

WINTER 2021/2022



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.

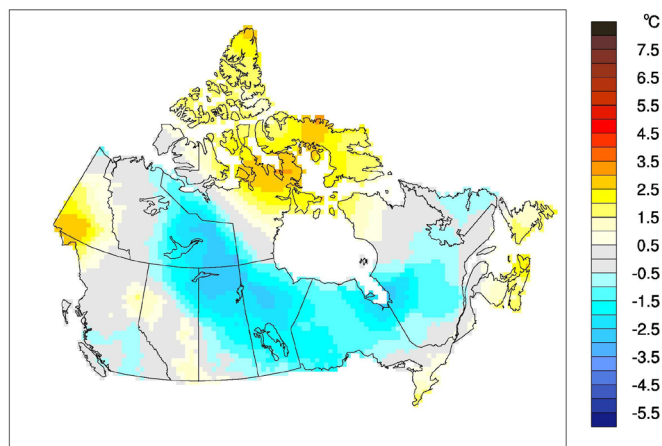
Over the past decade, precipitation monitoring technology has evolved and Environment and Climate Change Canada and its partners implemented a transition from manual observations to using automatic precipitation gauges. Extensive data integration is required to link the current precipitation observations 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 2021/2022 was 0°C at the baseline average (defined as the mean over the 1961–1990 reference period), the 28th coolest winter in the 75-year record (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 2021/2022 shows that eastern Northwest Territories, southwestern Nunavut, parts of southern British Columbia, northeastern Alberta, northern Ontario, central Quebec, and most of Saskatchewan, Manitoba and Labrador experienced temperatures at least 0.5°C below the baseline average. Areas in southern Northwest

Territories, northern Saskatchewan and northwestern Manitoba experienced temperature departures more than 2.0°C below the baseline average. Conversely, southern Ontario and Alberta, northern British Columbia and Quebec, and most of the Yukon, Nunavut and the Atlantic provinces experienced temperatures at least 0.5°C above the baseline average. Most notably, northeastern Nunavut, southwestern Yukon and northwestern British Columbia experienced temperatures more than 2.5°C above the baseline average. The rest of the country experienced temperatures close to the baseline average.

TEMPERATURE DEPARTURES FROM THE 1961–1990 AVERAGE – WINTER 2021/2022

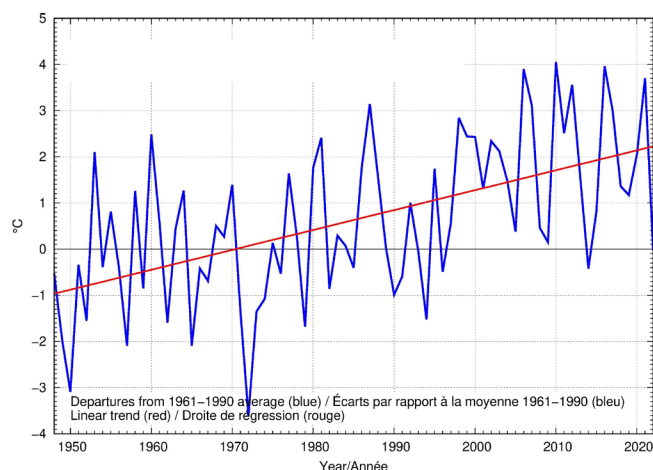


The time series graph shows that averaged winter temperatures across the country have fluctuated from year to year over the 1948–2022 period. With the exception of this year and 2014, averaged winter temperatures have



remained above the baseline average since 1996. The linear trend indicates that winter temperatures averaged across the nation have warmed by 3.3°C over the past 75 years.

WINTER NATIONAL TEMPERATURE DEPARTURES AND LONG-TERM TREND, 1948–2022



REGIONAL TEMPERATURE

When examined on a regional basis, the average winter temperature for 2021/2022 had not ranked among the 10 warmest on record, since 1948, for any of the eleven climate regions. In addition, none of the eleven climate regions experienced a winter average temperature for 2021/2022 that was among the 10 coolest in the 75-year record. Average winter temperatures for all eleven climate regions exhibit positive trends over the

75 years of record. The strongest regional trend (+5.5°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 2022 and another table summarizing regional and national trends and extremes summaries are available upon request at btvc-ctvb@ec.gc.ca.

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

THE MAP OF CANADIAN CLIMATE REGIONS



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