

Climate

Canada's climate is characterized by its diversity, as temperature and precipitation differ from region to region and from season to season. While it is true that in the extreme north temperatures climb above 0°C for only a few months a year, most Canadians live within 300 km of the country's southern border where mild springs, hot summers and pleasantly crisp autumns prevail at least 7 months out of 12. The seasons dictate the look of the land: according to whether the natural environment is in a state of dormancy or growth, Canadians will be alpine skiing... or water skiing.

While seasonal change signals fluctuations in temperature and number of hours of sunshine, the shifting position of air masses also plays a part. The usual air flow from west to east is disrupted in winter when cold, dry air moves down from the Arctic, and in summer when warm, tropical air moves up from the southeast. Added to these factors are the effect of mountain ranges, plains and large bodies of water.

The West Coast

The coast of British Columbia has the most temperate climate in Canada, thanks to warm, moist Pacific Ocean airstreams. The province's most populous cities, Vancouver and Victoria, enjoy comfortable and relatively dry summers and mild, wet winters. Snow seldom falls in low-lying areas, and when it does, it usually melts the same day.

The Cordilleran mountain system, which includes the Coastal Range and the Rocky Mountains, blocks the warm, moist Pacific air from the interior plains of the Prairie provinces. As the moist air is forced to rise over the mountains, it cools and falls on the western slopes in heavy amounts of precipitation, as rain at lower altitudes and snow at higher ones. The valleys between the mountain ranges receive much less precipitation and experience warm, even scorching, summers.

The Prairies

Part of the vast central plains of North America, the Canadian Prairies extend east from the Rocky Mountains to the Great Lakes. Here, cold winters and hot summers are the norm, with relatively light precipitation. For instance, in the dry southern portion of Saskatchewan, annual precipitation averages less than 300 mm. Manitoba, the wettest of the Prairie provinces, receives about 500 mm each year.

Spring rains and dry autumn conditions have helped make the Prairies one of the top grain-growing areas of the world. Farming is not without its risk, however, in the form of wind erosion, drought, thunderstorms and hailstorms, and unreasonably early autumn frosts.

Among the most remarkable features of the Prairie winter is the "chinook," a warm, usually dry winter wind that affects much of southern Alberta. The chinook sweeps down from the Rocky Mountains and has been known to raise temperatures as much as 16°C in a single day.

The Great Lakes-St. Lawrence Region

More than half the Canadian population lives close to the Great Lakes or along the St. Lawrence River. Here, winter brings heavy snowfalls. Summers tend to be longer and more humid than elsewhere in Canada. Rainfall varies little year to year and is ample enough to sustain some of the best farming areas in Canada. Mean daily temperatures reach close to 20°C from mid-June to mid-September, with week-long heat waves in the 30s a not uncommon occurrence. Warm, sunny days and crisp, cool nights make the fall season popular.

Atlantic Canada

The combined influence of continental air masses with air currents off the ocean give this region one of the most rugged and most variable climates anywhere in the country. In winter, mean temperatures can vary markedly as arctic air is replaced by maritime air from passing storms. Snowfall is relatively heavy, and fog is common in spring and early summer. The warmest month is July, when mean temperatures are in the 16 to 18°C range.

The North

Spanning the entire country north of the Prairies and the populated Great Lakes-St. Lawrence region is the boreal forest. This area is usually snow-covered more than half the year; its "summer"—the frost-free period—lasts barely two months. Precipitation is light, except along the coast of Labrador where the influence of Atlantic storms is felt.

Further north, above the tree-line, lies the Arctic. Here, temperatures rise above freezing only a few weeks a year. Just a metre below the delicate but tenacious vegetation that grows in summer, the ground remains permanently frozen.

Adapting to Climatic Change

Over the centuries, Canadians have learned to pay attention to their variable climate and to secure themselves against climatic vagaries. Despite modern innovations that afford protection from the extreme heat and cold (advanced snow removal, heated and air-conditioned shopping centres, indoor recreation facilities and office complexes connected by indoor passageways), a feeling of healthy respect for Mother Nature persists in the national psyche. On the whole, Canadians tend to enjoy the changing seasons and the beauty that each distinct season brings. 