

### 8.2.1 Federal government activities

The federal government has full legislative jurisdiction over the coastal and inland fisheries of Canada. All laws for the protection, conservation and development of these fisheries resources are enacted by Parliament. Management of fisheries is conducted co-operatively with the provincial governments; some of them have been delegated certain administrative responsibilities.

The federal Department of Fisheries and Oceans controls marine and freshwater fisheries in Newfoundland, Prince Edward Island, Nova Scotia, New Brunswick, Yukon and Northwest Territories. The federal government inspects fish and fishery products produced for sale outside provincial boundaries throughout Canada. In the national parks, fisheries are managed by the Canadian Wildlife Service.

The Department of Fisheries and Oceans conserves, develops and generally regulates the nation's coastal and freshwater fisheries through a broad range of responsibilities: management of Canada's ocean and some inland fisheries; fisheries and oceanographic research contributing to optimum use of renewable aquatic resources and marine and fresh waters; hydrographic surveying and charting of navigable coastal and inland waters; administration of small craft harbours; environmental impact studies affecting coastal and inland waters; and research in support of international agreements relating to fisheries management and marine environmental quality.

Regional headquarters for fisheries management and ocean science and surveys are in Vancouver, Winnipeg, Quebec City, Moncton, Halifax and St. John's. There are research institutes and laboratories at centres across Canada, notably at Patricia Bay, BC, Burlington, Ont., and Dartmouth, NS.

Close contact with fishermen, the fishing industry and provincial authorities is maintained through the regional offices. Co-ordination and discussion between federal and provincial fisheries managers are facilitated through federal-provincial committees.

The Fisheries Prices Support Board, the Canadian Saltfish Corporation and the Freshwater Fish Marketing Corporation work closely with the Department.

**International fisheries.** Many injurious effects on aquatic resources are results of historical practice, insufficient knowledge, multiple uses of water, social and economic conditions, and national and international competition. Problems under national control are corrected as conditions warrant but many resources shared with other nations must be managed jointly.

Canada co-operates with many nations to obtain scientific data and formulate policies for developing and conserving fisheries through membership in 10 international fisheries commissions and an international council. These international organizations are set up under formal conventions. Canadian representatives appointed by order-in-council include officials of the Department of Fisheries and Oceans and members of the fishing industry.

Canada is a member of the fisheries committee of the Food and Agriculture Organization of the United Nations and of the Codex Alimentarius Commission, concerned with world food quality standards.

**Acid rain** has become a matter of increasing interest and debate. Numerous studies have demonstrated that acid rain is adversely affecting many lakes and rivers. There are growing indications that it may be harming crops and forests as well. A number of strategies have been proposed. The cost and desirability of control is being debated in the United States and Canada, raising questions about the causes, effects and controllability of acid rain.

Broad dispersion of acid rain over large parts of Europe and North America represents a major man-made disturbance of the environment. Acid rain has led to severe degradation of many aquatic ecosystems in the United States, Canada, the United Kingdom, and Scandinavia. Many thousands of lakes have been affected. Waters and soils over extensive areas of North America are susceptible to acidification. There has been an increase in both acidity and toxic substances in many lakes and rivers over the past several decades, particularly in New England and southeastern Canada.

Conditions that lead to the formation and long-range transport of acid rain are reasonably well known. Sulphur dioxide and nitrogen oxides emissions are transformed in the atmosphere to sulphuric and nitric acids, transported great distances, and deposited on vegetation, soils and surface waters. In the United States and Canada the sources of acid rain are entirely man-made. There is much circumstantial evidence relating power plant emissions to acid rain.

Acid rain has destroyed many species of fish and their prey. It has also caused toxic trace metals to reach concentrations in surface and ground waters that are undesirable for human consumption. Fish taken from acid waters show high concentrations of mercury and other heavy metals. Only the control of emissions can significantly reduce the rate of deterioration of sensitive freshwater ecosystems.