

Canada warming at twice the global rate, climate report finds

Report by Environment and Climate Change Canada suggests the majority of warming is the result of burning fossil fuels



The Snowy mountain wildfire, visible from Cawston, British Columbia, on 2 August 2018. Photograph: Canadian Press/REX/Shutterstock

Canada is warming twice as fast as the rest of the world, a landmark government report¹ has found, warning that drastic action is the only way to avoid catastrophic outcomes.

“The science is clear — Canada’s climate is warming more rapidly than the global average, and this level of warming effectively cannot be changed,” Nancy Hamzawi, assistant deputy minister for science and technology at Environment and Climate Change Canada, told reporters on Monday.

The report, released late on Monday by Environment and Climate Change Canada, paints a grim picture of Canada’s future, in which deadly heatwaves and heavy rainstorms become a common occurrence. Forty-three government scientists and academics authored the peer-reviewed report.

While global temperatures have increased 0.8C since 1948, Canada has seen an increase of 1.7C — more than double the global average. And in the Arctic, the warming is happening at a much faster rate of 2.3C, the report says.

While the increased warming in the Arctic is not yet fully understood, snow and ice play a critical role in reflecting the sun’s radiation and heat. But scientists say² the retreat of glaciers and disappearing sea ice both contribute to a feedback loop of warming, which is one of the factors contributing to Canada’s disproportionate temperature increase.

The report suggests the majority of warming felt in Canada and around the globe is the result of burning fossil fuels.

Canada has already pledged to cut emissions by 200m tonnes by 2030 — a cornerstone of Prime Minister Justin Trudeau’s national climate strategy — largely through a federally mandated carbon tax³ and shuttering coal-fired plants.

¹ <https://changingclimate.ca/>

² While the increased warming in the arctic isn’t yet fully understood, scientists believe snow and ice play a critical role in reflecting the sun’s radiation and heat. the retreat of glaciers and the disappearance of sea ice in recent decades has created a positive feedback loop of warming, say scientists, helping to explain the disproportionate temperature increases documented throughout the country./

³ <https://www.theguardian.com/world/2018/dec/04/how-to-make-a-carbon-tax-popular-give-the-profits-to-the-people>

Despite the urgency of the report, Canada remains mired in a political battle over climate policy.

Trudeau has pushed for a national carbon pricing strategy, and on Monday the federal government imposed the tax on four provinces that refuse to implement one. Conservative politicians have pledged to remove the tax if they win this fall's general election, arguing that it is too much of a burden for Canadians.

But under the current plan, households will receive rebate cheques from the federal government to offset any added expenses from the tax – meaning costs to the average consumer are negligible.

The report makes clear that Canada faces markedly different outcomes, depending on the policies it chooses to reduce emissions.

Under a scenario in which global emissions are dramatically reduced, average temperatures will rise only 3C across the country by 2100, including the Arctic region.

But if countries – including Canada – fail to act aggressively, increases of **7-9 degrees** are likely, and the Arctic faces the prospect of **11 degrees of warming**.

Under the report's worst-case scenario, the risk of deadly heatwaves increases tenfold bring with it droughts and forest fires. Western Canada has already grappled with two years of record forest fire seasons⁴. The risk of major rain events also doubles, meaning cities will be inundated with catastrophic urban flooding.



Access to critical sources of fresh water will also be constrained, due in large part to reduced winter snowfall, which in turn becomes a source of clean water when the snowpack melts.

Many of the previously documented effects – melting permafrost, disappearing sea ice⁵ and glacial retreat⁶ – are only set to intensify in the coming years.

"We are already seeing the effects of widespread warming in Canada," said Elizabeth Bush, a climate science adviser at Environment Canada, told reporters. "It's clear, the science supports the fact that adapting to climate change⁷ is an imperative. Urgent action is needed to reduce emissions."

⁴ <https://www.theguardian.com/world/2018/aug/16/british-columbia-wildfires-state-of-emergency-declared>

⁵ <https://www.theguardian.com/science/2018/jan/02/how-smart-ice-is-helping-to-save-lives-on-canada-thinning-sea-ice>

⁶ <https://www.theguardian.com/world/2018/oct/30/canada-glaciers-yukon-shrinking>

⁷ <https://www.theguardian.com/environment/climate-change>