

Downscaled Changes¹ in Ontario by 2050s²

• Average Climate Indicators

• **Temperature very likely to increase significantly**

- Annual: by ~3.6 [1.3~6.9]°C
- Winter: by ~5.3 [0.9~11.2]°C
- Summer: by ~2.4 [-0.6~6.0]°C

• **Cooling degree day (CDD)**

increases by ~177 [6 ~ 459]°C or ~167%

• **Frost Days**

decrease by ~31 [-38 ~ 12] days or 19%

• **Precipitation likely to increase (low confidence)**

- Annual: by ~11 [-13~34]%
- Winter: by ~16 [-23~67]%
- Summer: by ~12 [-37~65]%

• Extreme Climate Indicators

• **Temperature-related**

- warm-days increase ~59 [10~126] days or 164%
- warm-nights increase ~70 [23~139] nights or 194%
- Maximum single heat wave duration increase ~16 [1~50] days or 200%

• **Precipitation –related (low confidence)**

- Heavy precipitation days (>10mm/day) increase ~4 [-6~13] days or 17%
- Very heavy precipitation days (>20mm/day) increase ~2 [-3~6] days or 33%
- Very wet days (>95 percentile) increase ~2 [-3~8] days or 25%

1 Preliminary results from MOECC funded York University project, under the IPCC AR5 RCP8.5 business as usual projections.

2 2050s is defined as 2041-2070; all changes (except the following one in foot note 3) are calculated as the differences between the 2041-2070 and the averages of the end of last century, 1990s (1981-2010).