

provided for about 2,200 commercial food-fish fishermen and 2,500 bait-fish fishermen; many more are employed indirectly. Approximately 900 are engaged in fish handling and processing. The species harvested commercially include yellow perch, smelt, whitefish, pickerel, pike, lake trout, herring, chub, carp, white perch, sturgeon, white bass, bullhead, catfish, eel, goldeye, sunfish, burbot, freshwater drum, rock bass, crappie, sauger and suckers. Over 90% of all fish landed in Ontario are harvested from the Great Lakes. More than 500 smaller inland lakes are commercially fished, mainly those in the northwestern portion of the province.

Fishing methods and equipment have been modernized extensively during the past few years and include the use of diesel-driven steel-hull tugs with depth sounding devices, radar and ship-to-ship and ship-to-shore communications. Modern icing facilities and transportation methods are in use as well as new types of fishing gear. Programs to develop more efficient and economical fishing and processing techniques have resulted in efficient bulk-handling techniques for smelt and a viable fish-meal plant which produces a marketable product from fish-processing wastes and fish unsuitable for food. Trawling on Lake Erie has proved efficient in harvesting smelt year-round. Most Ontario fishermen are organized into local associations and many of these are represented by the Ontario Council of Commercial Fisheries.

Ontario has an estimated freshwater area of approximately 68,490 sq miles (177,388 km<sup>2</sup>). Excellent angling opportunities are available for such prized fish as brook, rainbow and lake trout, yellow pickerel (walleye), smallmouth and largemouth bass, northern pike, and maskinonge. A wide selection of ice-angling equipment including snowmobile rentals is available and seasons have been extended in many parts of the province for certain species of fish. The Ontario Recreation Survey indicated that 2.4 million Ontario residents 12 years of age or older fished in 1973.

Revenue from the sale of angling licences in 1975 was \$5.6 million. Prices and numbers sold vary greatly according to licence type. Canadian residents bought 22,637 licences at \$4.00. Non-residents bought 467,776 seasonal licences at \$10.75 and 165,527 at \$6.00. Total expenditures in Ontario related to resident and non-resident angling were estimated to be over \$400 million in 1975. The management of this resource is administered by a field staff of conservation officers, biologists and technicians.

Ontario operates 14 fish hatcheries and rearing stations; notably for brook, rainbow and lake trout, splake, smallmouth and largemouth bass and maskinonge. The basic aim of the hatcheries is the economic production of high-quality species to sustain and rehabilitate recreational and commercial fishing. Studies are conducted on the improvement of transportation and planting techniques, including the use of aircraft and trucks, to improve survival and returns to the angler. The marking of hatchery fish by removal of a single fin is providing valuable information on survival of fish stocks and angler success; 150 fish sanctuaries provide protection during spawning. Research programs are directed toward specific fisheries management problems in the Great Lakes and in the smaller inland waters.

**Manitoba.** Manitoba's interior location belies the importance of its fisheries resources which stem from an abundance of fresh water in about 40,000 sq miles (104,000 km<sup>2</sup>) of lakes and streams covering 16% of the province.

In the year ended March 31, 1976, the commercial fishery produced 20.6 million lb. (9.3 million kg) of fish, a 4.3% increase from the 19.7 million lb. (8.9 million kg) of the previous year. The value to the fishermen increased from \$5.4 million to \$5.9 million. Lake Winnipeg contributed 8.3 million lb. (3.8 million kg; 41%), followed by the northern waters with 5.2 million lb. (2.4 million kg; 25%), Lake Winnipegosis with 3.0 million lb. (1.4 million kg; 14%), Lake Manitoba with 2.4 million lb. (1.1 million kg; 8%), and other southern lakes with 1.7 million lb. (0.8 million kg; 8%). Sixteen species or groups of species normally enter into the