



## 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.

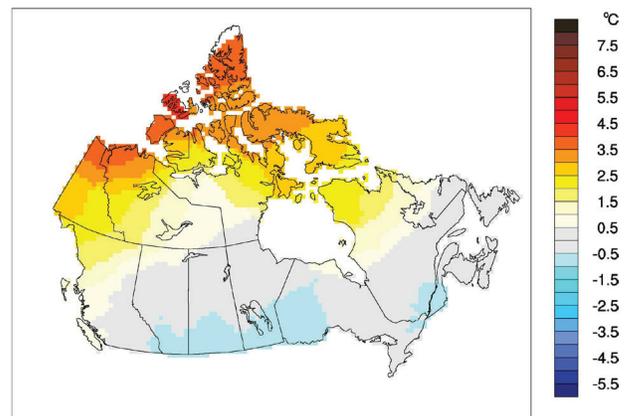
Over the past decade, precipitation monitoring technology has evolved and Environment and Climate Change Canada and its partners implemented a transition from manual observations to using automatic precipitation gauges. Extensive data integration is required to link the current precipitation observations 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 resumed 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 2019 (January to December) was 1°C above the baseline average (defined as the mean over the 1961–1990 reference period), based on preliminary data, which is the 15<sup>th</sup> warmest observed since nationwide recording began in 1948. The warmest year occurred in 2010, when the national average temperature was 3°C above the baseline average. The coolest year occurred in 1972, when the national average temperature was 2°C below the baseline average. The temperature departures map shows that Yukon, Northwest Territories, Nunavut as well as the northern areas of British Columbia, Alberta, Quebec, and Labrador experienced annual temperatures notably above the baseline average. Meanwhile, temperatures were below the

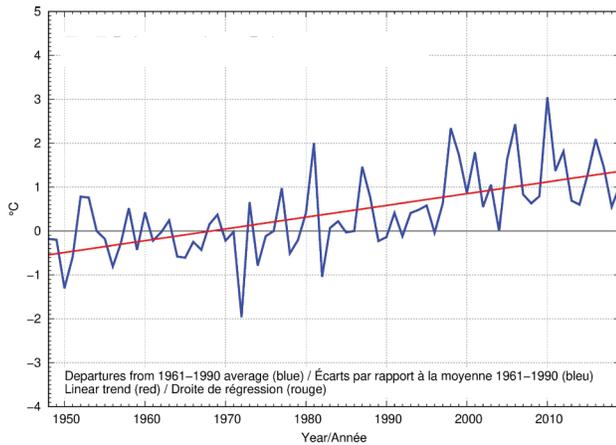
baseline average along Canada's southern border from Alberta through Saskatchewan, Manitoba, and northwestern Ontario, and from eastern Ontario to southern Quebec. Annual temperatures were generally near the baseline average in the remainder of the country.

### TEMPERATURE DEPARTURES FROM THE 1961–1990 AVERAGE – ANNUAL 2019



The time series graph shows that annual temperatures averaged across the country have fluctuated from year to year over the 1948–2019 period. The averaged annual temperatures have remained above the baseline average since 1996. The linear trend indicates that annual temperatures averaged across the nation have warmed by 1.7°C over the past 72 years.

## ANNUAL NATIONAL TEMPERATURE DEPARTURES AND LONG-TERM TREND, 1948–2019



## REGIONAL TEMPERATURE

When examined on a regional basis, the average annual temperature for 2019 was among the 10 warmest on record, since 1948, for three of the eleven climate regions. These regions were the Arctic Mountains & Fiords (2<sup>nd</sup> warmest at 3.1°C above average), the Yukon/North B.C. Mountains (3<sup>rd</sup> warmest at 2.4°C above average) and Arctic Tundra (4<sup>th</sup> warmest at 2.6°C above average). Average annual temperatures for 2019 were not among the 10 coolest on record, since 1948, for any of the eleven climate regions. However, of note, the Great Lakes/St. Lawrence region experiences its 15<sup>th</sup> coolest year (0.3°C below average) and

the Prairies region experienced its 18<sup>th</sup> coolest year (0.6°C below average). All eleven climate regions exhibit positive trends for annual temperatures over the 72 years of record. The strongest regional trend (+2.8°C) is observed in the Mackenzie District region, while the weakest trend (+0.7°C) is found in the Atlantic Canada region. A table listing the regional and national temperature departures and rankings from 1948 to 2019 and a table that summarizes regional and national trends and extremes summaries are available on request to [ec.btv-ctvb.ec@canada.ca](mailto:ec.btv-ctvb.ec@canada.ca).

## Canadian Climate Regions



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