

ClimateData.ca: Supporting municipal climate resilience

Climate change affects all sectors of society and the economy, but its impacts are felt most directly at the local level. Municipalities are central to responding to a changing climate, responsible for infrastructure, land-use planning, emergency management, and service delivery in a changing climate. Having access to reliable, useful and usable climate information helps municipalities consider climate change in their activities.

1. What is ClimateData.ca?

ClimateData.ca is an authoritative source of high-resolution climate data designed to support climate-informed decision-making in Canada.

The platform enables municipalities and other decision-makers to access and use the most up-to-date climate information through clear visualizations, downloadable datasets, and practical guidance. It is a collaborative platform, developed with Canada's regional climate service providers.

ClimateData.ca's goal: To make climate data accessible, usable, and relevant so users can plan, design, and adapt with confidence.

2. Why ClimateData.ca matters for municipalities

Municipalities play a critical role in climate adaptation, but they are not expected to be climate science experts.

ClimateData.ca is designed to support municipalities by:

- **Reducing complexity:** Translating climate science into clear, decision-relevant information
- **Saving time:** Providing ready-to-use tools and information aligned with common municipal planning needs
- **Building confidence:** Offering guidance and examples that demonstrate how data can be applied in practice

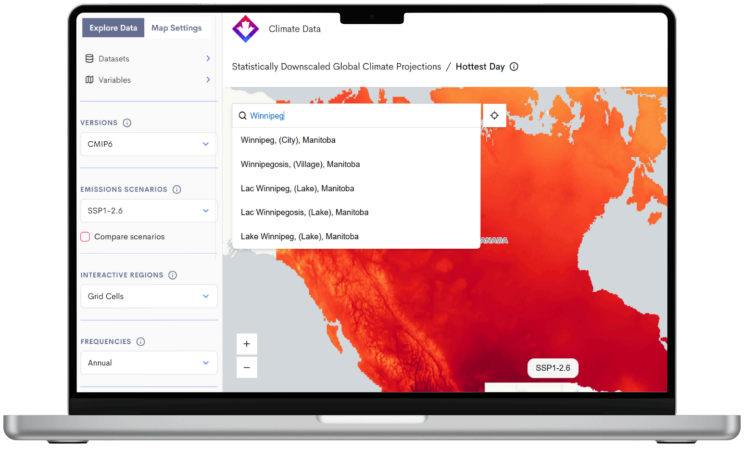
Whether municipalities are starting to explore climate risks or advancing detailed adaptation planning, ClimateData.ca supports each stage of the resilience journey.

3. Key features and tools

ClimateData.ca brings together climate science and practical tools and guidance in one place, designed for both technical and non-technical users.

Climate data and analysis

- Location-specific climate information available for communities across Canada
- Interactive maps with customization options (datasets, variables, time periods, emissions scenarios)
- Downloadable data for deeper analysis and reporting



Planning and design tools and data

- Future climate design value summaries to complement building codes
- Climate change–scaled Intensity-Duration-Frequency (IDF) data to support resilient infrastructure and stormwater planning that can withstand changes to precipitation extremes
- Spatial analogues to help users gain insights on how to prepare for and adapt to climate change by identifying locations that currently experience climate conditions similar to those projected for their location in the future

Learning and guidance resources

- Interactive guided tour of ClimateData.ca
- Learning Zone with plain-language explanations of climate concepts that can support understanding and communication
- Articles and blogs illustrating how municipalities and other organizations are using climate data in real-world decisions
- Northern-specific content to help navigate different data choices to find the most relevant information and support northern adaptation efforts

4. Regional expertise with national coverage

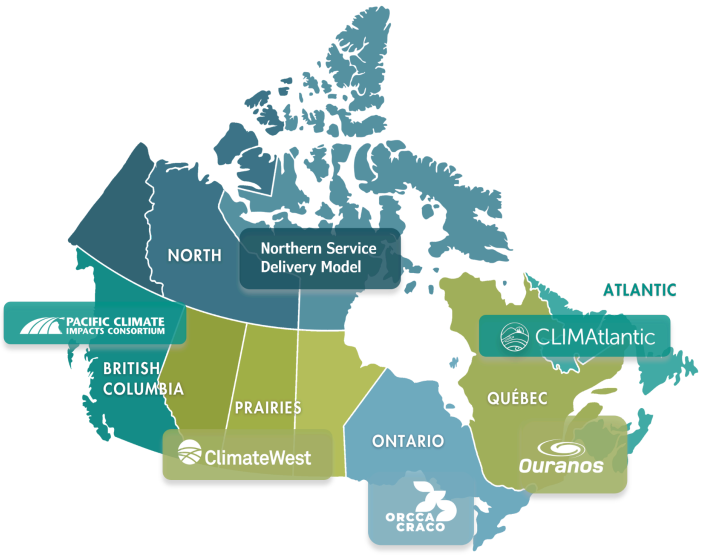
Climate impacts vary widely across Canada. ClimateData.ca combines national-scale climate data with regional expertise to ensure local relevance.

- ClimateData.ca is supported by regional climate service providers from across the country
- The platform connects users with regional climate service organizations in their area that provide locally tailored knowledge and support
- Regional insights help municipalities interpret climate data in the context of local geography, hazards, experience, and decision-making processes

This approach ensures that communities are not only accessing data, but understanding how to use it effectively in their specific context.

Canadian climate service providers:

- National: Canadian Centre for Climate Services
- Atlantic: CLIMAtlantic
- Québec: Ouranos
- Ontario: Ontario Resources Centre for Climate Adaptation (ORCCA)
- Prairies: ClimateWest
- Pacific & Yukon: Pacific Climate Impacts Consortium (PCIC)



5. Support and ongoing engagement

ClimateData.ca offers multiple ways for municipalities to stay connected and supported in their climate data journeys:

- **User support and Support Desk** for questions and guidance
- **Newsletter subscription** for updates, new tools, and resources
- **Social media channels** highlighting new features, case studies, and learning opportunities

These supports help municipalities to continue building their capacity and confidence.

Get started with an interactive tour of ClimateData.ca