



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.

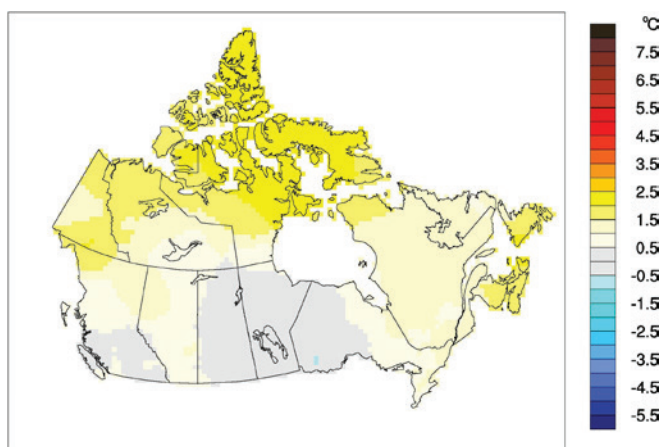
Over the past decade, precipitation monitoring technology has evolved and Environment and Climate Change Canada and its partners implemented a transition from manual observations to using automatic precipitation gauges. Extensive data integration is required to link the current precipitation observations 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 year 2022 (January to December) was 1.2°C above the baseline average (defined as the mean over the 1961–1990 reference period), based on preliminary data, which had ranked the 16th warmest observed since nationwide recording began in 1948. The warmest year occurred in 2010, when the national average temperature was 3.0°C above the baseline average. The coolest year occurred in 1972, when the national average temperature was 2.0°C below the baseline average. The temperature departures map shows that most of Canada experienced temperatures at least 0.5°C above the baseline average. Temperatures more than 1.5°C above the baseline average were recorded in most of northern Canada, northern parts of British Columbia and Quebec, and most of the Atlantic provinces. Annual temperatures were close to the baseline average in the southern areas of British Columbia and in most of Manitoba, Saskatchewan and northern Ontario,

with the exception of some small regions of northern Ontario that experienced temperatures of 0.5°C below the baseline average.

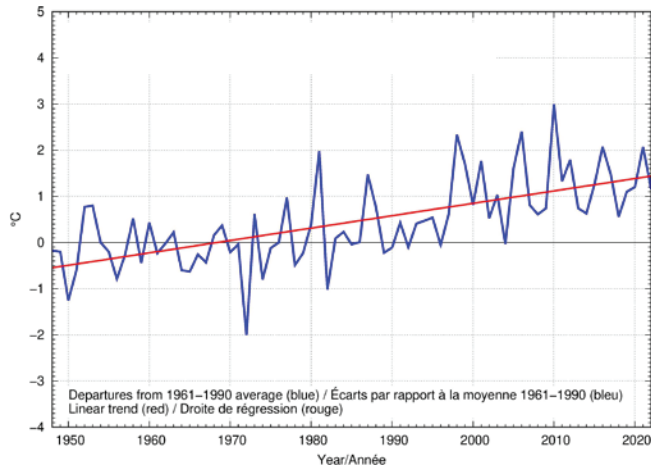
TEMPERATURE DEPARTURES FROM THE 1961–1990 AVERAGE – ANNUAL 2022



The time series graph shows that annual temperatures averaged across the country have fluctuated from year to year over the 1948–2022 period. Since 2005, average annual temperatures have remained above the baseline average. The linear trend indicates that annual temperatures averaged across the nation have warmed by 1.9°C over the past 75 years.



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



REGIONAL TEMPERATURE

When examined on a regional basis, the average annual temperature for 2022 was ranked among the 10 warmest on record, since 1948, for one of the eleven climate regions: Atlantic Canada (6th warmest at 1.7°C above the baseline average). The average annual temperatures in the Arctic Tundra and the Arctic Mountains & Fiords regions were both ranked 12th warmest at 1.9°C and 2.0°C above the baseline average, respectively. Average annual temperatures for 2022 were not ranked among the 10 coolest on record, since 1948, for any of the eleven climate regions. Average annual temperatures for all eleven climate regions exhibit positive trends over the 75 years of record. The strongest regional trend (+2.7°C) was observed in the Mackenzie District region, while the weakest trends (+1.1°C) were found both in the Atlantic Canada and Northeastern Forest regions. 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



Cat. No.: En81-23F-PDF
ISSN: 2367-9794
EC22056

For information regarding reproduction rights, please contact Environment and Climate Change Canada's Public Inquiries Centre at 1-800-668-6767 (in Canada only) or 819-997-2800 or email to enviroinfo@ec.gc.ca.

© His Majesty the King in Right of Canada, represented by the Minister of Environment and Climate Change, 2023

Aussi disponible en français