

History of Commercial Fishing in Prince Edward Island

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The purpose of the program

The purpose of this program is to explore the history of the second largest primary industry on Prince Edward Island.

The content of the program

The materials that constitute this program are contained within a suitcase for easy storage and portability. This document provides the core information. There are various supplementary resources. A complete listing is given at the end of this document.

The Origins of Fishing

Fishing is defined as hunting, harvesting or trapping creatures of the sea.

Seafood is a very important part of the human food supply worldwide.

Four-fifths of the earth's surface is covered by water. There are twenty thousand different species of fish. Four hundred of those species are known to be in the waters of Atlantic Canada with about one hundred of them being important to the fisheries.

Fishing dates back to the Stone Age 40,000 years ago. Drawings that show fishing have been discovered on cave walls. Early hooks were made of animal bone and material such as vines was used for lines.

Early man made nets by spinning grasses, wool, or flax. Nets were used several ways. In a body of water where the fish were very plentiful, people, holding each end of the net would walk out into the water, circle the fish with the net, scoop them up into the net, and walk back into shore. The second way was to weight the bottom of the net down with stones so that it would stay on the river bottom and put sticks on the top part of the net so it would float, and leave it there for a period of time until the fish swam into the net and were caught.

Early civilizations learned to build small boats allowing fishermen to go out into deeper waters to fish. Often the fishermen towed a net behind the boat.

Today, we hear about over-fishing of the seas but this is not something new for it has happened many times down through history.

Overview of Fishing in Prince Edward Island

Fishing has played an important role in the economy of Prince Edward Island. It is the second largest primary industry on the Island. Farming is number one. A primary industry is one that uses the natural resources of land and sea.

Fishing on the Island falls into two areas:

Commercial fishing – is done by people who make their living from the activity. This includes **aquaculture** or the deliberate growing of shellfish in waters close to shore.

Sport or Recreational fishing – is done by people for the sport or enjoyment of catching the fish. It is usually done with rod, line, and hook and falls into the areas of fly-fishing, bait fishing, and big game saltwater fishing such as tuna fishing. Done as a hobby the fisherman may have no desire to keep the fish caught and will release them. The sport fisherman may pay an outfitter to take him fishing or give his catch to the outfitter as is the case on the Island for tuna fishing. But mostly all that is required is a recreational fishing license and rivers and streams are free game. Recreational fishermen often devote time and effort to restoring rivers and streams that have been damaged through different causes.

The **commercial fishery** is the focus of this project.

The fishing industry impacts the lives of not just the fishermen themselves, but of many other Islanders. This is something that is often not thought about – how interdependent we are on each other. Workers who are affected by the fishery include: boat builders, marine equipment manufacturers and suppliers, fishery clothing manufacturers, fuel suppliers, workers or helpers on the fishing boats, fish buyers, processing factory workers, factory equipment manufacturers, mechanics, ice makers, truck drivers, restaurant owners, tourist operators, store owners and clerks, and wharf maintenance workers. Can you think of any others?

The fishery on Prince Edward Island is regulated by the Federal Department of Fisheries and Oceans. The Parliament of Canada was given the legislative responsibility for seacoast and inland fisheries under the British North America Act in 1867. The department regulates licenses, fishing seasons, and quotas. It also assists with marketing and the development of markets. Fishery department scientists monitor the level and health of stocks and fishery officers police the industry.

The provincial Department of Fisheries and Aquaculture has a mandate to assist the development of the fisheries and aquaculture resources in an environmental way that will bring the most to the economy of the province. They act as an advocate for the Island fishing industry as well as offer programs and services to improve quality. They support development of new fisheries and new technology. At the time of Confederation the provincial government retained ownership of the beds of rivers and the power to grant leases and deeds.

The Beginning of the Fisheries on Prince Edward Island

On the north side of Prince Edward Island is the Gulf of St. Lawrence; on the south side is the Northumberland Strait. Before the European discovery of the area both bodies of water teemed with numerous species of sea life. Inland on the Island there are rivers,

streams and brooks that were also well stocked with fish. Fish was so plentiful around the Island because the water is shallow enough to allow light penetration for the growth of plankton, which is the first link in the marine food chain. Some species feed on the plankton and other species then feed on those fish.

Palaeo-Indian period

The first fishers on the Island would have been the Palaeo-Indians who are known to have been here over ten thousand years ago. Archaeologists studying campsites have determined that seal was a big part of their diet followed by shellfish, salmon, flounder, as well as several land animals. They fished and hunted mainly with spears.

Archaeological sites on the north shore of the Island prove that over 3500 years ago the Shellfish people from the New England area were located there. They lived on a diet of shellfish, birds and small animals.

The early Mi'Kmaq people depended very heavily on animals and fish for their food supply. They ate what was available during different times of the year and could be hunted or fished. Seal, beaver, rabbit, porcupine, moose, bear, deer, waterfowl, eggs, lobsters, clams, oysters, eels, salmon, smelts, herring, sturgeon, cod, mussels, and snails were a few examples of what was on their menu. They used basket nets, hooks of bone, and spears for fishing. They constructed weirs or fences across streams and used canoes to fish in deeper waters.

1500s

The Basque people of northwestern Spain and southwestern France were the first Europeans to fish around the Island. They came during the summer months and fished off-shore. They would come ashore to dry and salt their fish catch, which they took back to Europe. The Basques may have also hunted whales and walrus around the Island as early as the sixteenth century.

There was a high demand for fish in Europe. Meat was expensive and unaffordable for many people. As well, Catholic Europe had strong rules about the eating of fish, which put it in high demand. When fish stocks in that part of the world began to dwindle from over-fishing, the Europeans needed to find fresh fishing grounds. With the discovery of North America they were in luck. It was reported that the stocks of fish around Newfoundland were so thick they slowed down the progress of a boat in the water. This is where the majority of European fleets went but over time some made their way to the Island.

1600s

The French were the next to fish the waters around the Island. They came from France in spring and returned in summer or early fall. They carried out two kinds of cod fishery.

1. **Green Cod Fishery** – The cod was caught, piled, and salted on board the fishing vessels and then taken back to Europe as quickly as possible.

2. **Dry Cod Fishery** – The cod was caught, taken ashore, gutted, and spread on racks to cure using the sun and salt. Late in the season the cod would be loaded onto the ships and taken back to Europe.

An early French visitor, Nicholas Denys, described the extent of the fisheries carried out by the boats that simply followed the fish. “There are places where there are taken every day, fifteen, twenty, and thirty thousands of fish, not counting that which is being done in all the other places, and a fishery of this extent lasts six weeks or two months.”

Over time the Government of France gave out grants to companies to settle and develop the Island that included rights to the fisheries. Frenchmen were encouraged to stay on the Island through the winter and build permanent drying stages and storehouses. This was called a sedentary fishery. In 1654, Nicholas Denys was given the first grant for Isle Saint Jean that included the rights to “cod, salmon, mackerel, herring, sardines, sea-cows, seals, and other fishes which are found throughout the extent of the said country.” Cod was not only used for food, but also for oil, which was important for human health and for fuel to burn in lamps. Walrus was hunted for their teeth, hide, and oil and seals were wanted for fur and oil.

1700s

The French grant holders were never really able to make the sedentary fishery a success. The Island fisheries had to compete with the seasonal European fisheries and there were many people seeking grants and fighting amongst themselves, making it hard for anyone to do well.

The French government became more interested in having the forests of the Island converted into farmland to feed the soldiers of Fortress Louisburg and the permanent settlers they brought to the Island were encouraged to farm rather than fish. The government felt that if the settlers were encouraged to fish they would ignore the land. The vast wealth that came from the fisheries never made its way to the French settlers on the Island.

With the constant threat of British invasion many of the later French settlers felt safer putting their labour into fishing rather than developing farms. When the British did take over the Island the Acadians who escaped the expulsion turned to the sea to survive and to this day the Acadians make up a high percentage of Island fishers. They are also strong supporters of the co-operative movement that was established for the processing and selling of their catch.

The British, when they first took over the Island, had a great interest in promoting the cod fishery but there was no driving force to put it in place. For many years the British allowed the fishing fleets of the New England States to exploit the waters off Prince Edward Island rather than using them for the prosperity of the local people. This stopped with the American Revolution but started again with a signed treaty in 1783. The only thing the Americans were not allowed to do was come ashore to dry their catch.

1800s

In 1807, there were 938 vessels fishing off of P.E.I. This is why we read in Island history of the shipwrecks of many American vessels off the coast of Prince Edward Island. The best-known incident is the Yankee Gale, a huge storm that caused the loss of many ships off the north shore in 1851. The struggle went on for years about how close the Americans could come to the Island and harvest the seas.

Like the French before them, British settlers were encouraged to pursue farming so that the colony could become self-sufficient in its food supply. Officials reported that farming and fishing could not be developed side by side because one would take away from the other. But many of the early settlers depended upon the fisheries to keep them alive while they established their farms. The British settlers introduced the potato to the Island and many a meal consisted of blue potatoes and codfish.

For many decades farming was seen as a higher class of work than fishing. This may have been because farmers had to buy their land and invested heavily in their farms to make them a success. As well, since the fishery was seasonal it was more difficult to make a living. However, many people who lived along the coastlines and river shores both fished and farmed. This proved difficult in that the busy seasons for both industries overlapped.

In 1825, the Island government finally passed an act of legislation to begin the promotion of the fisheries. It was as though they suddenly realized the Americans were getting rich off their resource. It set the dates for the fishing season as being April 15th to November 1st. That same year the government passed legislation for the protection of oyster beds. The oyster stock was already endangered by the heavy export of the shellfish but more so by large numbers of the whole oyster being burned to make lime for the land.

Late in the 1820s the government tried to get people involved in fishing by offering bounties (financial incentives) based on the amount of fish caught. But, by 1829, there were still only 38 men and 11 vessels on P.E.I. involved in making a livelihood from fishing. The reasons given for the limited number was that people didn't have the money to invest in the equipment they needed to go fishing. This situation often led to fishermen getting their equipment from a merchant or store owner on credit and in turn having to sell their catch back to these same people. The merchant was always the one who came out ahead since he determined how much he would pay for the fish. Many people found themselves owned by the company store.

Change often only comes under hard times and working for the company is what made co-operatives seem attractive to fishermen who had foresight. Tignish, Prince Edward Island is the home of the first Fishermen's Union in Canada. Started in 1924, it is a producer-co-operative that is still going strong today.

By the 1840s the Island government is starting to protest the Americans coming so close to Island shores (there was a three mile limit) but others wanted them coming into port as

they were a good source of business for the selling of agricultural goods. The debate went on for years. The following figures will show how underdeveloped the Island fishery was – in 1851, the value of fish exported from the Island was in British money 6,700 pounds. The low estimate of what the Americans took away was 100,000 British pounds.

The direction of the Island fishing industry changed in the 1850s. A new treaty agreement was reached with the Americans in 1854 that allowed free trade between the U.S. and the British colonies to the north in coal, forest, fish and farm products in return for American access to the inshore fishery. The result was the Americans started putting money into developing the Island fishery to process the fish on Island shores. While the industry grew, the profits were still going into the pockets of Americans. The American fleets were using fishing methods such as long lining, seining, and drift netting, which allowed them to take large amounts of fish.

When the free trade agreement ended in 1866, several Island fishing companies started up to take the place of American companies. But by 1871 the Americans were allowed back inside the three-mile limit helping themselves to the Island's fishery resources. This was one reason the new country of Canada started negotiating again with the Island to join Confederation.

When PEI joined Canada in 1873, the Dominion (federal) government took over the stewardship of the fisheries. The focus shifted to building an inshore fishery. An inshore fishery is one where the fishermen can return to home at night. This was the fishery that was most economical and appealing to Islanders.

The 1870s was the real start of the lobster industry and suddenly people were attracted to the fishery and the canning factories. By 1881, more than eight thousand people were involved in the lobster fishery. Some of the big players, many of whom were outside investors, were getting rich.

What unfolded in the years ahead differed for the various fisheries. But the one constant was the government efforts to move people away from the industry. In contrast to a time when not enough Islanders were interested in fishing, now there were too many for anyone to make a good living.

1900s

The beginning of World War I brought hard times to the fishery because the industry's best customers were European countries involved in war. But the roaring twenties brought good times as people threw themselves back into the luxuries of life. Then came the Great Depression and Island fishermen were once again hard hit when the markets "from away" couldn't afford to buy their catch. Independent as they were, fishermen were forced to accept government relief to feed their families. World War II hit fish markets even harder. In 1940, records show that 900 fishermen left the business.

The fishery goes in cycles depending heavily on the economy of outside markets. History shows that as the years went on, the Island fishery became more and more dependent on the lobster. During the 1950s and 1960s government tried to introduce a fleet of draggers, now popular in other maritime provinces, to become a part of the offshore ground fish industry. They were not economically successful. Again government felt the best solution was to put more controls on the fishery and move more people away from the business.

The Comprehensive Development Plan brought in by the provincial government in 1969, planned to improve and stabilize the Island economy through the primary industries of farming and fishing. To do this government wanted to modernize the industries and lower the number of people employed in them so that those remaining would have a higher standard of living.

Fishing vessels

With an inshore fishery the type of fishing vessel required is much smaller than the vessel required for an off-shore fishery where the fishermen could be away from home for long periods of time.

The early fishermen used dories or small sailboats. A dory is a small shallow boat usually measuring 5 to 7 metres in length. They can come into very shallow water. They were originally used as hand-line fishing boats that were lowered from the big mother ships. They could be made to travel through the water by hand rowing them or by placing sails on them. The dory is still very popular with fishermen involved in the modern day oyster industry. They are now powered by gas or diesel engines. There are three known ways of spelling the name: dory, doree, dorey.

Sails were gradually replaced by motors made from converted car engines. The design of the boats changed to suit the motor. The power of a motor made it possible to build bigger boats. The early motorized boats that were open to the elements were known as Prince Edward Island Shore boats.

Then a design came into fashion that is still popular. It is called the Cape Islander after a 1905 design from Sable Island. The boat has a high prow with a low stern. Ones built for the Northumberland Strait have a slimmer bow for the choppy waters of the strait and are called "North Strait" Boats.

The boats built for the longer swell of the Gulf of St. Lawrence have a higher pitch and flare. They have an enclosed cabin.

The boats of past generations were built of wood but fibreglass boats dominate today's markets. The engines are diesel or gas.

Island fishermen have used hooks and lines, or small nets or traps that were friendly to the fish stock. This prevented over-fishing of the fish stocks, a situation encountered in

many areas of the world when large off-shore fishing ships using big nets and drag methods heavily fished the stocks.

Species of Fish

Many species of fish have been sought by Prince Edward Islanders over the years. They can be grouped as ground fish, pelagic fish, crustaceans, and shellfish.

Ground Fish

Ground fish are species that spend most of their time feeding near the sea floor bottom. In the early days of the settlement of the Island, the northern cod was one of the most important. Other types of ground fish that were hunted included: white hake, silver hake, haddock, pollock, tomcod, halibut, Greenland turbot, catfish, American plaice, winter flounder, witch flounder, cusk, sturgeon, redfish, and skate.

Ground fish species are often fished by large offshore ships trawling large nets along the bottom of the ocean. This can be harmful to the ocean bottom because everything along the path is taken up. It also allows large amounts of the fish to be harvested, which leads to depletion of the stocks. Inshore fishermen of PEI used older more environmentally friendly methods, but still the cod fishery had to be closed in the 1980s because the stocks were over-fished and there was concern the species would become extinct. This severely affected the livelihood of a number of Island and Atlantic fishermen.

Pelagic fish

Pelagic fish swim and feed primarily in the surface layers or a short distance below. The pelagic species that have been sought off Prince Edward Island include: American eel, Atlantic herring, blueback herring, gaspereau, mackerel, Atlantic salmon, brook trout, rainbow smelt, silversides and bluefin tuna. These fish swim in large schools. The salmon stock was under severe pressure by as early as 1860, as people were netting them and killing them by torch and spear as they went up the rivers to spawn.

Most of the pelagic species are fished by hook and line, nets, or rod fishing. Eels and smelts are sometimes speared.

In late summer and early fall the giant bluefin tuna makes its way to the north side of Prince Edward Island to feed on the mackerel. But it wasn't until 1965 that Island fishermen began to exploit the tuna fishery. North Cape, in Kings County, calls itself the "Tuna Capital of the World" due to the number of tuna that have been caught in the area. Tourists come from all over the world for the opportunity to catch a tuna. They fish from the back of a boat with a rod and reel, or hook and line, using mackerel for bait. It can take hours to land a tuna, which becomes the property of the ship captain. The large fish are sold to markets in Japan. Tuna fishing is a risky business venture because the arrival of the tuna depends on mackerel schools and there is no guarantee that a tuna will be caught.

Crustaceans

Crustaceans are aquatic creatures with hard shells or crusts including lobsters, shrimps, crabs, and barnacles. Inshore fishermen seek them during specified time periods laid out by the federal government. The most valuable to the Island economy is the lobster, but snow crabs are also trapped off the shores of PEI.

Lobsters

What would finally make Islanders take control of their own fishing resource? It was the lowly lobster. The lobster fishery has become the main fishery on Prince Edward Island, but it wasn't always that way. At one time lobsters were so plentiful that they washed up on shore following storms. This abundance led them to be considered poor man's food and many Islanders were ashamed to be seen eating lobster.

The crustaceans couldn't be sold to far-off markets because there was no way to preserve them, so they were basically considered useless. The invention of the tin can in 1814 made it possible to process and ship lobster meat. The lobster canning industry was pioneered in the western end of the Island and on the southeast coast. By the 1880s and 1890s, lobster canneries could be found all along the coastlines. However, there were many problems with the quality of the canning process and some very bad product made its way to market. Over time this was regulated through government standards.

In the early days, lobsters were fished in shallow water by using wooden tongs to pick them up. This method was followed by a net connected to a long handle in which bait would be placed. The fisherman would lower it down and simply wait for the lobster to crawl in and then pull up his catch. Later on an early version of the lobster trap was introduced. This allowed fishermen to go into deep water where the lobster was plentiful.

At first, the lobster industry was unregulated, meaning there were no rules to follow. It wasn't long before concern was expressed that lobsters could be fished into extinction. By the 1890s there were serious problems with the stock as there were over 2,500 boats fishing. Every generation of lobster fisherman since has faced the same concern. Where there is money to be made, the debate will always be great.

The federal government introduced limited regulations for the first time in 1889, and many changes have been introduced in the decades since. Some of those changes have included shortening the fishing season, making a spring and fall fishery, increasing the size of lobster taken, not allowing the taking of spawning lobster, licensing fishermen, imposing fines for poaching etc.

By 1906 the lobster fishery was worth half a million dollars a year and was employing over two thousand people in the factories alone. Up until World War

I, Britain was the main market for Island canned lobster. With the advancement in technology and travel, Island lobster processors have been able to ship live lobsters all over the world. Markets include Canada, the United States, Europe, and Japan.

Some of the biggest changes that happened in the lobster industry in the 20th century were the arrival of motorized boats and a continual reduction in the number of processing plants. Cold storage and freezing processes have provided new ways to process fish.

By 1983, the lobster fishery accounted for 66 percent of the fishing dollars on Prince Edward Island. Lobster is the king in the Island fishing industry. The lobster season determines the success of a fishing year on Prince Edward Island.

Since the building of the Confederation Bridge in the 1990s, lobster catches in that area of the fishing grounds have dropped greatly and fishermen feel it is because of the bridge.

In 2000 the Department of Fisheries and Oceans brought First Nations participants into the commercial lobster fishery on Prince Edward Island through a voluntary license retirement program. This has proven beneficial to the native communities. There is a food fishery allowed for natives to meet their own needs.

One of the biggest concerns faced by the current day lobster fisherman is what will he be offered for his catch by buyers when he returns to the wharf. The processing business is being controlled by fewer and bigger companies and the fresh market prices depend on what is happening in the world economy for lobster is now considered a luxury item. While the fisherman has no control over his selling price he also has little control over his input costs to catch the lobster such as fuel prices, bait prices, and labour costs.

Snow Crab

The snow crab is a deep-sea shellfish found anywhere in depths from 45 to 275 meters. The season opens in the Gulf of St. Lawrence in April or May depending on how quickly the winter ice clears. The season continues until the allotted quotas are filled.

Prince Edward Island was involved in the development of the snow crab fishery in the Gulf of St. Lawrence in the 1960s. This has been a very turbulent fishery in that quota has had to be shared with other gulf provinces and goes up and down. The one certainty about the snow crab fishery is that it is very profitable. A former PEI Fisheries Minister, Kevin MacAdam described the fishery this way, "The snow crab fishery is extremely important to Prince Edward Island as it provides a good deal of economic and employment benefits and spin-offs."

Shellfish

Shellfish that could be harvested close to shore played a large role in the survival of early settlers, who depended on clams, oysters, quahaugs, bar clams, rock crabs, and wild mussels for food. The Island would become famous for many of these same shellfish in later years.

Oysters

The early settlers to Prince Edward Island discovered an abundant supply of oysters, especially in Malpeque Bay. The oyster, unlike the lobster, could be shipped to markets in its natural state. It was also easy for Islanders to fish – all that was needed was a small dory, and a set of tongs. The last two decades of the 1900s saw the stock heavily harvested.

By 1901, Prince Edward Island was leading Canada in the production of oysters. Oysters were being shipped to foreign markets and making a name for the Island. The Malpeque oyster was considered one of the best tasting oysters in the world. On early Prince Edward Island, oyster bars or saloons were common and served up oysters to tourists as well as local people.

Soon the oyster fishery was in trouble. When harvesting the shellfish, people were not taking care to protect the undersized oysters and spat or seeds in the beds. Damage was also being done to beds by the winter practice of digging for mussel mud in the rivers and bays to obtain a source of lime for the farmland. Another practice that damaged the stocks was the burning of live oysters for the production of lime. This was outlawed in the early 1870s and by 1893 oyster fishermen had to be licensed and were obliged to follow regulations or rules.

In 1903, a marine biological station was established in Malpeque to carry out research on the oyster. Researchers studied the habits of the oyster and started to lay out oyster beds with spat to try and bring back the stocks. Between 1913 and 1915, seed oysters were brought in from the Chesapeake Bay in the United States and with them came an unknown disease that almost completely devastated the industry. Oysters in Island waters began to die and it seemed nothing could be done to stop the spread. Oysters that lived built an immunity, which was passed to their offspring. The work done at the Ellerslie Experimental Station in Bideford is credited with rebuilding the industry. By 1939 it was on its way to recovery.

Today, oyster fishermen can fish oysters from public beds or from their own leased beds, which they manage by restocking. The method of harvesting oysters has not changed over time. Tongs and small dories are still used. Oyster fishermen are out on the waters of rivers and bays starting May 1st of each year.

Mussels

Wild mussels have always been a part of the Island shoreline. However, people weren't fussy about eating them because they were gritty and not very tasty. In 1974, the Prince Edward Island Department of Fisheries began experiments to cultivate mussels and make them desirable to eat. By 1978, the industry was underway and mussel lines can be seen in most Island inlets and bays. People involved in growing mussels are called aquaculturists. Mussels are harvested year round. There are now numerous processing plants across the province providing good sources of employment. The Cultured Mussels Growers Association and Cultured Mussel Industry in Prince Edward Island state that the Island now supplies over eighty percent of the mussels produced in North America. Island mussels are sent to markets around the world.

Quahaugs

Quahaugs are hard shell clams. They are harvested from mid-June to mid-September. Pickers work at low tide and go out to submerged flats at the edge of channels to rake or pick the quahaugs which are usually just under the surface. It takes six years for quahaugs to reach maturity. Harvesting quahaugs is hard work for the picker. Quahaugs are sold in the United States and Canada but they have never been developed or marketed in the same way as oysters.

Scallops

The scallop is a mollusk which is an invertebrate animal usually enclosed in a shell. Scallops can swim through the water by opening and closing their shells. They are found in the Northumberland Strait. The scallop industry was started in the Northumberland Strait in the early 1950s. A small number of Island fishermen share the scallop beds with fishermen from Nova Scotia and New Brunswick. Scallops are fished by dragging the seabed. Since the scallop can't live out of water they are shucked on board the fishing boat. While the whole organism can be eaten the North American market prefers just the shell muscle.

There is currently some experimentation on Prince Edward Island with farming bay scallops. They are a much smaller scallop but the taste is comparable.

Clams

The clam found in the mud along Island shores was one of the foods that carried early Island settlers through the harsh winters. The clam fishery never became a big part of the Island economy although the digging of clams to sell to Island restaurants at one point was a popular way to make extra cash. As well, Islanders often went down to the shore to dig a "feed of clams." This resulted in many areas being fished out. In many areas of the Island today the person wishing to dig a "feed of clams" will find post signs informing them of contamination.

Irish Moss

There are four hundred known types of seaweed that grow in the waters of Prince Edward Island. One of those became a very lucrative part of the fisheries during World War II. It is *Chondrus Crispus* or Irish Moss. Carrageen is extracted from the moss and is used as a thickener that binds together and gels ingredients in such products as ice cream, shampoo, beer, and toothpaste. When the war blocked the extract named agar from coming from Japan to North America, local fishermen in Maine, Nova Scotia, and Prince Edward Island were encouraged to fill the market.

At first the Island fishermen weren't even interested in gathering the moss, but once they found they could earn as much as twenty dollars per day they had a change of heart.

By the 1970s, Prince Edward Island became the largest supplier of Irish Moss in Canada and an important world supplier, making the revenue it generated very important to Island fishermen. While it has declined over the years, it still holds an important place in the economy of western Prince Edward Island, bringing in over one million dollars per year.

One of the biggest problems faced by the Irish Moss industry is that there has never been success in getting a processing plant established on the Island. This means the raw product has to be shipped to off Island plants at high transportation costs and at reduced value.

Processing and marketing

After fish are caught, it is a challenge to get them to the consumer in as good a condition as possible. Fish could be sold fresh at the wharf, or preserved by means of salting or smoking. Both processes remove moisture, which allows bacteria to grow and spoil or rot the flesh.

Salt acts as a preservative in that it quickens the drying process. Drying the fish to remove the moisture content is usually done using the sun and wind. The two methods could be used separate or together. When people were ready to eat the fish, they would soak it in water several times to remove the salty taste and to put moisture back into the meat. They would then boil or bake the fish. People today still enjoy salted fish.

Smoking the fish is a process of slowly drying it over a fire. The smoke from the fire gives a special flavour to the fish. Smoked meat today is a delicacy that people enjoy for its flavour.

Fish markets were expanded with the development of the tin can but the market had its biggest change following World War II with the development of frozen foods. The process of quick-freezing retained the quality of freshly caught fish and people liked the taste. It was the late 1950s before most Island processors changed from salting and drying to freezing fish. They had to change to the new methods as many of their markets were disappearing.

The visitor to the Island in the early stages of the lobster industry would have seen lobster factories dotting the coastlines of the Island. However, with better transportation systems and low profit margins many of the small factories faded away to be replaced by larger more efficient units. In recent decades the processing industry on Prince Edward Island has undergone a great deal of turmoil as it tries to remain competitive and cost efficient. Island governments, have in the past, involved themselves in the structuring of the processing industry, though not very effectively.

Up until the 1980s, the fish man coming to the door to sell fresh cod and other fish was a part of Island life. But the over fishing of the stocks changed all that. The government put in place a moratorium on the cod fishery throughout the Atlantic Provinces and a way of life for many people changed. Only time will tell what the future will bring.

The Risks of being a Fisherman

Fishing is a risky business in many ways. The fishermen are at the mercy of the weather. In days past they learned to read the skies and the winds to know when it was safe to go on the water. But there were no guarantees and many have lost their lives over the centuries. It is easier for fishermen today in that they can listen to Environment Canada reports on the weather. They have Citizens Band (CB) radios on board that they can use to call for help and they also have the Coast Guard for Search and Rescue missions. Buoys placed by the Federal Department of Transport mark entrances to harbours and channels and there are lighthouses to rely upon. Fishermen also have modern equipment on board such as GPS units and depth finders. They even have equipment to tell them where schools of fish are located. Fishermen of the past would be amazed.

Another way that fishing is a risky business is that fishermen have no control over the costs of supplies necessary to do their job nor do they have control over what they are paid for their catch. The price is set by the demand in the marketplace. If lots of people want to buy lobster, the price will be high. If only a few want lobster, the price will be lower. Some fishermen are members of cooperatives to try and have more influence but this doesn't work for everyone as fishermen take great pride in being independent.

Fishermen can't control their stock the way farmers can. They are all competing for whatever fish Mother Nature produces. This is influenced by such things as over-fishing, pollution, and other environmental factors. However, steps are always being taken to help manage the fish stocks. Fishermen must have licenses to fish different species; they can only fish at certain times of the year; and the size they can take is regulated. Canada has also set boundaries on how close fishing ships from other countries can come to Canadian shores.

Times are Changing

Many of the major changes in the Island fishing industry have come from 1950 onward. One of the biggest and most influential changes came in 1956 when fishermen were allowed to collect Unemployment Insurance benefits during the off-season to add stability to their livelihood.

The only way a young person today can become a fisherman of many of the species is to buy a license from someone leaving the industry. The price of licenses has continued to increase over the years making it an expensive venture. The benefit of this type of licensing is that it has led to career fishermen who want to protect their industry.

A major problem the Island fishermen face is the same one faced by Island farmers and other industries. Prince Edward Island is a very small producer in a world market and this makes it hard to compete and receive fair prices for its products. The distance from major markets also makes it hard to be competitive. However, the quality of Island seafood enables it to hold its own in the marketplace.

The processing industry on Prince Edward Island has seen big changes. The numbers involved in the industry have fallen drastically over the years. The co-operative movement seems to work well. The private processors have had trouble staying competitive and up-to-date. The PEI government became involved in helping a number of them join together to form a company call Polar Quick Freeze. This ended up costing the Island taxpayer millions of dollars. Another problem the processing industry has faced is difficulty in getting plant workers. Fewer Islanders are willing to do the seasonal factory work for a variety of reasons and some companies have been forced to bring in foreign workers.

Marketing is always a challenge. Two factors that influence the sale of Island fish produce are the cost of transportation and the value of the Canadian dollars against other currencies. The state of the world economy is also influential because many of our seafood species are seen as luxury items.

Questions for Critical Thought and Ideas for Further Exploration

The Origins of Fishing

- What sorts of tools were available for early PEI fishermen? Were they effective and efficient?
- Over-fishing is not a new problem. If people know of its negative impact on the environment, why is it a continuing issue?

Overview of Fishing in Prince Edward Island

- Why is sport or recreational fishing popular on Prince Edward Island?
- If fishermen experience a difficult year, how are other Islanders affected?

The Beginning of the Fisheries on Prince Edward Island

- Why was the Island so full of numerous types of fish *before* the Europeans discovered America? What influence did the Europeans have?

Palaeo-Indian period

- Did the Palaeo-Indians have a healthy diet?

- Were the Palaeo-Indians innovative?

1500s

- Was fishing off the coast of P.E.I. and Newfoundland easy for the European fishermen who came all the way across the Atlantic to make their catch? What might be some of the challenges they faced?
- Why would the fishing stocks off the coasts of North America have been so plentiful prior to European discovery?

1600s

- Why did the French carry out both the green cod fishery and the dry cod fishery?
- Why would the Government of France be interested in financing companies to settle in Prince Edward Island? Why was the right to the fisheries so important?

1700s

- Why did the wealth from the fishery off the Island's shores never make it into the hands of Islanders? Was that fair? Who was responsible for this occurrence?
- What might be some implications or consequences from the exploitation of the fishery off the coast of the Island? Why did the British allow this to happen?

1800s

- Farming used to be seen as a higher class of work than fishing. Is this still true today? Why did that stereotype exist? What sorts of stereotypes exist today regarding different types of employment?
- Why were the Americans able to make good money at fishing while Islanders could not seem to do the same?
- What were the benefits of co-operatives? How did they help fish catchers and fish consumers?
- What did Islanders like about the inshore fishery? Was this a positive change in direction for the industry?
- How did the government's role in the fishing industry change throughout the 1800s? What were some of the causes that influenced the changes?

1900s

- Which major event of the 1900s would have had the most positive impact of the Island fishing industry? Which had the most negative impact?

- What might Island fishermen have thought of the government taking control of the industry? Did they find it helpful or hurtful?

Fishing Vessels

- Fishing vessels have advanced greatly over the years. What do you think was the most important change?
- What are some aspects of fishing vessels and equipment that have remained the same over the years?

Species of Fish – Ground Fish

- Why might these fish be referred to as “ground” fish?
- The method of fishing ground fish can be very harmful to the environment as can be over-fishing. However, many Island fishermen depend on this species for their livelihood. What might be some solutions to this problem? How can we protect the environment and allow fishermen to make a living?

Pelagic Fish

- Why might these fish be grouped under the title of “pelagic” fish?
- What might be the benefit of these fish swimming in large schools?
- If tuna fishing is a risky business on which to depend, why might it be so popular?

Crustaceans

- Why might the name “crustaceans” be given to this category of aquatic creatures?

Lobsters

- Why might the lobster have developed such an essential role in the fishing industry?
- Why is it desired by consumers?
- What factors have either a positive or negative influence on the lobster fishing industry?

Snow Crab

- The snow crab fishery is said to provide “...a good deal of economic and employment benefits and spin-offs.” What might some of these include?
- Why is it vital that a quota be in place?

Shellfish

- Why would early settlers have depended heavily on shellfish compared to other types of fish?

Oysters

- What motivates fishermen to get involved in oyster fishing? Has this motivation changed over time?
- Why is licensing an important protection and preservation initiative for the fishing industry?

Mussels

- Why might those involved in growing mussels be called “aqua culturists”?
- Why was the government eager to discover how to make mussels appealing to consumers?

Quahaugs

- Why were quahaugs never developed and marketed around the world like oysters?

Scallops

- Experimentation to grow bay scallops is currently taking place on the Island. Why would fishermen be interested in this development?

Clams

- Have you ever heard of the expression a “feed of clams”? What does this mean?
- When digging for clams, it is important to make sure the area is not contaminated. What might be the cause of some of the contamination?

Irish Moss

- The collecting of Irish moss is considered part of the fishing industry. Why might this be the case?
- Where does Irish moss come from? How is it gathered?

Processing and Marketing

- Which of the three processing methods, salting, smoking, or freezing, would be the most economical?
- Why did the selling of fresh fish door-to-door stop in the 1980s? How would this have affected fishermen? What about Island consumers?

The Risks of being a Fishermen

- Is becoming a fisherman worth all the risks?
- The price of a fishermen’s catch depends on market demand. Why might there be a higher demand some years and not other years?

Times are Changing

- How does the licensing method affect young fishermen trying to get into the business?
- The Island is a small producer in the world market. Why is this a disadvantage?

Suggestions for Activities

1. A lobster license has to be purchased from someone retiring from the industry. Before the restriction was put on the number of licenses available, a new fisherman could purchase a lobster license for approximately one hundred dollars. Find out the current price of a lobster license. Once you know the cost of your lobster license, find out how much it would cost to buy a fishing boat, equipment and traps. How would you finance your entry into the industry? At what cost would you be borrowing the money? What would your yearly payments be to the bank?
2. What Island species of fish do you think would be your best choice of entry into the industry?
3. Is there a way Islanders involved in the fishing industry could be adding more value to their catch before they bring it to the marketplace?
4. Invite a local fisherman into the classroom to talk about his career and his likes and dislikes of his choice of livelihood.
5. Bring an oyster into the classroom to determine its age. This is done by counting the number of rings in the outer shell.
6. Find out how you go about leasing an oyster bed. What is involved in stocking it with spat? Would this be a cheaper fishery to consider entering than the lobster or scallop fishery? How does the cost of entry compare to the return of money that can be made?
7. Take a walk along the shoreline and collect some wild mussels. Compare them with the cultured mussels. Maybe cook up a pot of cultured mussels.
8. See what you can discover about the nutritional value of mussels. Are they a good food to add to your diet?
9. Can you think of any species in Island waters that are not currently fished and marketed and could be successfully developed?
10. As you learned through this program, early Islanders sat back and permitted outsiders to grow rich off their natural resources. Have a class debate centered on the following question. Are current day Islanders more willing to develop their own resources or do they still allow others to make the money?

11. Listen to Stompin' Tom's song about gathering Irish Moss. It gives a good overview of the industry and tells a great deal about our history and living environment.

12. Investigate the following website to see maps of the snow crab fishing regions.

http://article.pubs.nrc-cnrc.gc.ca/ppv/RPViewDoc?_handler_=HandleInitialGet&journal=cjfas&volume=60&calyLang=fra&articleFile=f03-076.pdf

Items in the suitcase

Besides the written material contained in the binder, a number of other materials have been gathered for the suitcase that will increase the student's understanding of the commercial fishing industry and how it has evolved over time.

Name That Fish: This matching game encourages students to identify different fish and sea creatures by matching their name to their picture. This game can be played in an association method, or as a memory challenge elimination game where the cards are turned face down and flipped to find a matching pair. This game includes eighty colourful laminated cards and a convenient Answer key.

Fishing for Trivia: With fishing rod in hand, this game gives students the chance to fish for questions and test their knowledge about fish and the Island fishery. All questions are multiple-choice and are taken from program material. Game includes five fishing rods and thirty questions on brightly coloured laminated fish. Answer key provided.

Articles: The binder containing the program "The History of Commercial Fishing on Prince Edward Island" also contains articles from local newspapers related to the industry including a 1981 article on fishing growth limits, a 2002 article on the professionalization of the fishery, and one on the development of Polar Foods International. Also included are the 2008 Angling Summary and a deep-sea fishing info brochure; both of which provide info on identifying different types of fish.

Activities: A couple activities including a crossword puzzle and a fish facts section are included on top of the list of suggested activities in the written material. The East Coast Reader, a Nova Scotia Newspaper that worked alongside Fisheries and Oceans Canada, Habitat Protection and Sustainable Development Division, Maritimes Region, and the Nova Scotia Department of Education produced these activities in their March 2008 issue.

Photographs: The binder containing the program "The History of Commercial Fishing in Prince Edward Island" also contains photographs from the early to mid 1900s relating to the industry. Images of oyster barrels, fishing dories, lobster traps and canning factory, smelt shacks, etc. give students a look at some of the early days of the industry.

Photo CD: All of the photographs are also provided on a CD for easy classroom viewing.

Resources used to complete this Project

The French in Prince Edward Island

The French Regime in Prince Edward Island, D.C Harvey, 1926, Yale University Press

Three Centuries and the Island, 1959, University of Toronto Press

The Fishery of Prince Edward Island, by Kennedy Wells, Ragweed Press, Charlottetown, 1986.

Past and Present

Canada's Smallest Province: A History of Prince Edward Island, edited by Francis W.P. Bolger, 1973 published by the Prince Edward Island 1973 Centennial Commission.

The Role of the Island Department of Fisheries

<http://www.mar.dfo-mpo.gc.ca>

History of Lobster processing

www.parl.ns.ca/lobster/history.htm

www.historyforkids.org