

CANADA'S COMMERCIAL FISHERIES

The fishing grounds of the continental shelf on Canada's east and west coasts are among the richest in the world, and Canada's inland waters, comprising about one-half of the fresh-water area of the world, support extensive fresh-water fisheries. The Canadian commercial catch of fish and shellfish amounts to some two billion pounds a year, with a marketed value close to \$200 million. More than 150 species have commercial significance, but the major groups upon which the Canadian industry is based are: (1) the groundfish group (excluding halibut) -- particularly Atlantic cod, haddock and red-fish (ocean perch); (2) halibut; (3) the Pacific salmon; (4) herring; (5) Atlantic lobster; and (6) the group of freshwater species -- particularly white-fish and pike-perch.

An increased total Canadian and foreign catch is forecast for most of the Atlantic groundfish species except haddock. The stock of cod represents about two-thirds of known Atlantic groundfish resources and the present catch rate of 16 per cent of the stock leaves room for a large increase in landings. The present utilization of haddock is estimated to be 42 per cent of the stock; that of red-fish and the small flatfishes, 7 and 14 per cent, respectively, of their stocks. An increased catch of Pacific groundfish is probable, but the stocks are less than 10 per cent of those of the Atlantic.

Some increase is seen for the catch of Pacific halibut, of which about 62 million pounds a year are taken (the Canadian share being about 40 per cent). An annual catch quota is imposed under the Northern Pacific Halibut Convention, and competition among fishermen for a share of the catch has increased the number and efficiency of halibut vessels until the yearly quota is now taken in a few weeks. Most of the catch is marketed over the year in the dressed frozen form. It is thought that the recovery of the halibut fishery under international management over the past twenty years may be explained in part by higher average water temperatures and by faster recruitment and growth resulting from the reduction in the density of the stock. If so, a moderate increase in exploitation might be both feasible and desirable.

The Atlantic halibut catch is only one-tenth as great as Pacific halibut landings. No increase is foreseen at present.

The total annual catch of the Pacific salmon species, at 233 million pounds, is thought to represent about 56 per cent of the combined stocks in Canadian waters. The Canadian catch is about three-quarters of the total and the Pacific salmon group is the most important in the Canadian fisheries. An increase of more than 100 per cent in the combined stocks by 1980, to about 900 million pounds, is thought

possible because of the success of international conservation measures under the International Pacific Salmon Fisheries Convention, such as seasonal closure regulations to ensure adequate escapement of spawning stocks, the construction of fishways past dams, and the removal of stream obstructions. For instance, a five-fold increase in the Fraser River sockeye stock might be brought about. The chief threat to restoration of the Fraser sockeye run lies in prospective power development on the river; salmon by-pass facilities for the large dams proposed would be astronomical in cost and they would also be ineffective if they delayed the fish beyond their spawning time or beyond the period of suitable water temperatures.

The catch of Atlantic salmon is about four million pounds yearly, representing perhaps 40 per cent of the stocks. The stock might be doubled if present measures to control predation by the American merganser and to remove or by-pass obstacles to the ascent of streams by spawning salmon are not nullified by urban and industrial stream pollution or by the effects of logging activities and forest spraying for control of the spruce budworm.

Pacific herring are caught chiefly for reduction to fish meal and oil. The current catch of 380 million pounds is close to 50 per cent of the present stock. It is thought that the stock would sustain a catch increase of 35 per cent, although wider fluctuations in the annual catch might result.

The Atlantic herring stock is estimated at 3,800 million pounds, and the annual catch of 240 million represents only 6 per cent utilization. Most of the catch is taken during spawning runs in inshore waters and processed into smoked, pickled, and canned products, although there is also a small reduction industry. If a mass market for herring products could be developed, much larger catches could be made, but better methods would have to be found to locate and catch the herring in off-shore waters during summer and autumn months when they are highest in quality.

The Atlantic lobster fishery is intensive; the annual catch of 48 million pounds is believed to be about two-thirds of the legal-sized stock. A decrease in the stock is possible if, as predicted, average water temperatures begin to decline after 1960. However, it is thought that an effective management programme might maintain the catch at present levels until 1980.

The bulk of the Canadian commercial catch of fresh-water fish, 114 million pounds annually, is taken in lakes, especially Lake Erie and Lake Huron, Lake Winnipeg, Lesser Slave Lake in Alberta, and the Great Slave Lake in the District of MacKenzie. It is believed that stocks could sustain a 40 per cent