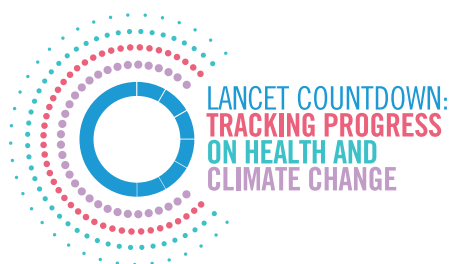


The Lancet Countdown on Health and Climate Change

Policy Brief for Canada

OCTOBER 2021



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Health impacts of climate crisis hit home

The health impacts of climate change hit home in Canada this summer. The British Columbia Coroners Service reported 570 heat-related deaths during the heat dome week in June, triple the average weekly number of deaths.¹ In the week that followed, the town of Lytton burned to the ground and nearby Lytton First Nation evacuated after setting a Canadian heat record of 49.6°C.² Communities in northwest Ontario were hit hard by wildfires, with evacuation of at least six First Nations.³ Overall, Indigenous Peoples, including First Nations, Métis, and Inuit, are disproportionately impacted by fire, with a 33 times higher chance of evacuation due to wildfires for First Nations persons living on reserve compared to those living off-reserve.⁴

The health impacts of the climate crisis experienced by people living in Canada this year are not isolated; rather, they are part of an overall trend. For instance, between 2014-2018, rapid warming in Canada led to a 58.4% increase in average annual heat-related mortality for the over 65 population, compared to the 2000-2004 baseline.⁵

In the summer of 2021 the Intergovernmental Panel on Climate Change (IPCC) released an updated report, which underscored that every fraction of a degree of warming avoided provides critical protection.⁶ Soon after, over 200 journals including *The Lancet*, the *British Medical Journal* and the *Canadian Medical Association Journal* published an editorial stating that, “the greatest threat to global public health is the continued failure of world leaders to keep the global temperature rise below 1.5°C and to restore nature.”⁷

The global climate crisis requires urgent, society-wide mobilization to provide children born today with the livable environment and functioning health systems they need to thrive in a climate changed world.

This mobilization requires two branches of simultaneous action: adapting to the increasing pressures on our health, health systems, and society; and reducing greenhouse gas emissions to keep impacts within the range where healthy adaptation is possible.

Key Messages and Recommendations

Climate change is already impacting health and health systems in Canada, and impacts will worsen. Canada needs to prepare and adapt in order to save lives and reduce long-term financial costs.

- 1** Establish and adequately fund a new national body with the authority to work between silos to develop a comprehensive National Climate Adaptation Strategy that includes risk assessments and adaptation planning.
- 2** Recognise that both adaptation and mitigation can save money by saving lives and improving health. Accordingly, at all governmental levels, fund, conduct and publicize cost-benefit analysis calculations for climate change policies that include quantification of health impacts in collaboration with health ministries.

Many measures can improve health and reduce greenhouse gas emissions immediately, including increasing urban greenness.

- 3** Increase and preserve green space in urban centers to reach a high level of greenness, prioritising low-income neighbourhoods. Urban municipalities must align their green space and climate change strategies, supported by the proposed National Climate Adaptation Strategy, and in collaboration with public health, city planners and community groups.

Protecting public health requires staying below 1.5°C of warming, yet Canada's emissions have grown the most of all G7 nations since signing the Paris Agreement. Government's relationship with the fossil fuel industry must change.

- 4** Eliminate all direct and indirect fossil fuels subsidies. Redirect that financial support to healthy, renewable energy infrastructure via a just transition that supports workers and communities, and supporting climate and health adaptation programs.
- 5** Remove fossil fuel influence from policymaking. Institute a 1:1 ratio of meetings of federal government representatives with non-profit and profit-based groups, with publicly available presentations and notes, and an end to closed-door meetings on public policies with fossil fuel industry representatives.

Adaptation

Adaptation measures offer opportunities to reduce the health burden of climate change on our economies and health systems. Interventions must be coordinated through the different levels of governments and include community stakeholders, with a focus on reducing health inequities related to historic, cultural, and social structural vulnerabilities.

De-silo to Save Lives: Integrated Adaptation Planning Needed

All levels of decision makers must coordinate preparations to protect the health of people living in Canada from worsening extreme weather events. This integrated response requires both knowledge and money, with climate change and health risk assessments dictating the work, and implementation made possible through adequate funding for our disaster response, public health, and health systems to adapt to these known and predicted risks.

Yet, according to a 2020 analysis of public-facing web-based communication materials prepared by Canadian institutions responsible for the delivery of core public health services at the local or regional level (i.e. regional public health agencies, public health units, etc.), only 20% have a dedicated weblink discussing health risks of climate change.⁸ Moreover, only 3% of all federal climate adaptation funding since 2017 has been designated to health-related projects.⁹

Cities are stepping in to fill a leadership void in adaptation, but more support and resources are required. According to Lancet Countdown data, 22 of Canada's 23 largest urban centres have completed or are in the process of completing a climate change risk assessment, and 15 identified climate change as a risk to public health or health systems. Cities recognize that older adults, low-income households and people with pre-existing medical conditions face structural barriers which exacerbate climate-health inequities in these populations.

Despite city-level assessments, broader leadership and dedicated funding to adapt is sorely needed. Furthermore, smaller centres and rural, remote and Indigenous communities are likely to be differentially impacted by

climate change and have fewer resources to adapt as a result of systemic inequities.¹⁰ A comprehensive review of adaptation in these settings has yet to be completed and should be prioritised with the direction of local leaders.

RECOMMENDATIONS

Establish and adequately fund a new national body with the authority to work between silos to develop a comprehensive National Climate Adaptation Strategy that includes risk assessments and adaptation planning.

Recognise that both adaptation and mitigation can save money by saving lives and improving health. Accordingly, at all governmental levels, fund, conduct and publicize cost-benefit analysis calculations for climate change policies that include quantification of health impacts in collaboration with health ministries.

Improving health sector co-benefits from urban green space

Adaptation outside of the health sector also has co-benefits for human health. Urban forestry strategies aimed at increasing canopy cover not only reduce heat exposure and heat-related illnesses, but also improve air quality and respiratory health, reduce flood risks, and increase opportunities for physical activity and positive mental health through time in nature.^{11,12}

A recent analysis of urban greenness and mortality in Canadian cities found that people who reside in areas with high levels of greenness experience an 8-12% reduction in all-cause mortality risk.¹³

Fortunately, major Canadian urban centres, where 70% of the population live, are improving greenness, a measure of natural spaces and tree cover within city boundaries. According to the Lancet Countdown data, in 2010, seven of Canada's eight largest cities had a level of urban greenness considered "low". Five of these had achieved a "medium" level of greenspace coverage in 2020. None has yet achieved

a high level of urban greenness, as defined by this indicator.* Moreover, currently only 15% of Canada's largest cities have well-aligned urban forestry and climate change strategies.¹⁴

Increasing overall greenness is not equitably distributed within cities. Low greenness is often correlated with low-income neighbourhoods, contributing to inequities. During the 2018 Montreal heat wave, people at risk were twice as likely to die if they lived in an urban heat island area with low prevalence of greenspace.¹⁵

* A high level of greenness is defined by this indicator as a population-weighted peak normalized difference vegetation index (NDVI) higher than 0.50.

Mitigation

Though positive steps have been taken, including the implementation of a price on carbon, investments in low carbon transit, and a mandate for new vehicles to be zero-emissions by 2035, Canada's emissions continue to grow. Canada and the U.S. are the only G7 countries that have increased emissions since signing the Paris Agreement—and Canada's have grown the fastest, primarily due to oil and gas production.¹⁶ Lancet Countdown data show the carbon intensity of Canada's energy system has been slow to decrease, falling only 4.6% from 1999-2019. At the average pace of decarbonisation observed between 2015 and 2019, it would take Canada over 188 more years to fully decarbonise its energy system.

The Government of Canada committed in April 2021 to increase its ambition, aiming to reduce emissions 40 to 45% below 2005 levels by 2030.¹⁷ Yet an analysis showed that present policies are not sufficient to meet this level of emissions reductions.¹⁸ There is a gap between ambition and implementation.

A healthy prescription : End fossil fuel subsidies

The oil and gas sector is the largest and fastest-growing source of emissions in Canada. These emissions overwhelm bold reductions undertaken by some provinces and sectors,

In short, urban greenspace saves lives, and Canada has room for improvement with significant opportunities to enhance access to high quality green spaces for all.

RECOMMENDATION

Increase and preserve green space in urban centers to reach a high level of greenness, prioritising low-income neighbourhoods. Urban municipalities must align their green space and climate change strategies, supported by the proposed National Climate Adaptation Strategy, and in collaboration with public health, city planners and community groups.

wiping out progress made by shifting off coal-fired power. Moreover, the emissions associated with the oil and gas that Canada exports are globally significant.¹⁹

Carbon pricing is a step in the right direction; however, more must be done in tandem with ending financial subsidies to the fossil fuel sector. While Canada has put a price on pollution, this is heavily discounted. Lancet Countdown data show that Canada's net revenue from carbon taxes in 2019 was US\$ 1.7 billion, after subtracting approximately US\$ 2 billion in fossil fuel subsidies. Furthermore, if public financing through crown corporations is included, Canada's federal government provides over US\$ 14 billion in annual fossil fuel subsidies.²⁰ If this were accounted for, net revenue from carbon pricing is negative – in other words, it still pays to pollute in Canada. Total government support to the fossil fuel sector increased during the COVID pandemic.²¹ As noted in a recent International Institute for Sustainable Development (IISD) report, "Canada ranks worst among G20 countries for public finance for fossil fuels on a per GDP basis."²⁰

There is evidence that by making polluting options more costly, carbon pricing can help to save lives from air pollution, by creating incentives to reduce emissions, improve air quality.²² An end to subsidies and supports that foster the fossil fuel sector is urgently needed. These public funds are better spent on creating a just transition to a clean energy economy or supporting adaptation.²³

Fair decision-making for a just, evidence-based transition

In the year following the onset of the COVID pandemic, fossil fuel industries and associations met with federal government officials a total of 1,224 times, or more than 4.5 times per working day. In contrast, environmental groups met with government representatives 303 times, or less than one-quarter the frequency.²⁴ Outsized support to the oil and gas industry is likely due to the dominant role representatives of this sector have in political lobbying.

Energy transition policy must be developed without such excessive industry pressure. The development of Canada's new food guide can serve as an example of developing evidence-based outcomes aligned with world-leading research and policy. Importantly, because the new guide was developed without closed door industry meetings, it reflects the best information available on public nutrition.²⁵ Government leaders and civil servants can similarly create

energy and environmental policy in the public interest by implementing more balanced lobbying standards, actively seeking the input of health- and sustainability-oriented groups, and ensuring decisionmakers receive evidence-based information around the health and economic impacts of climate change.

RECOMMENDATIONS

Eliminate all direct and indirect fossil fuels subsidies. Redirect that financial support to healthy, renewable energy infrastructure via a just transition that supports workers and communities, and supporting climate and health adaptation programs.

Remove fossil fuel influence from policymaking. Institute a 1:1 ratio of meetings of federal government representatives with non-profit and profit-based groups, with publicly available presentations and notes, and an end to closed-door meetings on public policies with fossil fuel industry representatives.

Conclusion

The COVID-19 pandemic has demonstrated that we have the ability to manage a daunting health crisis. We must now confront the climate and health crisis to protect citizens today and generations to come.

We must ensure public resources go towards supporting healthy energy choices and effective adaptation to a changing climate.

Canada's decision makers should begin a healthy transition by ending public fossil fuel subsidies. Instead these funds can support national green energy and health adaptation strategies, such as a climate adaptation agency and increasing urban greenness, with support for locally specific climate action plans.

These decisions can be supported by comprehensive cost-benefit analysis of the true costs of climate inaction, including impacts on deaths and disability. This will provide evidence to support actions that save money and lives.

Finally, the indicator data in this brief present only a partial snapshot of climate change and health impacts in Canada. Decision makers need to prioritise inclusive research and policymaking that values the perspectives and experiences of rural, remote, Indigenous, and low-income communities. Only then will we fully understand how climate change is impacting health across the country, and how to address it.

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Organisations and acknowledgements

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THE LANCET COUNTDOWN

The Lancet Countdown: Tracking Progress on Health and Climate Change is an international, multi-disciplinary collaboration that exists to monitor the links between public health and climate change. It brings together over 120 leading experts from academic institutions and United Nations (UN) agencies across the globe, bringing together climate scientists, engineers, energy specialists, economists, political scientists, public health professionals and doctors.

Each year, the Lancet Countdown publishes an annual assessment of the state of climate change and

human health, seeking to provide decision-makers with access to high-quality evidence-based policy guidance. For the full 2021 assessment, visit www.lancetcountdown.org

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