

# CANADA'S CHANGING CLIMATE

## PROJECTED CHANGES THIS CENTURY FOR QUEBEC

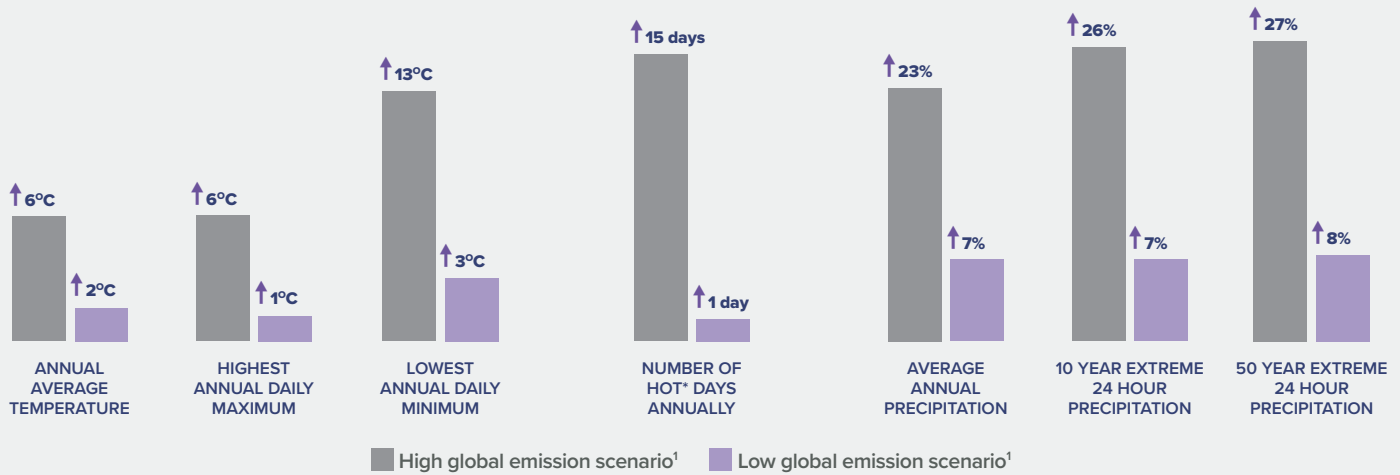


Canada's climate has warmed and will warm further in the future, driven by human influence.

Global emissions of carbon dioxide from human activities will largely determine how much warming the country—and the world—will experience in the future.

### HIGH VS LOW EMISSION PROJECTIONS

#### TWO VERY DIFFERENT FUTURES FOR QUEBEC



<sup>1</sup> High and low global emission scenarios. The high emission scenario RCP 8.5 is associated with an increase in global average temperature of about 3.7 °C by late century relative to the 1986-2005 reference period. The low emission scenario RCP 2.6 is associated with an increase in global average temperature of about 1.0 °C by late century relative to the 1986-2005 reference period.

\*Hot day = daily maximum temperature is above 30°C

### THE EFFECTS OF WARMING ARE EVIDENT IN QUEBEC

#### EFFECTS ARE PROJECTED TO INTENSIFY IN THE FUTURE



Extreme warm temperatures have become hotter and even hotter temperatures are projected for the future. This will increase the severity of heatwaves, and contribute to increased drought and wildfire risk.



The Gulf of St. Lawrence is projected to experience 25 to 75 cm of local sea-level rise by late century under a high emission scenario. Local sea level will fall along the James Bay and Hudson Bay coastlines, as land uplift will offset the effects of global sea level rise.



Waters in the Gulf of St. Lawrence have become warmer and more acidic, and their oxygen content has declined. These conditions are expected to deteriorate further.



Peak streamflow in spring in Southern Quebec rivers is projected to be earlier by as much as 20 days by mid-century under a high emission scenario.



Seasonal sea ice cover had declined in the Gulf of St. Lawrence, Hudson Bay, and James Bay. More persistent ice-free conditions are projected by mid-century.



Growing seasons have already lengthened in Quebec. Growing seasons for warm season crops could lengthen by weeks by mid-century, and potentially by more than a month by late century.

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