CLIMATE CENTRAL

Lost Winter in Canada

Supplementary analysis: Climate change causing fewer freezing winter days — affecting snowfall, winter sports, ecosystems, and more

December 2024

KEY FACTS

- **Across Canada, climate change — due primarily to burning oil, coal, and methane gas — is causing a significant increase in winter days above freezing, also called lost winter days.**
- **Analysis of daily minimum temperatures during winter (December, January, February) shows which regions in Canada experienced the most significant annual changes to days above freezing during the past decade (2014-2023) due to human-caused warming.**
- **Around 20% of the regions in Canada analyzed (58 of 289) saw at least one additional week's worth of winter days above freezing each year, compared to a world without climate change. These regions are in British Columbia, New Brunswick, Nova Scotia, Ontario, Prince Edward Island, and Québec.**
- **Among the provinces overall, Prince Edward Island and Nova Scotia saw the most days above freezing added by climate change each year – about one week's worth, on average.**
- **Several of Canada's biggest cities — including Calgary, Montreal, Toronto, and Vancouver — experienced at least five additional days annually where temperatures were above freezing due to climate change, compared to a world without climate change.**
- **Warming winters have a range of impacts for people, ecosystems, and industries. Warmer temperatures affect snow accumulation and ice coverage, with significant consequences for winter sports and activities — and the people who make a living from them.**

➤ **Download data**

This national summary is part of a broader analysis, in which Climate Central assessed how warming temperatures, attributed to climate change, affected the number of days above freezing (0°C) during winter (December, January, February) in 123 countries across the Northern Hemisphere over this past decade (2014-2023). For locations across the globe, findings show how many lost winter days — days between December-February where minimum temperatures exceeded 0°C — are occurring annually due to climate change. For detailed methodology and summary of findings for 123 countries and 901 cities, see the full report.

RESULTS

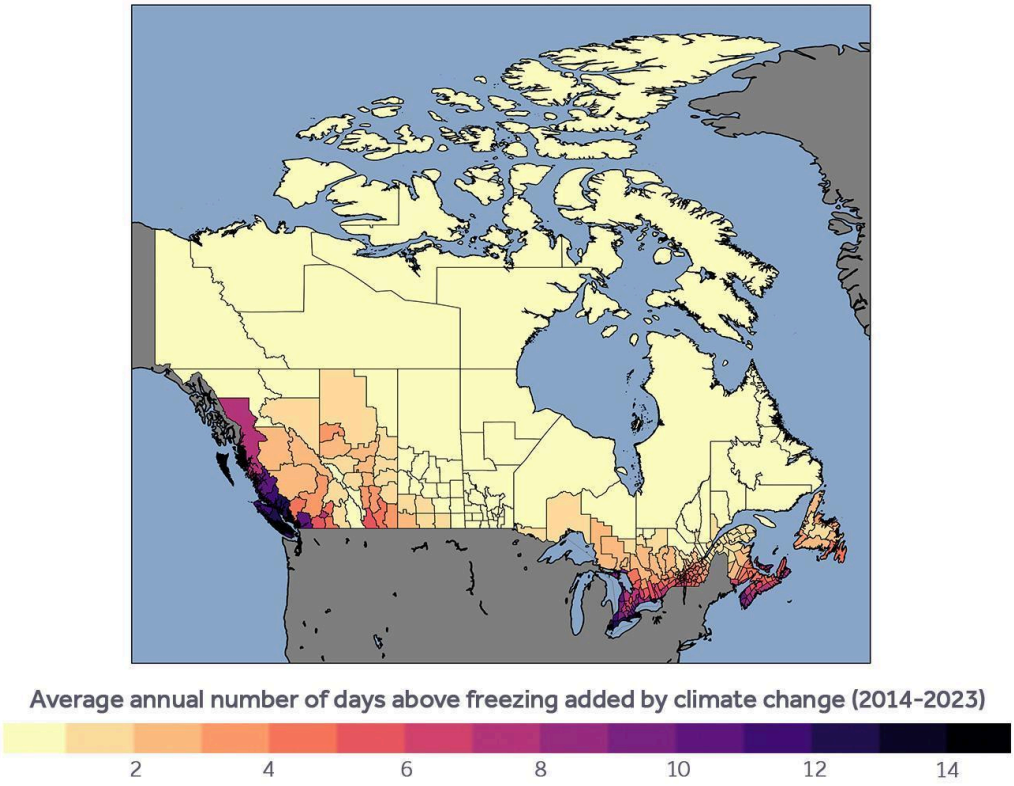

Figure 1. Annual winter days with minimum temperatures above 0°C added by climate change in Canada. Results averaged over a ten-year period (2014-2023).

Region	Province	Winter days above 0°C annually	Winter days above 0°C added by climate change annually
Nanaimo	British Columbia	70	18
Cowichan Valley	British Columbia	67	17
Greater Vancouver	British Columbia	65	16
Niagara	Ontario	32	15
North Coast	British Columbia	70	15
Alberni-Clayoquot	British Columbia	67	15
Sunshine Coast	British Columbia	44	15
Essex	Ontario	31	14
Haldimand-Norfolk	Ontario	30	14

Table 1. Regions in Canada with the most additional winter days where minimum temperatures exceeded 0°C added due to climate change. Results represent averages over the past decade (2014-2023).

City	Province	Winter days above 0°C annually	Winter days above 0°C added by climate change annually
Vancouver	British Columbia	69	19
Toronto	Ontario	27	13
Montreal	Quebec	10	6
Calgary	Alberta	7	5
Ottawa	Ontario	7	4
Edmonton	Alberta	4	3
Winnipeg	Manitoba	1	1

Table 2. Winter days with minimum temperatures above 0°C added each year due to human-caused climate change, in the seven major cities in Canada included in this analysis. Results represent averages over the past decade (2014-2023).

Climate Central is an independent group of scientists and communicators who research and report the facts about our changing climate and how it affects people's lives. Climate Central is a policy-neutral 501(c)(3) nonprofit.

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