Fisheries Development Is A Joint Community Effort

BY EUGENE GORMAN
Deputy Minister of Fisheries

"The problem of developing our Island Fisheries is a weighty one. It will not be solved by the enthusiastic effort of any one Department, nor perhaps even by adding to this the intense desire of fishermen for more effective methods;—though these are powerful factors.

"I am convinced this is a job that will be properly done only by the joint efforts of the Island Community,—by the judicious encouragement of government, by the active and effective role of the fishing industry, also by the understanding and participation of those other factors essential to the success of enterprise.

"This participation may be in some cases moral only, yet decisive. It follows, then, that a clear understanding by the whole community of the aims and import of a fisheries development program might well be one of the important factors in its ultimate success. To this end therefore, I would briefly trace a word picture of our position and of the opportunity which beckons us.

LUXURY ITEMS

"Our past fishery activity has revolved heavily around a luxury item, shellfish. In the period of our records (back to 1919) this has never amounted to less than 60 percent of our turnover dollar, and has sometimes amounted to more than 82 percent.

"This branch of fishing is furthermore exploited very close to its economic limit. Our problem of expansion then, is not simply to develop our main line. We must develop another.

"This brings us to the groundfish (cod, hake, haddock, flounder) or to the pelagic fish (herring, mackerel). Both are migratory by nature, moving about the surface or bottom of the sea as motivated by food needs, temperature environment, spawning habits, or seasonal migrations.

"The most likely class to produce quick and — we hope, lasting results is the groundfish; so we'll discuss this. And I think you'll agree it is a problem not only of developing another line, but of creating it first.

EATING HABITS CHANGE

"As I said, our activity revolved around shellfish. Generally speaking our boats are lobster boats, our fishermen are lobster fishermen, our plants are lobster plants.

"When our fishermen pursued groundfishing it resulted in small scattered volumes which blended well in our traditional production of salt fish. But over the years an important change was taking place. Salt fish was becoming more difficult to sell.

"Eating habits were changing. Great numbers of people who brought from Europe a preference for the concentrated protein diet of salt fish, changed their preferences with the availability of different foods. This was accelerated with the development of another method of food preservation, freezing; and it was further accelerated by the combination of that development with transportation.

'We move into the age of the deep freeze, when the housewife in New York or Toronto wants a fresh or frozen fillet, this is indeed the line we must develop.

FRESHNESS ESSENTIAL

"In this type of processing considerable changes are seen. It is essential of course to have the product as fresh as possible to begin with. This is possible since it is iced as soon as caught on the boat. On shore it is quickly scaled, filleted, packaged and frozen.

"To do a proper freezing job, powerful machinery is necessary. It must be able to take the fish through the critical period the temperature drop from 32 deg. to, say 26 deg.—very quickly; and most modern machinery does this in 25-30 minutes.

"These machines are large cabinets with shelves which move apart to receive, and then compress, packages ranging in thickness from one to three inches. The refrigerant is carried into the shelf itself by flexible rubber lines. From 1000 lbs of fish landed something like 335 lbs of fillets are cut; and from the residue 665 lbs some 135 lbs of fish meal will be manufactured.

CHANGE IN METHODS

"Since this type of processing requires the concentration of large volumes of fish, we are led to a change in catching methods. To supplement landings from shore boats, the off shore dragger is necessary. You will be interested in comparing the methods.

"As you know, the small boat fisherman uses baited hooks either on hand lines or on set lines strung out on the bottom and picked up later with whatever fish that have taken the bait.

'Using the small boat, he is more vexed by bad weather. For the same reason, he is not so able to follow the fish if they move off shore. Another problem lies in the fact that he is not able to take all the varieties available,—for example flounder.

LARGER BOAT

"The dragger is in a better position. The fisherman now has a larger boat (perhaps 60 ft. in length), strong, completely decked over, and with heavy horse power. He fishes with a cone-shaped bag net, the otter trawl. At the large opening of this cone the net is hung to a head rope, which is held off the bottom when fishing by a series of steel floats, 8"-10" in diameter,—and to a foot rope which is weighted by chain and waterlogged wood rollers.

These ropes forming top and bottom of the mouth, terminate in the wings of the net. Each wing is attached by long cable to an otter door; and the two doors are dragged from the ship's side, each by its own cable. The two cables are strung onto a double drum deck winch which is driven from the main engine.

DRAGGING DESCRIBED

"The use of this gear can be briefly described. The boat leaves port with the gear on deck and with 6-9 tons of ice in her fish bins. Arriving on the fishing grounds, it steams in a circular course to shoot the gear. First the heavy cod end is put over then the rest of the net, the wings, and the doors, until it is strung out from the two "A' frames along the side of the boat

"It is then let down on the winch, paying out about three times as much towing warp as there is depth of water. After it is dragged for perhaps an hour at a speed of 3-4 knots, the net is raised to the side of the boat and the fish taken out.

"This is done by hoisting the cod end over the deck and loosing the slip knot in the end While the net is making its next drag, the crew dress the fish on deck and ice it in the hold. The net may take a ton or more in a drag; and the 60 ft. boats have brought in 36 tons of fish in a 5 day trip. These are manned by a crew of five.

INITIAL COST

"A crew can walk on one of those 60 foot boats (which, incidentally, is the largest we are interested in) for an initial outlay smaller than would be necessary for each to supply most with a shore gear, provided this is how it works. The total cost of the boat ready to fish is less than $40,000.

"As you know, with all loans

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it is required that the fishermen put up a 30 percent equity. In the case of this size of proposition, however, an equity of $12,000 might be prohibitive.

"The Loan Board, therefore, requires in this case that the Fishermen merely put up the difference between the subsidy assistance of $165.00 per ton, or $7500 in this case. In other words, five fishermen could walk on this boat for about $4500.

"The Dominion subsidy is given as a grant provided the boat fishes five years. The remainder of the loan to the Board is paid back at 12½ percent of the gross catch as they fish. We estimate that this boat will be paid for in something like 8-10 years.

A BIG DIFFERENCE

"It is not easy for shore fishermen to turn to this new type of catching and become immediately successful. In fact, we have been told that we are foolish to try to make deep sea fishermen out of shore fishermen.

"We are not prepared to accept this, however, for the development of this program would have very little social impact if we were merely to put these boats in the water and import fishermen to run them.

"We would still have some 2500 fishermen on our shores wondering how they were to make a living. In this respect the progress of these new crews has been very gratifying. The Board estimated that they will reach their full earning capacity in three seasons.

MUCH TO BE LEARNED

"Much is to be learned by all of us in this new type of fishing. To give you an example. We were told that these boats could not fish until the end of June when the fish come into the Gulf.

"We sent our first Boat, "Souris II", on an exploration early in the spring of 1951. Since no result was obtained by this, we decided to take another boat early in the spring of 1952 and go ourselves.

"Armed with a sea bottom thermometer we plotted a course of about 700 miles and proceeded to test our theories. We maintain that the fish never left the Gulf but merely retired to deeper and warmer waters during the cold weather. This will be further attested by anyone who has flown over the Gulf in early Spring and seen countless thousands of seals on the ice.

"However, as soon as the ice left the first week in May, Inspector Campbell, myself, the Mate, Engineer and Twine man set out in the "Marjorie" and "Marybelle", which Skipper Roland MacDonald, was kind enough to turn over to us for the experiment.

TEMPERATURE PATTERN

"The temperature pattern was pretty much as we expected. For instance, nine miles out of Sourris the surface water was fairly warm, but bottom water was 2 degrees below freezing. This general pattern was true in most of the fishing grounds off our east coast. As we moved northward the pattern began to reverse until off Sea Wolfe sland on the Cape Breton coast, we found bottom water, 5 degrees or ½ degree above freezing.

"Here we cast the gear and took over ½ ton of fish. The bottom temperatures steadily warmed up until, in 106 fathoms off Cape St. Lawrence, we found bottom water at about 37 degrees. Here we took over one ton of fish in a drag.

"It was interesting to note that in the Magdalen Island area, where fishermen insisted that the fish had not come to the Gulf, we took fish in a warm intrusion about 14 miles off Entry Island.

"It was interesting also to find that the four Spanish coal burners were dragging in the grounds we covered. This is just an example of some of the differences between this type of fishing and the traditional shore fishing. Another great difference is, of couse, in the case of electronic equipment on the off shore boats, such as, radio telephones, depth sounders, and further refinements which will even locate one fish.

FOOD POTENTIAL

Thus far we have been describing our position. You can see we have just begun to break with an old pattern or rather to add to it a very necessary complement. What we mentioned, the opportunity before us, this is where we could spend a lot of time. First of all, let us cast all these against a background of world food conditions at the present time.

"We are in the midst of an explosion of populations. The next 50 years will treble the population of Canada, the United States and many other countries. The next 25 years may treble the populations in many parts of Asia. We have been told that less than that time will be required to treble populations in Caribbean areas.

"At the same time we see serious pressure on the food producing resources of the world. This is reflected in the pressure for protein concentrates in animal foods, and of course in the high prices for all foods.

SEA VERSUS LAND

"To meet the growing demands of an increasing population more and more pressure will be evident. This is seen in another comparison, and here keep in mind that an acre of sea is more productive than an acre of land. The sea accounts for 71 percent of the earth's surface, the land 29 percent.

"Per capita there are 63 acres of sea, 17 acres of land, yet from the sea we take less than ½ lb. of food per acre, while from the land we take 100 lbs. per acre, PLUS all other non-food fibres.

"As to calories of food energy, the human population derives about one day's food supply per year from the sea and 364 day's supply from the land.

"Now I am not one of those who is going to suggest to you that we can expect our Canadian and American people to eat the amount of fish per capita that is consumed by, say the Japanese, or the British or Scandinavians.

"I am convinced that in this country with its abundance of competitive foods we need not hope for such ratios, but we can bring our product to more and more people who have as yet never enjoyed high quality sea food.

EXAMINES OPPORTUNITY

"In examining the opportunity, this would then indicate a growing market. The next question would be the raw material to send to the market, and here there is some confusion.

"In late years there has been a lot of loose talk about depleting fisheries with the use of mechanical methods. This is not new. In Britain 1376-77 it was complained to the Crown, "that certain fishermen for seven years past had subtly devised contrivances to which was attached a net of so small a mesh that no manner of fish could escape and that such practice was to the great damage and destruction of fisheries of the kingdom" and the controversy has never waned.

"We are of the opinion that the varying availabilities of fish stocks are more explained by the changing cycles of climate. These changes are readily demonstrated on land where you can check advances and receding timber land back for centuries. If this occurred on land it must also have been so at sea.

CODFISH IDENTITY

"It is only 30 years or so since a codfish was sent by Greenland Fisheries to the Royal Danish Museum to discover its identity. Now the Greenland Fishery is one of the biggest cod producers. On the other end of the scale we have seen the Georges Bank, off New England, gradually drop in production.

"New England boats have had to travel farther and farther to profitable grounds and now we see the whole centre of the fishing industry moving to the Maritimes and Newfoundland. There are biological reasons why this is a good move. The same factors that made the Grand Bank the greatest fishery in the world also made the Gulf as great a fishery.

DRAINAGE AREA

"The only reason it never came into such progress was that there was no economic necessity to exploit it. A fishery depends for its sustenance, on the land, specifically on the run-off of rich food organisms.

"The whole Great Lakes drainage area empties through the Gulf in a ditch 60 miles wide off Gaspe and as deep as 1200 feet. This provides food needs for the various forms of life, even up through to the varieties that live on lesser species.

"To this run-off of the Great Lakes area, is added a certain amount of the Hudson's Bay source of food which comes down the Labrador current and in the Strait of Belle Isle, where it decomposes in the warmer waters of the Gulf to sustain under-sea life.

FUTURE OF FISHERIES

"So now begin to see our future. People want fresh or frozen fish. This desire will be intensified with growing populations. To properly put up the highest quality it is almost essential to be close to the fishing grounds, and here we are with practically a ringside seat.

"So close are we that five men in a wooden boat can successfully compete even with the one million dollar factory ships which would have to come from distant ports. We do not yet know the limit to which we can extend our economy by extending our sea frontiers.

"I want to close with two final point. The first is a comparison of our turn-over dollar fisheries to agriculture. The last figures I saw showed that for every $4.00 worth of fish products sold, $28 to $30 worth of agricultural products were sold. Now if we were a large land area we might be prepared to accept such a ratio, but in this small Province, surrounded by sea teeming with fish, we think it is a poor comparison.

"The second point is, that as people of this Province we have certain costs to bear. For Government, schools, and so on, these costs will be less onerous if every segment of our economy can assume their weight. Thus far our fisheries communities have not been in the position to do so. We know they can do so if given the tools.

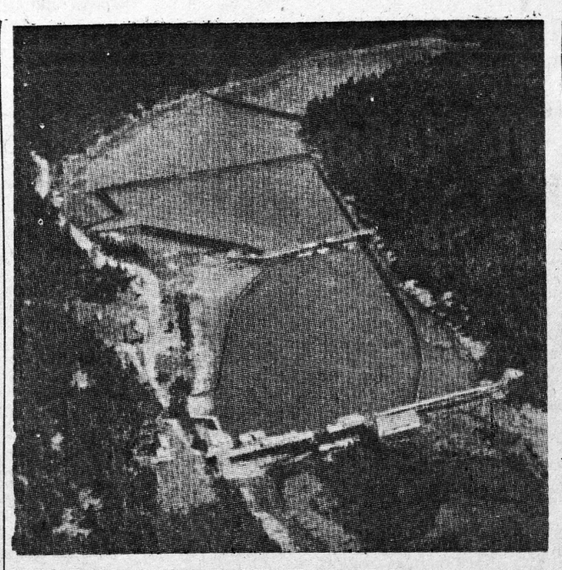
"This is what we aim to do and that is why we are anxious to place the program before as many people as possible so that all may understand how much is involved.

LAUNCHING "OTTER" DOOR FROM TRAWLER

SHRIMP THERMODOR

3-4 pound cooked shrimp
½ cup sliced mushrooms
¼ cup butter or other fat, melted
¼ cup flour
1 teaspoon salt
½ teaspoon dry mustard
Dash cayenne pepper
2 cups milk
Grated Parmesan cheese
Paprika

Cut large shrimp in half. Cook mushrooms in butter for 5 minutes. Blend in flour and seasonings. Add milk gradually and cook until thick, stirring constantly. Stir in shrimp. Place in 6 well-greased, individual shells or 6-ounce custard cups. Sprinkle with cheese and paprika. Bake in a hot oven, 400 degrees F., for 10 minutes or until cheese browns. Serves 6.



WORLD'S LARGEST LOBSTER FARM

Overnight air-freighting of live lobsters across the Atlantic promises to increase considerably the market area for Maritime lobsters.

Pioneered by a St. Andrew's N.B. firm, the first test plane load of 210 cases-12,600 pounds consigned to Brussels, was followed by orders for more.

Experts in the seaside province claim the new market is likely to develop a demand similar to the biggest metropolitan areas in North America.

PACKED IN SHAVINGS

Packing the live crustaceans in dry wood shavings in lieu of the heavy ice and seaweed packing commonly used to keep the lobster alive during long hauls, renders this venture economically sound, as the former packaging elements weighed more than the shellfish it protected.

The fact that live lobsters will "keep" in excellent condition for six days or more in this new type of packing was discovered by Canadian fisheries research scientists.

The initial shipment of "flying lobsters" came from the world's largest lobster farm shown above.

Operated by Conley's Lobsters Ltd. of St. Andrew's, N.B., this giant pound has a capacity of 1,000,000 pounds of shellfish. Located on Deer Island near the entrance to the Bay of Fundy, the farm is divided by sluice gates into several sections. These gates allow the pound to be freshened twice a day by the high-rising Fundy tides.

Lobsters caught during the coastal fishing season are shipped to such farms and kept there to fill market demands legally at any time of the year.

In captivity the crustaceans are said to increase rapidly in size.

APEC To Sponsor Food Show At Moncton Last Of April

An Atlantic Food Show and Convention will be held in Moncton, N.B. during the last week of April, 1958. The show and convention will be sponsored by the Atlantic Provinces Economic Council in co-operation with the food processing and packing industry in the four Atlantic Provinces.

The Atlantic Food Show will be the first of its kind ever held in the Atlantic Provinces. The Convention will attract retail, wholesale and institutional buyers from the region and other areas of Eatern Canada.

The purpose of the food show is to provide an opportunity for retail wholesale and institutional buyers as well as the public to see first hand the wide range of food products available from Atlantic Province processors and packers. Included in the show will be fish, poultry, meat, dairy, fruit, vegetables, confectionery and other quality food products processed and packed in the provinces of Nova Scotia, New Brunswick, Prince Edward Island and Newfoundland.

Consumer and institutional packs of Atlantic fish products will be shown. Members of the fish packing industry in the four provinces intend to take booth space. Four members of the industry were chosen to serve on the planning Committee.

OLD FAVORITES

Melton Mowbray in Leicestershire, England, has long been famous for pork pies and Stilton cheese.

BROILED FISH

2 pounds fillets, steaks, or pan dressed fish
1 teaspoon salt
Dash pepper
¼ cup butter or other fat, melted

Cut fish into serving-size portions. Sprinkle both sides with salt and pepper. Place on a greased broiler pan about 2 inches from source of heat, skin side up. Brush with butter and broil 5 to 8 minutes or until slightly browned. Baste with butter and turn carefully. Brush other side with butter and broil 5 to 8 minutes longer or until fish flakes easily when tested with a fork. Serves 6.