



coastal regions experience the highest precipitation (100-140 cm), followed by Ontario and Quebec (65-90 cm) and the semi-arid Prairie region (40-55 cm). Canada's northland receives the lowest precipitation (15-40 cm).

About 30% of the mean annual precipitation occurs as snow, and much of it remains stored in its natural form for several months until spring. This snow cover is vital for soil moisture and recreation, however, flooding may occur, when river levels rise, and the melting snow cannot be carried off rapidly enough.

Despite abundant water in southern Canada, certain areas, particularly the Prairies, are inadequately supplied. This is due in part to sparse rainfall and due to the fact that almost half of Canada's water flows northward through undeveloped areas, largely unused. The summer of 1988 was particularly dry and caused hardship for many farmers.

About 7.6% of Canada's total area is covered by lakes and rivers, making surface water the source of 90% of freshwater for water users throughout Canada (Table 1.1). The remaining 10% is obtained from groundwater sources.

Lakes are natural regulators of river flow; they smooth out peak flows during flooding and sustain

stream flow during dry seasons. Among the largest freshwater bodies in the world are the Great Lakes with an area of almost 250 000 km<sup>2</sup>; 37% is in Canada and 63% in the United States (Table 1.3). The size and elevation of other large Canadian lakes are listed in Table 1.4.

Groundwater and alpine glaciers contribute to stream flow in Canada. In some areas, particularly the Prairies, groundwater is the principal source of water for streams during extended dry weather periods. In hot summer months, glaciers may contribute up to 25% of the flow of the Saskatchewan and Athabasca rivers.

The main measure of a country's water supply is its renewable stream flow. On an average annual basis, Canada's rivers discharge roughly 105 000 m<sup>3</sup> per second, nearly 9% of the world's renewable water supply and equivalent to about 60% of Canada's mean annual precipitation. Table 1.5 lists Canada's principal rivers.

The international boundary between Canada and the United States, including Alaska, is 8 900 km long, of which 3 900 km lie along or across water bodies. Boundary basins are of economic importance to both countries.

**The Atlantic drainage basin** is dominated by the Great Lakes-St. Lawrence system which carries