integrating health co-benefits and health impact assessments into ongoing policy decisions;
 - d. In recognition of the significant (26% in 2016) and growing contribution of the **oil and gas sector** to Canada's climate emissions, identifying the steps that will be taken to reduce those emissions over time, including phasing out fossil fuel subsidies, tightly regulating methane emissions, and phasing out extraction over time;
 - e. In recognition of the significant (25% in 2016) and growing contribution of the **transportation sector** to Canada's overall emissions, and fine particulate air pollution-

related premature deaths (1,063 yearly in Canada), identify how those emissions will be slowed and reduced over time giving consideration to alternative fuels, electrification of vehicles, public transit, active modes of transportation, transit-supportive development policies and telecommuting;

- f. In recognition of the significant contribution of **coal-fired power plants** to global climate emissions (one third of global emissions) and air pollution-related premature deaths (400,000 each year globally), and their substantial contribution (8.5% in 2014) to emissions in Canada, ensure that coal-fired power plants in Canada are phased out by 2030, with electricity needs displaced by energy efficiency and at least two thirds replaced with non-emitting forms of electricity;
 - g. In recognition of the substantial contribution (10% in 2016) of the **agricultural sector** to Canada's emissions, and the health benefits associated with diets rich in plant-based protein, develop policies to reduce climate emissions and foster innovation in this sector, move forward with the implementation of Canada's new Food Guide, and ensure that the new Guide is supported by a national food policy.
2. **Develop and properly fund just transition policies and programs to support an equitable transition for the farmers and workers, and their communities, who will be impacted by the transition to a low carbon economy.**
 3. **Make strong commitments to minimize the impact of climate change on the health of Canadians by:**
 - a. Providing funding of local and regional climate change impact assessments and adaptation plans and best practice information-sharing between public health units in different regions of the country;
 - b. Ensuring pan-Canadian and inter-jurisdictional coordination to standardize surveillance and reporting of climate-related health impacts such as heat-related deaths, develop knowledge translation strategies to inform the public, and generate clinical and public health response plans that minimize the health impacts;
 - c. Increasing funding for research on the mental health impacts of climate change and psychosocial adaptation opportunities; and
 - d. Ensuring funding is provided to the health sector to prepare for climate change impacts through efforts to increase resiliency (i.e. risk assessments, readiness to manage disease outbreaks, sustainable practice).

¹ World Health Organization (WHO). 2016. WHO Director-General Keynote address at the Human Rights Council panel discussion on climate change and the right to health.

² Watts N et al., 2015. Healthy and climate change policy responses to protect public health. *The Lancet*. 386(10006).

³ Henderson SB, Johnston FH. Measures of forest fire smoke exposure and their associations with respiratory health outcomes. *Curr Opin Allergy Clin Immunol* 2012;12(3):221-7.

⁴ Howard C, Rose C, Hancock T. *Lancet Countdown 2017 Report: Briefing for Canadian Policymakers*. Lancet Countdown and Canadian Public Health Association; 2017 October 31st, 2017.

⁵ Dodd W, Scott P, Howard C, Rose C, Scott C, Cunsolo A, et al. Lived experience of a record wildfire season in the Northwest Territories, Canada. Accepted by *Canadian Journal of Public Health* 2018.

⁶ McCue D. Growing 'ecological grief' is the mental health cost of climate change. 2018 [October 26, 2018]; Available from:

<https://www.cbc.ca/radio/checkup/growing-ecological-grief-is-the-mental-health-cost-of-climate-change-1.4871666>

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- ⁷ Government of the Northwest Territories. Climate Observations in the Northwest Territories (1957-2012)
- ⁸ Rosol R, Powell-Hellyer S, Chan HM. Impacts of decline harvest of country food on nutrient intake among Inuit in Arctic Canada: impact of climate change and possible adaptation plan. *Int J Circumpolar Health* 2016;75(1):31127
- ⁹ Ogden NH, St-Onge L, Barker IK, Brazeau S, Bigras-Poulin M, Charron DF, et al. Risk maps for range expansion of the Lyme disease vector, *Ixodes scapularis*, in Canada now and with climate change. *Int J Health Geogr* 2008;7:24.
- ¹⁰ Berry P, Clarke K, Fleury MD, Parker S. Human Health; in from Impacts to Adaptation: Canada in a Changing Climate. Natural Resources Canada,; 2014.
- ¹¹ Hodgson G. 2018. The costs of climate change are rising. Special to the Globe and Mail. May 15, 2018. <https://www.theglobeandmail.com/business/commentary/article-the-costs-of-climate-change-are-rising/>
- ¹² Canada. 2017. Environment Canada Weather. Top Weather Stories in 2017. <https://www.canada.ca/en/environment-climate-change/services/top-ten-weather-stories/2017.html>
- ¹³ Climate Atlas of Canada. 2018. <https://climateatlas.ca/>
- ¹⁴ Woods A. More than 90 deaths now linked to heat wave in Quebec. 2018. [cited July 18, 2018]. Available from: <https://www.thestar.com/news/canada/2018/07/18/89-deaths-now-linked-to-heat-wave-in-quebec.html>.
- ¹⁵ BC Government News (BC). 2018. Provincial state of emergency declared. August 15, 2018.
- ¹⁶ Ontario Government. 2018. Emergency Preparedness. Forest Fires. <https://www.ontario.ca/page/forest-fires>
- ¹⁷ Canada. 2018. Environment Canada. Weather. Air Quality Health Index (AQHI). https://weather.gc.ca/airquality/pages/bcaq-006_e.html
- ¹⁸ Calabrese, Darren. 2018. At the edge of Canada, climate change brings 'ecological grief' to Labrador Inuit. Special to the Globe and Mail. October 22, 2018. <https://www.theglobeandmail.com/canada/article-at-the-edge-of-canada-climate-change-brings-ecological-grief-to/>
- ¹⁹ McCue, Duncan. 2018. Growing 'ecological grief' is the mental health cost of climate change. CBC Radio. October 21, 2018. <https://www.cbc.ca/radio/checkup/growing-ecological-grief-is-the-mental-health-cost-of-climate-change-1.4871666>
- ²⁰ Watts, Nick et al. 2018. The 2018 report of the Lancet Countdown on health and climate change: shaping the health of nations for centuries to come. *The Lancet*: November 2018.
- ²¹ Watts, Nick et al. 2017. The 2017 report of the Lancet Countdown on health and climate change: from 25 years of inaction to a global transformation for public health. *The Lancet*: Feb 2018.
- ²² Intergovernmental Panel on Climate Change. Summary for Policymakers: Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [(eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.; 2013.
- ²³ Watts, Nick et al. 2018. The 2018 report of the Lancet Countdown on health and climate change: shaping the health of nations for centuries to come. *The Lancet*: November 2018.
- ²⁴ Office of the Auditor General of Canada. 2018. Perspectives on Climate Change Action in Canada—A Collaborative Report from Auditors General—March 2018
- ²⁵ International Panel on Climate Change (IPCC). 2018 Summary for Policymakers of IPCC Special Report on Global Warming of 1.5°C approved by governments.
- ²⁶ World Health Organization (WHO). 2016. WHO Director-General Keynote address at the Human Rights Council panel discussion on climate change and the right to health.
- ²⁷ International Panel on Climate Change (IPCC). 2018 Summary for Policymakers of IPCC Special Report on Global Warming of 1.5°C approved by governments.
- ²⁸ Howard C, Rose C, Rivers N. Lancet Countdown 2018 Report: Briefing for Canadian Policymakers. Canadian Medical Association, Canadian Public Health Association, *The Lancet*; 2018 November
- ²⁹ Celis-Morales C, Lyall D, Welsh P, Anderson J, Steell L, Guo Y, et al. Association between active commuting and incident cardiovascular disease, cancer, and mortality: prospective cohort study. *British Medical Journal* 2017;357(:j1456.).
- ³⁰ Public Health Agency of Canada (PHAC). Undated. Against the Growing Burden of Disease. Presentation by Kimberly Elmslie Director General, Centre for Chronic Disease Prevention, PHAC. <http://www.ccgh-csih.ca/assets/Elmslie.pdf>
- ³¹ Willet, Walter et al. 2019. Food in the Anthropocene: the EAT–Lancet Commission on healthy diets from sustainable food systems. *The Lancet*. January 2019.
- ³² United Kingdom. UK Regulations: the Climate Change Act. 2018 [cited 2018]. Available from: <https://www.theccc.org.uk/tackling-climate-change/the-legal-landscape/the-climate-change-act/>
- ³³ Government of the United Kingdom. 2016 UK Greenhouse Gas Emissions. 2017. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/679334/2016_Final_Emissions_Statistics_one_page_summary.pdf
- ³⁴ Fankhauser S, Averchenkova A, J. F. Policy brief 10 years of the UK Climate Change Act 2018. <http://www.lse.ac.uk/GranthamInstitute/wp-content/uploads/2018/04/10-years-of-UK-Climate-Change-Act-Summary-Policy-Brief.pdf>
- ³⁵ Canada Go. Greenhouse Gas Emissions. 2018 [June 13, 2018]; Available from: <https://www.canada.ca/en/environment-climate-change/services/environmental-indicators/greenhouse-gas-emissions.html>