

WINTER 2020/2021



CLIMATE TRENDS AND VARIATIONS BULLETIN

This bulletin summarizes recent climate data and presents it in a historical context. It first examines the national average temperature for the season and then highlights interesting regional temperature information.

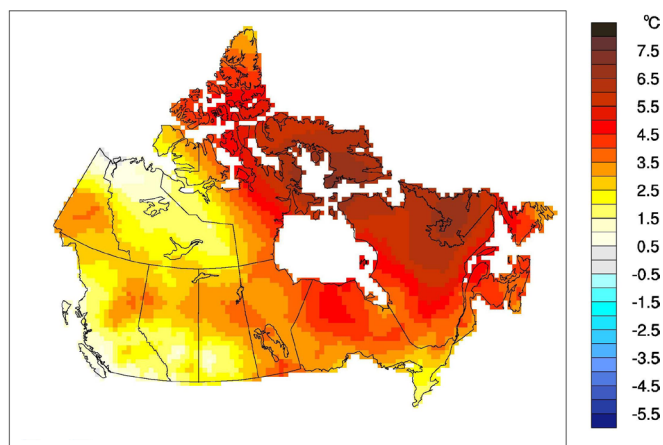
Over the past decade, precipitation monitoring technology has evolved and Environment and Climate Change Canada (ECCC) and its partners implemented a transition from manual observations to using automatic precipitation gauges. Extensive data integration is required to link the current precipitation observations to the long term historical manual observations. The update and reporting of historical adjusted precipitation trends and variations will be on temporary hiatus pending the extensive data reconciliation, and will resume thereafter. ECCC remains committed to providing credible climate data to inform adaptation decision making, while ensuring the necessary data reconciliation occurs as monitoring technology evolves.

NATIONAL TEMPERATURE

The national average temperature for the winter (December-February) of 2020/2021 was 3.7°C above the baseline average (defined as the mean over the 1961–1990 reference period), which is the 4th warmest observed since nationwide recording began in 1948 (based on preliminary data). The warmest winter occurred in 2009/2010, when the national average temperature was 4.1°C above the baseline average. The coolest winter occurred in 1971/1972, when the national average temperature was 3.6°C below the baseline average. The temperature departures map for the winter of 2020/2021 shows that all of Canada experienced temperatures at least 1°C above the baseline average. Eastern Canada experienced temperature departures more than 3°C above the baseline average.

Most notably, northeastern Nunavut, northeastern Quebec and most of Labrador experienced temperatures more than 5°C above the baseline average during the winter of 2020/2021.

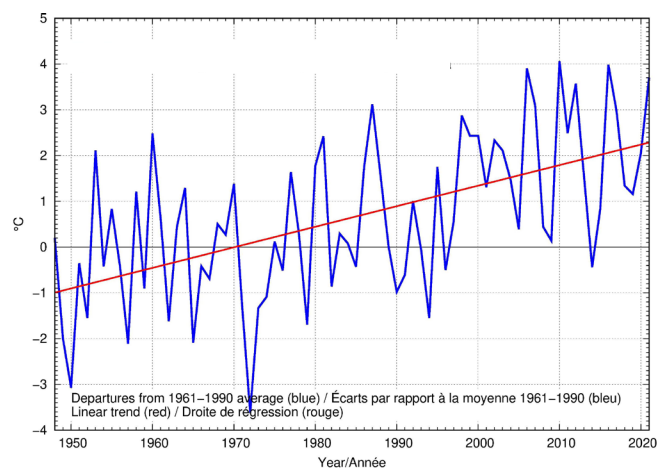
TEMPERATURE DEPARTURES FROM THE 1961–1990 AVERAGE – WINTER 2020/2021



The time series graph shows that averaged winter temperatures across the country have fluctuated from year to year over the 1948–2021 period. With the exception of 2014, averaged winter temperatures have remained above the baseline average since 1996. The linear trend indicates that winter temperatures averaged across the nation have warmed by 3.5°C over the past 74 years.



WINTER NATIONAL TEMPERATURE DEPARTURES AND LONG-TERM TREND, 1948–2021



REGIONAL TEMPERATURE

When examined on a regional basis, average winter temperatures for 2020/2021 were among the 10 warmest on record, since 1948, for four of the eleven climate regions. These regions were Atlantic Canada (warmest at 4.1°C above average), the Northeastern Forest region (2nd warmest at 4.7°C above average), the Arctic Tundra region (2nd warmest at 4.5°C above average) and the Arctic Mountain and Fiords region (2nd warmest at 5.3°C above average). Average winter temperatures for 2020/2021 were not among the 10 coolest on record, since 1948, for any of the eleven climate regions.

All eleven climate regions exhibit positive trends for winter temperatures over the 74 years of record. The strongest regional trend (+5.3°C) is observed in the Yukon/North B.C. Mountains region, while the weakest trend (+1.1°C) is found in the Atlantic Canada region. A table listing the regional and national temperature departures and rankings from 1948 to 2021 and a table that summarizes regional and national trends and extremes summaries are available upon request to ec.btv-ctvb.ec@canada.ca.

Please note that the latest generation of CANGRD is now adopted in the analyses of the Climate Trends and Variations Bulletin (CTVB). For more information, please visit the CTVB homepage.



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