

CCCR 2026

HAZARDS KEY MESSAGE EXCERPTS

“At the heart of adaptation planning is understanding current and future risks due to a changing climate.

To assess physical climate risks, it is often helpful to characterize them by climate hazard.”

Canada's Changing Climate Report
2026 excerpt, Chapter 10, Section 10.4

Confidence Legend

- VH** = Very High
- H** = High
- M** = Medium
- L** = Low
- VL** = Very Low

Confidence is one metric used to communicate the degree of certainty of findings in this report. It refers to the validity of a result based on the type, amount, quality, and consistency of evidence and the degree of agreement. See Chapter 1, [section 1.4.3](#) for more information on confidence terms.



Extreme heat and heatwaves

- Increases in the intensity and frequency of hot extremes [...] are projected for all regions of Canada, with changes becoming larger as global mean temperature increases **VH** (KM 8.2)



Wildfires

- The fire season has lengthened in most parts of Canada and is projected to continue to lengthen as the global average temperature increases **H** (KM 8.11)
- The frequency and intensity of extreme fire weather conditions are projected to increase in most regions of Canada with increases in global average temperature **H** (KM 8.11)



Sea-level change, storm surge, and coastal flooding

- Extreme sea-level events are projected to occur more often and to become larger because of future increases in relative sea-level rise in many parts of Canada **H** (KM 7.11)
- The projected lengthening of the Arctic ice-free season will cause increases in mean and extreme wave heights and storm surges **M** (KM 7.9)
- Compound coastal flooding arises from jointly occurring climate conditions, such as heavy rain during episodes of extreme water levels. Such co-occurring drivers have increased in frequency and intensity in some parts of Canada, with evidence primarily from Atlantic locations, **L** and are projected to become more frequent and intense at locations along the Atlantic, Pacific and Western Arctic coastlines **M** (KM 8.12)



Extreme precipitation & pluvial (rainfall-related) floods

- Projected increases in extreme precipitation are expected to lead to more frequent and intense flash flooding across Canada **H** (KM 5.10)
- The frequency and intensity of atmospheric rivers over Canada will increase in the future in high emissions scenarios **H** and intermediate emissions scenarios. **M** However, the magnitude of these increases is uncertain (KM 4.6)



Permafrost warming and thaw-driven landscape changes, and terrestrial ice loss

- Permafrost warming and thaw-driven landscape changes are expected to continue with increased climate warming. **VH** Even if the climate stabilizes, some thawing will continue at depth **VH** (KM 6.14)
- Canada's glaciers are projected to continue losing mass under every future emissions scenario **VH** (KM 6.10)
- The number and severity of glacier-related hazards, such as flooding and landslides, are expected to increase, particularly in western Canada **M** (KM 6.10)



Non-pluvial floods

- Warmer temperatures are expected to lead to the earlier occurrence of snowmelt, rain-on-snow events, and ice jam breakups, resulting in earlier streamflow-related spring floods **M** (KM 5.10)
- However, their future frequency remains uncertain because of the interactions among rising temperatures, reduced snow cover, and the complex dynamics of ice jam-related and snowmelt-related floods (KM 5.10)

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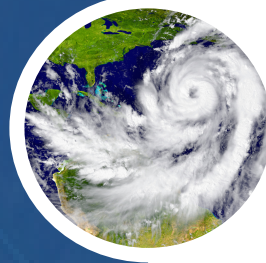
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Extratropical storms and hurricanes

- Changes in recent decades in the frequency and intensity of extratropical storms and of atmospheric blocks are uncertain. There is low confidence in any human influence on these past changes. A poleward shift in extratropical storms and a decrease in the frequency of summer extratropical storms are projected over Canada **L** (KM 4.4)



Marine hazards

- Continued warming is projected for the oceans around Canada, with the magnitude increasing with higher greenhouse gas emissions **H** (KM 7.2)
- More frequent and intense marine heatwaves have been observed in the Pacific and Atlantic oceans around Canada since the 1980s and are expected to continue to increase in all oceans, including the Arctic, because of human-caused climate change **H** (KM 7.3)
- Over the rest of the 21st century, the oceans around Canada are projected to continue to absorb anthropogenic carbon dioxide, to increase in acidity, **VH** and to lose oxygen in the subsurface **M** (KM 7.14)



Thunderstorms

- Large-scale environmental conditions favouring thunderstorms are projected to become more prevalent across central and eastern Canada in spring, summer, and fall **H** (KM 4.10)
- There is low confidence that thunderstorms and other severe weather events will increase, because an increase in favourable environmental conditions does not always lead to more thunderstorms **L** (KM 4.10)



Droughts

- Meteorological and agricultural droughts are projected to be longer and more frequent and intense across central and southern Canada during summer, and to be more prominent with higher amounts of global warming and at the end of the century **H** (KM 5.8)
- Summer hydrological droughts are also projected to be longer and more frequent and intense in many regions of southern Canada, mainly because of increased evaporation and lower runoff from mountainous regions **L** (KM 5.8)



Strong winds

- There is very low confidence in the direction and magnitude of future changes in extreme winds due to the limited number of studies and substantial model uncertainty related to projections of wind-related phenomena **VL** (KM 8.10)



Extreme cold, loss of cold, and seasonally frozen ground

- Decreases in the intensity and frequency of cold extremes are projected for all regions of Canada, with changes becoming larger as global mean temperature increases **VH** (KM 8.2)
- The annual number of days with seasonally frozen ground, and the maximum annual depth of seasonally frozen ground outside permafrost areas, are expected to decrease across Canada until mid-century before stabilizing under a low emissions scenario **H** (KM 6.12)