AUTUMN 2020

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.

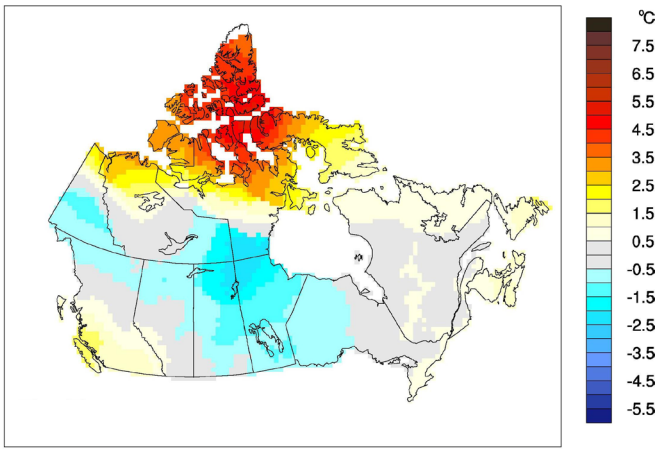
Over the past decade, precipitation monitoring technology has evolved and Environment and Climate Change Canada and its partners implemented a transition from manual observations to using automatic precipitation gauges. Extensive data integration is required to link the current precipitation observations 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 autumn (September–November) of 2020 was 0.7°C above the baseline average (defined as the mean over the 1961–1990 reference period), based on preliminary data, which is the 36th warmest observed since nationwide recording began in 1948. The warmest autumn occurred in 1998, when the national average temperature was 2.5°C above the baseline average. The coolest autumn occurred in 1972, when the national average temperature was 1.8°C below the baseline average. The temperature departures map shows that the northern parts of Yukon, Northwest Territories, Nunavut, Quebec as well as the Atlantic Provinces and the southern areas of British Columbia, Ontario and Quebec experienced autumn temperatures above the baseline average, with greatest departures recorded in the northern parts of Nunavut.

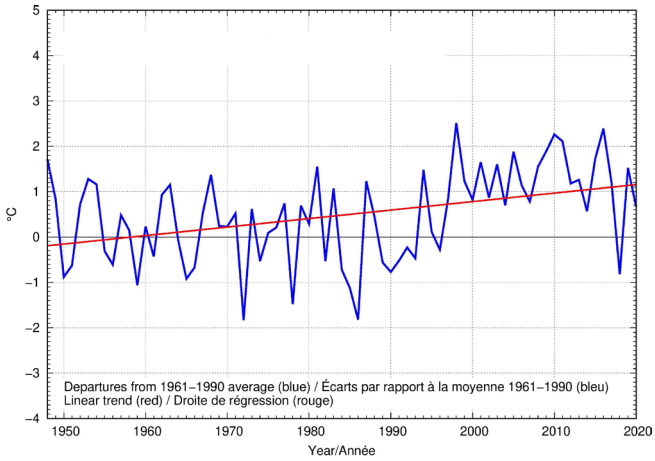
Meanwhile, southern areas of Yukon, Northwest Territories, and Nunavut, most areas of the prairies provinces as well as the northwestern areas of British Columbia and Ontario experienced autumn temperatures below the baseline average. The rest of the country experienced temperatures close to the baseline average.

TEMPERATURE DEPARTURES FROM THE 1961–1990 AVERAGE – AUTUMN 2020



The time series graph shows that autumn temperatures averaged across the country have fluctuated from year to year over the 1948–2020 period. With the exception of 2018, averaged autumn temperatures have remained above the baseline average since 1996. The linear trend indicates that autumn temperatures averaged across the nation have warmed by 1.6°C over the past 73 years.

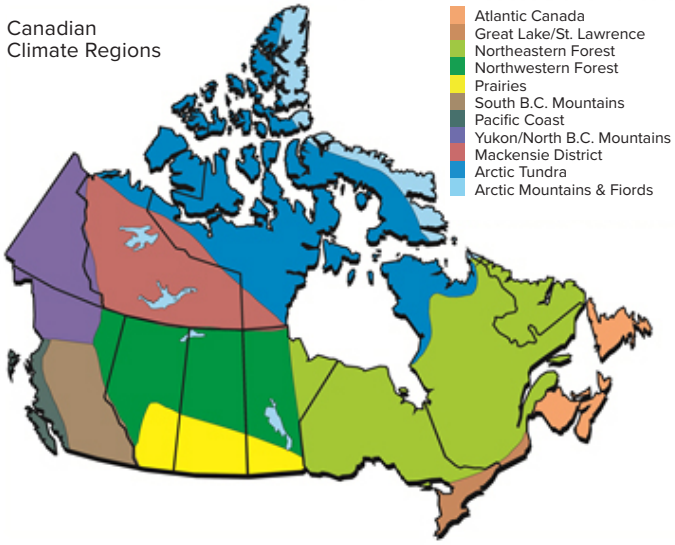
AUTUMN NATIONAL TEMPERATURE DEPARTURES AND LONG-TERM TREND, 1948–2020



REGIONAL TEMPERATURE

When examined on a regional basis, average autumn temperatures for 2020 were among the 10 warmest on record since 1948 for three of the eleven climate regions: the Pacific Coast (3rd warmest at 1.3°C above average), Arctic Mountains and Fiords (9th warmest at 2.9°C above average) and Arctic Tundra (10th warmest at 2.6°C above average). Average autumn temperatures for 2020 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 autumn temperatures over the 73 years of record. The strongest trends were observed in the Arctic Tundra, and Arctic Mountains and Fiords regions (+2.7°C), while the weakest trend (+0.4°C) was found in the Prairies region.

A table listing the regional and national temperature departures and rankings from 1948 to 2020 and a table that summarizes regional and national trends and extremes summaries are available upon request to ec.btvc-ctvb.ec@canada.ca.



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