

The floor of the submerged continental margin is nearly flat to gently undulating, with isolated rises and hollows. Most of it slants seaward with an abrupt break at the outer edge to the continental slope. From the Alaskan border eastward to the mouth of the Mackenzie River the shelf is shallow and continuous with the coastal plain on the mainland; its outer edge is at a depth of about 64 m and 40 nautical miles offshore. Near the western edge of the Mackenzie River delta it is indented by the deep Mackenzie Trough, formerly referred to as the Herschel Sea Canyon, whose head comes within 15 nautical miles of the coast. The submerged portion of the Mackenzie Delta forms a great pock-marked undersea plain, most of it less than 55 m deep, up to 75 nautical miles wide and 250 miles long. North and east of it, the continental shelf is more deeply submerged. Most of the well-defined continental shoulder is over 549 m deep, giving way to the smooth continental slope which extends to the abyssal Canada Basin at about 3658 m. The deeply submerged continental shelf runs along the entire West Coast of the Canadian Arctic Archipelago from Banks Island to Greenland. Major channels between the islands have flat floors at about the same depth as the shelf. A few local irregularities may be the result of glacial action. The only deep indentation is one sinuous canyon that heads off Robeson Channel at the northeastern end, close to Greenland. Submerged sides of the channels of the Archipelago, and slopes from the islands' western shores are marked in many places by a series of steps.

1.2.4 Islands

Canada's largest islands are in the North in the Canadian Arctic Archipelago. The northern group extends from the islands in James Bay to Ellesmere Island which reaches 83°07'N.

The largest on the West Coast are Vancouver Island and the Queen Charlotte Islands, but the coastal waters are studded with many small rocky islands. The largest off the East Coast are the Island of Newfoundland, Prince Edward Island, Cape Breton Island, Grand Manan and Campobello islands of New Brunswick, and Anticosti Island and the Îles de la Madeleine of Quebec.

Notable islands of the inland waters include Manitoulin Island, in Lake Huron, the so-called Thirty Thousand Islands of Georgian Bay and the Thousand Islands in the outlet from Lake Ontario into the St. Lawrence River.

The areas of principal islands by region are given in Table 1.6.

1.2.5 Surveying, mapping and remote sensing

The Surveys, Mapping and Remote Sensing Sector of the federal Energy, Mines and Resources department (EMR) is Canada's national mapping agency. The sector provides the precise geodetic survey framework which is fundamental to all other forms of surveying. The mapping of Canada has been completed at the scale of 0.4 cm to 1.0 km (1:250,000). All of the settled areas and many regions of northern development, amounting to more than 85% of the country, have also been mapped at a larger scale of 2.0 cm to 1.0 km (1:50,000). Photomaps derived from air photographs cover some of the areas mapped at the larger scale.

A legal surveys division of EMR manages and regulates surveys of federal lands, such as the northern territories, national parks, Indian reserves and offshore areas and is responsible for the custody of the related land survey information. The division is implementing a property mapping system which will form the base for a multipurpose land information system. It executes surveys on behalf of administering departments, collaborates in the demarcation and maintenance of provincial and territorial boundaries and verifies descriptions of electoral districts.

A geographical services division provides geographical information and cartographic advice to other federal programs. This division produces the *National Atlas of Canada*, the *Canada Gazetteer Atlas*, aeronautical charts and air information required for regulation, safety and development of Canadian civilian and military aviation. A national geographical names data base provides information on the status, origin and location of the names of more than 400,000 geographical features and places in Canada.

A permanent committee on geographical names establishes federal policy for the treatment of geographical names. Its secretariat advises on the origin and use of names and geographical terminology. The committee of 20 members, representing both federal and provincial jurisdictions, recognizes the right of each province to make decisions on names in its own area.

An international boundary commission maintains a well-defined boundary line between Canada and the United States and regulates all works, such as buildings, pipelines and roads crossing or near the line.

The Canada Centre for Remote Sensing (CCRS) has the mandate to improve remote sensing technology and to develop applications of satellite imagery and special airborne sensing systems such as radar imagers for resource monitoring