

mode of transportation. It is competing with railways, pipelines, aircraft and motor carriers. Water still provides the most economical means of transporting bulky raw materials of Canada's export trade such as wheat, pulp and paper, lumber and minerals. This is especially true in the Great Lakes–St. Lawrence and the Mackenzie River regions.

Water-oriented recreational activities which Canadians enjoy during their leisure take many forms, including swimming, boating, sightseeing, fishing, hunting, and water skiing. Although the provincial and federal governments produce data on different dimensions of recreation, coordinated information on the role of water in outdoor recreation is not yet available on a countrywide basis. It is known, however, that the magnitude of water-oriented recreation is large and is continuing to grow as more leisure time becomes available.

Fish and wildlife resources from river and lake systems make a vital contribution to the economy of Canada. Apart from being a recreational area for sport-fishing and hunting, the inland waters also support important commercial fisheries. Fish and wildlife require water of high quality. When water systems are put to multiple-purpose use, it is imperative to ensure that pollution does not destroy these resources. Within government agencies, shifts in emphasis have led to increased work on water pollution problems. Universities are also developing programs in the direction of environment-related water research.

### Coastal waters

#### 1.1.3

The coastline of Canada, measuring over 150,000 statute miles (241 402 km), is one of the world's longest. It comprises the following measurements — Mainland: Atlantic 9,843 miles (15 841 km); Pacific 4,363 miles (7 022 km); Hudson Strait 2,643 miles (4 253 km); Hudson Bay 7,623 miles (12 268 km); Arctic 11,884 miles (19 125 km); total 36,356 miles (58 509 km). Islands: Atlantic 18,176 miles (29 251 km); Pacific 11,622 miles (18 704 km); Hudson Strait 5,340 miles (8 594 km); Hudson Bay 9,181 miles (14 775 km); Northwest Territories south of Arctic Circle 13,800 miles (22 209 km); Arctic 57,014 miles (91 755 km); total 115,133 miles (185 289 km).

To describe Canada's coastal waters would require the resources of oceanography, marine biology and meteorology. However, basic to any study of the oceanic-continental margin is the physical relief of the sea floor; the information presented here is restricted to this with a few salient features of the Atlantic, Pacific and Arctic marginal seas surrounding Canada.

**Atlantic.** Along this coastal area, the sea has inundated valleys and lower parts of the Appalachian Mountains and of the Canadian Shield. The submerged continental shelf effecting the transition from continental to oceanic conditions is distinguished by great width and diversity of relief. From the coast of Nova Scotia its width varies from 60 to 100 nautical miles (111 to 185 km), from Newfoundland 100 to 280 miles (185 to 519 km) at the entrance of Hudson Strait, and northward it merges with that of the Arctic Ocean. The outer edge varies in depth from 100 to 200 fathoms (183 to 366 m) before the shelf gives way to the declivity leading to abyssal depths. The overall gradient of the Atlantic continental shelf is slight but the whole area is studded with shoals, plateaus, banks, ridges and islands and the coasts of Nova Scotia and Newfoundland are rugged and fringed with islets and shoals. Off Nova Scotia, the 40-fathom (73 m) line lies at an average of 12 miles (22 km) from the shore and constitutes the danger line for coastal shipping. The whole floor of the marginal sea appears to be traversed by channels and gullies cutting well into the shelf.

The topography of much of the Atlantic marginal sea floor was shaped by processes of glacial erosion and deposition. Large areas, however, undergo constant change due to continuous marine deposition of materials eroded by rivers, wave action, wind and ice.

Hudson Bay and Hudson Strait bite deeply into the continent. Hudson Bay is an inland sea 317,501 sq statute miles (822 324 km<sup>2</sup>) in area having an average