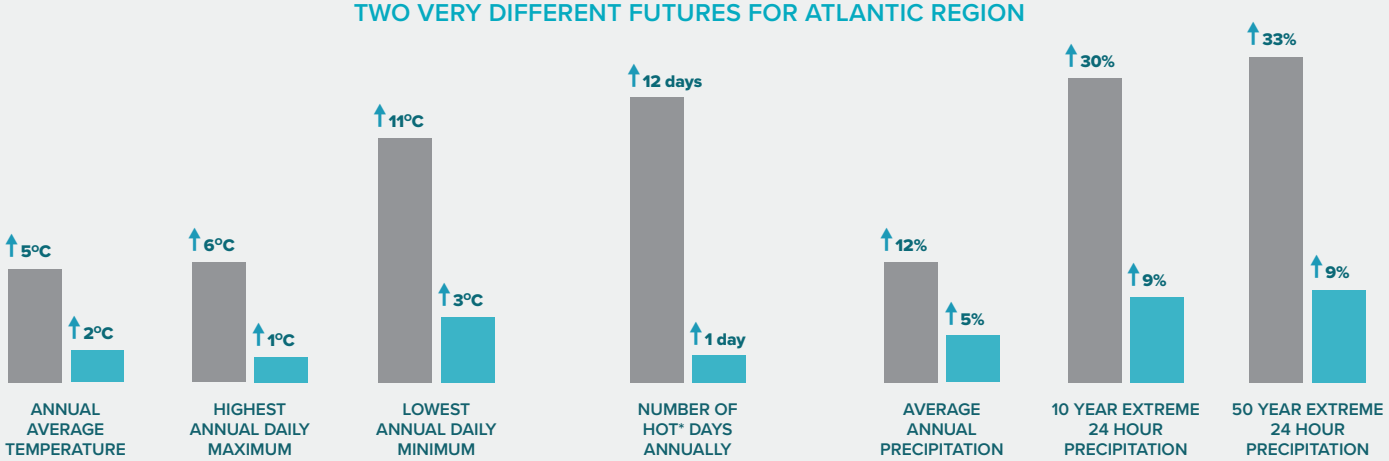
CANADA'S **CHANGING CLIMATE**

PROJECTED CHANGES THIS CENTURY FOR THE ATLANTIC REGION

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 ATLANTIC REGION



Median values. Changes are for 2081-2100 relative to the 1986-2005 reference period.

[1] **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 THE ATLANTIC REGION

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 coast of southern Atlantic Canada will experience the largest local sea-level rise in Canada due to global sea-level rise combined with sinking land areas. Small amounts of sea level change (rise or fall) are projected for the Labrador coast where land uplift is occurring.

Winter sea ice area has declined in the Atlantic region, especially in the waters east of Newfoundland. Winter sea ice cover is projected to continue to decline off Atlantic Canada.

Combined sea ice decline and sea-level rise are expected to contribute to an increase in the frequency of coastal flooding in the Atlantic region.

Increases in ocean temperature are projected off Atlantic Canada. Increases in acidity and reductions in subsurface oxygen conditions, which will become increasingly detrimental to marine life, are also projected.

Growing seasons have already lengthened across the Atlantic region. 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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