Newfoundland Labrador

Seafood Industry Year in Review 2012

Message from the Minister

On behalf of the Department of Fisheries and Aquaculture, it is my pleasure to present the Seafood Industry Year in Review 2012. This publication is a valuable reference and is frequently used by the seafood industry, academia and others from around the world. It provides a comprehensive look at Newfoundland and Labrador's fishing and aquaculture industries, and includes statistics for the various wild capture and farmed species. It also provides an overview of some important initiatives undertaken by our government last year.

The seafood industry continues to be extremely important to Newfoundland and Labrador's economy. With over 20,000 people participating in this industry, it remains the single largest employer in the province.

In 2012, seafood production was approximately 137,000 tonnes, with a value reaching $1.0 billion. Production value is on par with the previous year. Changing market forces and the impact of the world economy continued to present challenges for the industry. Consumer demand for seafood, however, continues to grow, and therefore I am optimistic the value of this industry will remain strong.

In support of the growth and development of the seafood industry, our government works to deliver a wide array of programs and services. For example, we support seafood marketing by attending key exhibitions throughout the world; we invest in innovative fish processing methods and developmental initiatives through our Fisheries Technology and New Opportunities Program; we provide funding for science and research to protect the resource; and we invest significant capital into the development of the aquaculture industry. Each initiative and expenditure, on behalf of the people of Newfoundland and Labrador, fosters a stronger and more sustainable seafood industry for the future of the province.

Protecting and growing our seafood industry is a responsibility of great importance – one which our government takes very seriously. This industry will continue to provide important economic and employment benefits to Newfoundlanders and Labradorians for generations to come.

Through the cooperative effort of industry, communities, residents and government, we will continue to work together to ensure viability and sustainability in all sectors of our economy. The seafood industry has shaped who we are as a people, and will undoubtedly continue to shape our success in the future.

DERRICK DALLEY, MHA
The Isles of Notre Dame
Minister

Acronyms and Abbreviations

The following acronyms and abbreviations are used throughout this document and are provided here for reference.

ATRQ – Autonomous Tariff Rate Quota
CETA – Comprehensive Economic and Trade Agreement
CFER – Centre for Fisheries Ecosystems Research
DFA – Department of Fisheries and Aquaculture
DFO – Fisheries and Oceans Canada
EU – European Union
FFAW – Fish, Food and Allied Workers
FTNOP – Fisheries Technology and New Opportunities Program
LERP – Lobster Enterprise Retirement Program
MI – Fisheries and Marine Institute of Memorial University of Newfoundland
NAFO – Northwest Atlantic Fisheries Organization
OLP – Ocean Learning Partnership
QCEP – Quality Compliance and Enforcement Program
SFA – Shrimp Fishing Area
TAC – Total Allowable Catch
WTO – World Trade Organization

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Department of Fisheries and Aquaculture
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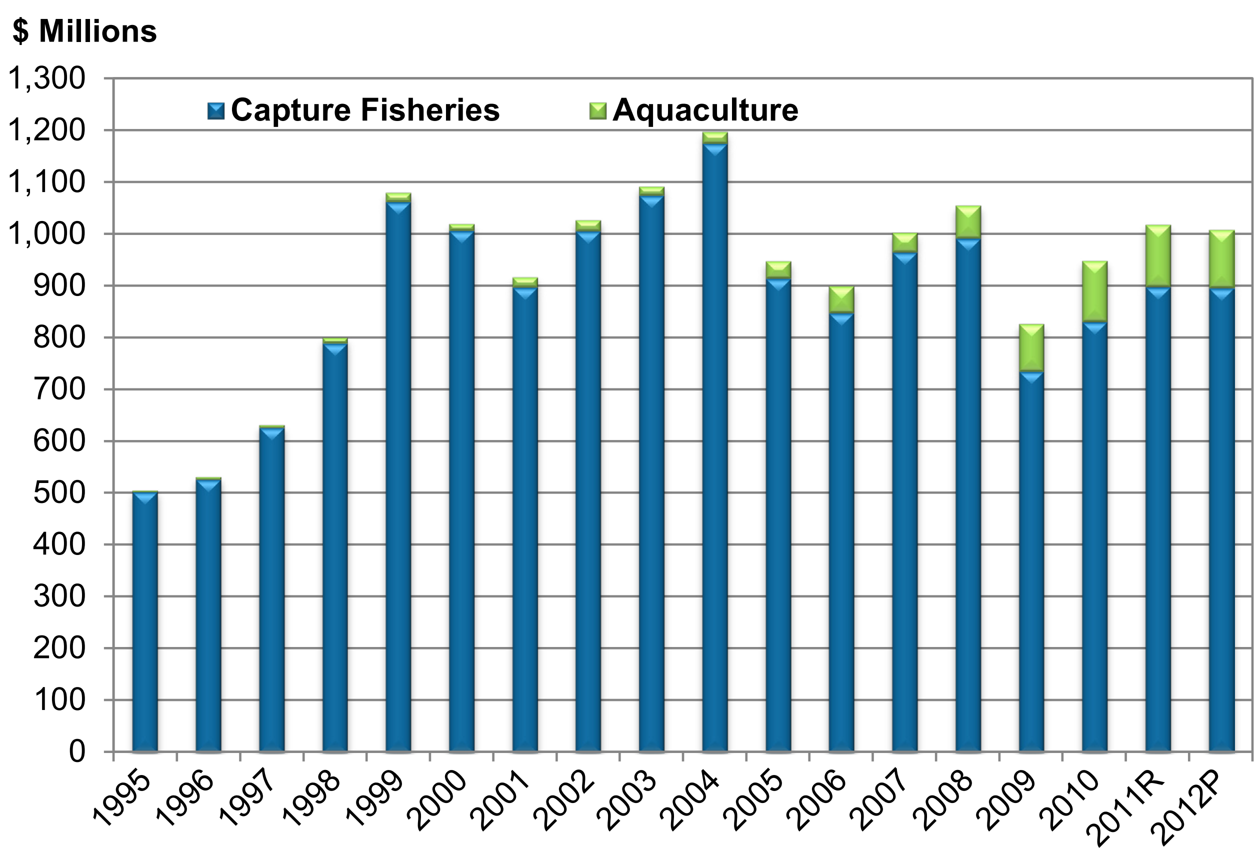
Seafood Industry Performance 2012

Newfoundland and Labrador's seafood industry experienced another successful year in 2012. The value of total production declined slightly from 2011 and remained high from a historical perspective. Consumer demand for seafood remained strong in 2012. The average market price for 150-250 count cooked and peeled coldwater shrimp peaked in 2011 and remained at that level in 2012, while market prices for other species declined. Snow crab market prices for 5-8 ounce sections declined slightly in 2012, after reaching a record level in 2011. Total seafood industry production was valued at just over $1.0 billion in 2012.

Production Market Value
Newfoundland and Labrador



Source: Fisheries and Oceans Canada (DFO); Department of Fisheries and Aquaculture (DFA)

R = Revised; P = Preliminary

Commercial capture fisheries landings declined slightly in 2012, while aquaculture production volume grew. The aquaculture industry saw a decrease in production market value, down 6.0 per cent. The production value for the capture fisheries declined marginally, down 0.3 per cent. The province's seafood industry continued to be negatively impacted by high operating costs and a strong Canadian dollar, relative to currencies in key export markets. The majority of the province's seafood products were exported to over 50 countries in 2012. The United States and China remained the province's primary export markets.

Employment

Employment in the seafood industry declined in 2012. This is the result of lower employment in the harvesting and fish processing sectors. Total industry employment was down 5.3 per cent, to 20,079 workers from 21,208 workers in 2011.

In 2012, employment in aquaculture hatchery and grow-out operations saw a modest decline relative to 2011, and larger decreases were recorded in the harvesting and processing sectors. Hatchery and grow-out employment recorded a marginal decline of 0.8 per cent, to 467 workers in 2012. The number of fish harvesters decreased 4.0 per cent, to 10,398 workers. Plants process seafood from the wild fishery and from aquaculture operations. Employment in the processing sector decreased 6.9 per cent, to 9,214 workers in 2012 from 9,902 workers in 2011. There were seven processing plants designated as permanently closed in 2012. Employment growth in the seafood industry has been slowed by competing employment opportunities, out-migration and an aging workforce.

Seafood Industry Employment

Newfoundland and labrador

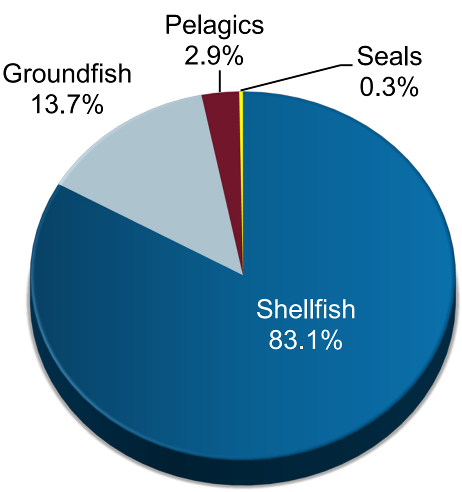
	2011R	2012P	% CHANGE
Hatchery and Grow-out (Aquaculture)	471	467	-0.8%
Harvesting (Capture Fisheries)	10,835	10,398	-4.0%
Processing (Aquaculture and Capture Fisheries)	9,902	9,214	-6.9%
Total	21,208	20,079	-5.3%

Source: DFA; Professional Fish Harvesters Certification Board

R = Revised; P = Preliminary

Capture Fisheries

Capture Fisheries Landed Value by Species Group, 2012

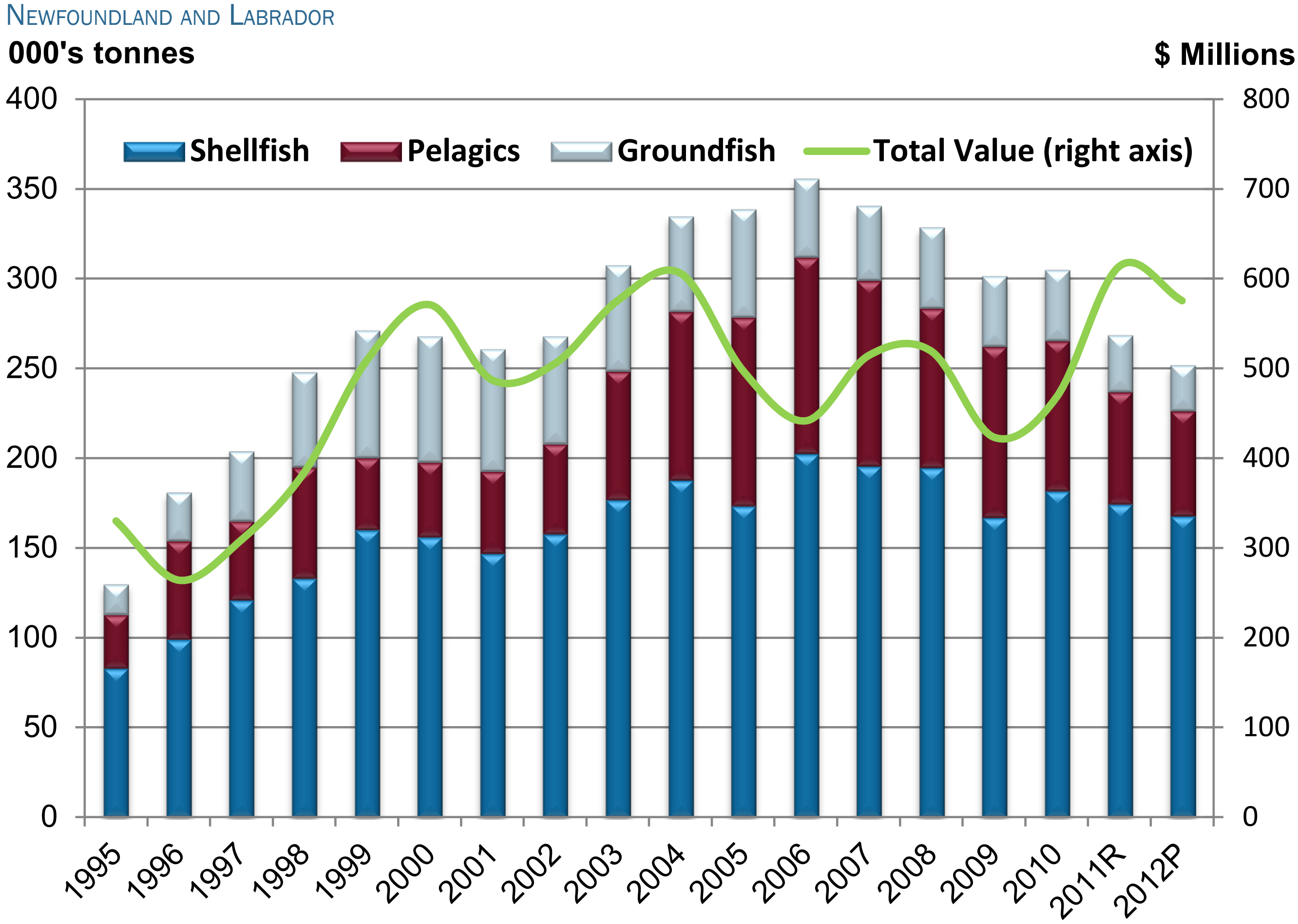


Note: Total landed value = $575 million.
Source: DFO; DFA

The commercial fishery recorded a decline in both fish landings and landed value in 2012. Overall, landings totalled 251,952 tonnes, down 6.2 per cent from 2011. This decline is mainly the result of lower landings of mackerel, offshore shrimp, snow crab and yellowtail flounder. The total landed value of the 2012 harvest was $575 million, down 6.3 per cent compared to $614 million in the previous year. This decrease was the result of lower landings and lower raw material prices paid for some species, snow crab in particular. The table on page 9 shows the volume and value of fish landings in Newfoundland and Labrador for 2011 and 2012.

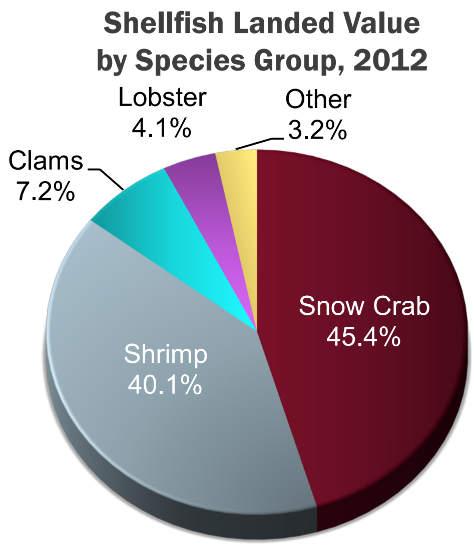
Fish Landings by Species Group

Newfoundland and Labrador



Source: DFO; DFA

R = Revised; P = Preliminary



Note: Shellfish landed value = $478 million.

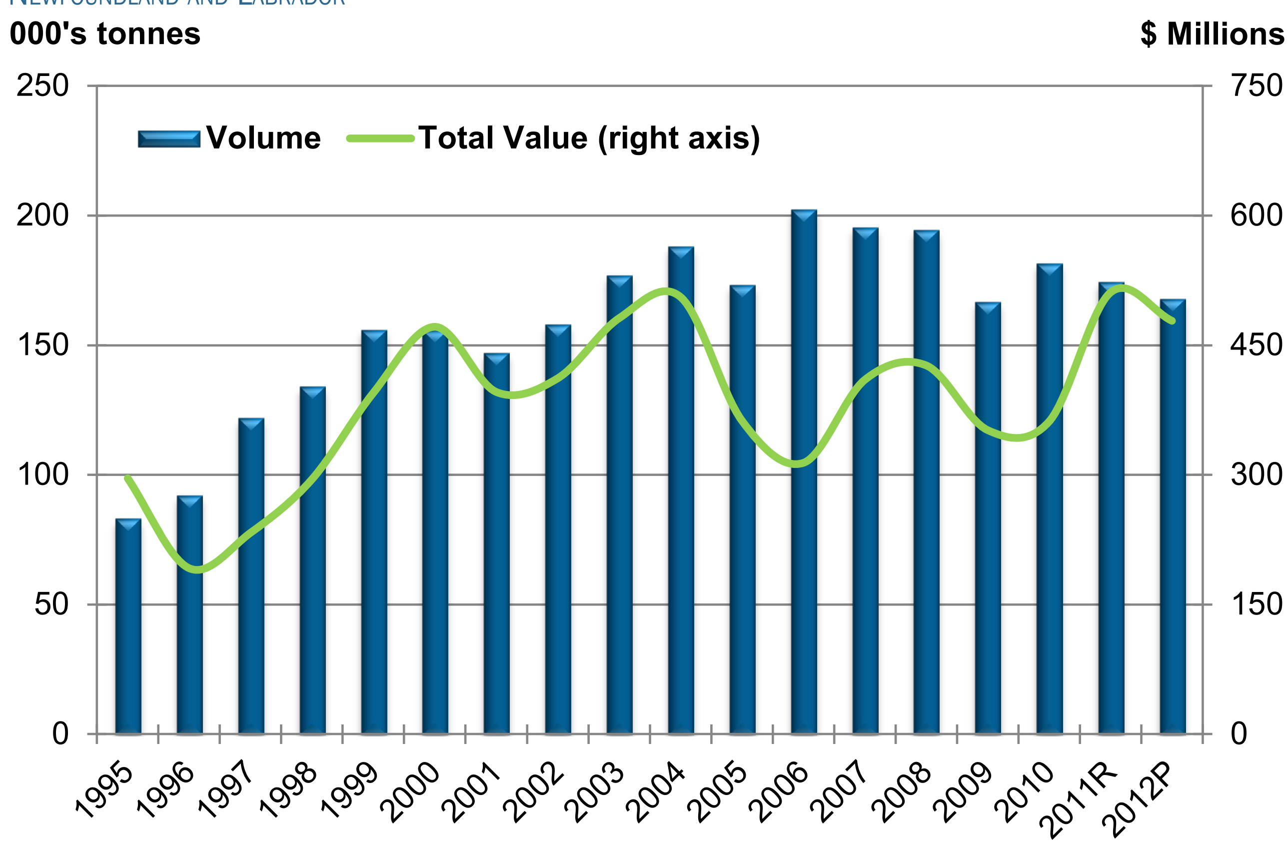
Source: DFO; DFA

Shellfish

The shellfish sector continued to be the major contributor to the capture fisheries in 2012, comprising 66.6 per cent of total landings and generating 83.1 per cent of total landed value. Shellfish landings declined in 2012, mainly due to quota cuts in the snow crab fishery and a reduction in offshore shrimp landings. Shellfish landings totalled 167,715 tonnes, down 3.8 per cent compared to 174,354 tonnes caught in 2011. The corresponding landed value declined 6.4 per cent, to $478 million, down from $511 million in 2011.

Shellfish Landings

Newfoundland and Labrador



Source: DFO; DFA

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Shrimp

Shrimp landings declined 1.4 per cent in 2012, to 85,583 tonnes from 86,813 tonnes in 2011. This decrease is due to an 11.4 per cent decline in landings by the offshore fleet. In 2012, there was a quota cut in Shrimp Fishing Area (SFA) 7 and lower landings in SFA 6 during the winter fishery. The inshore shrimp fishery recorded a 5.0 per cent increase in landings, largely the result of a quota increase in SFA 6. While total shrimp landings were down, the overall landed value of shrimp increased 1.4 per cent to $192 million, up from $189 million in 2011, due to higher raw material prices for offshore shrimp.

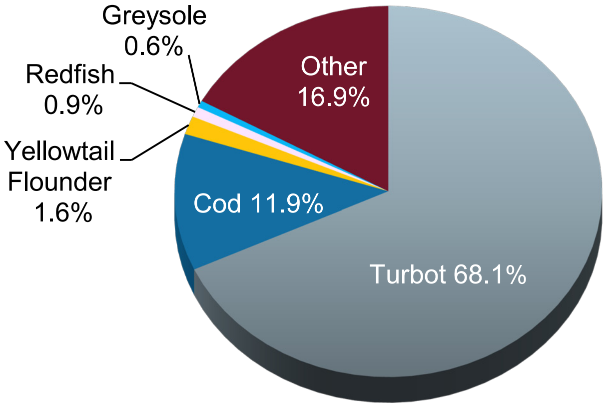
Snow Crab

Overall snow crab landings in the province declined 4.6 per cent, to 50,514 tonnes in 2012 compared to 52,951 tonnes the previous year. This decrease is the result of quota reductions by DFO in Northwest Atlantic Fisheries Organization (NAFO) Divisions 3K and 2J (see map on page 21 for NAFO Divisions). The associated landed value decreased 13.5 per cent, to $217 million in 2012 from $251 million in 2011. This is largely due to a lower average raw material price paid per pound for snow crab; $1.95 in 2012 compared to $2.15 in 2011.

Other Shellfish

Surf clam landings and landed value recorded a decline compared to 2011. Both were down 4.4 per cent in 2012. Lobster landings and corresponding landed value increased in comparison to the previous year, recording an increase of 11.3 per cent to 2,152 tonnes and 16.1 per cent to $20 million respectively. Whelk landings and landed value recorded a significant decrease in 2012, down 20.9 per cent to 4,802 tonnes and 18.6 per cent to $6.3 million respectively. Increases were also recorded for both scallop landings and landed value, up 8.8 per cent to 1,545 tonnes and 10.1 per cent to $2.8 million.

Groundfish Landed Value by Species Group, 2012



Note: Groundfish landed value = $79 million.

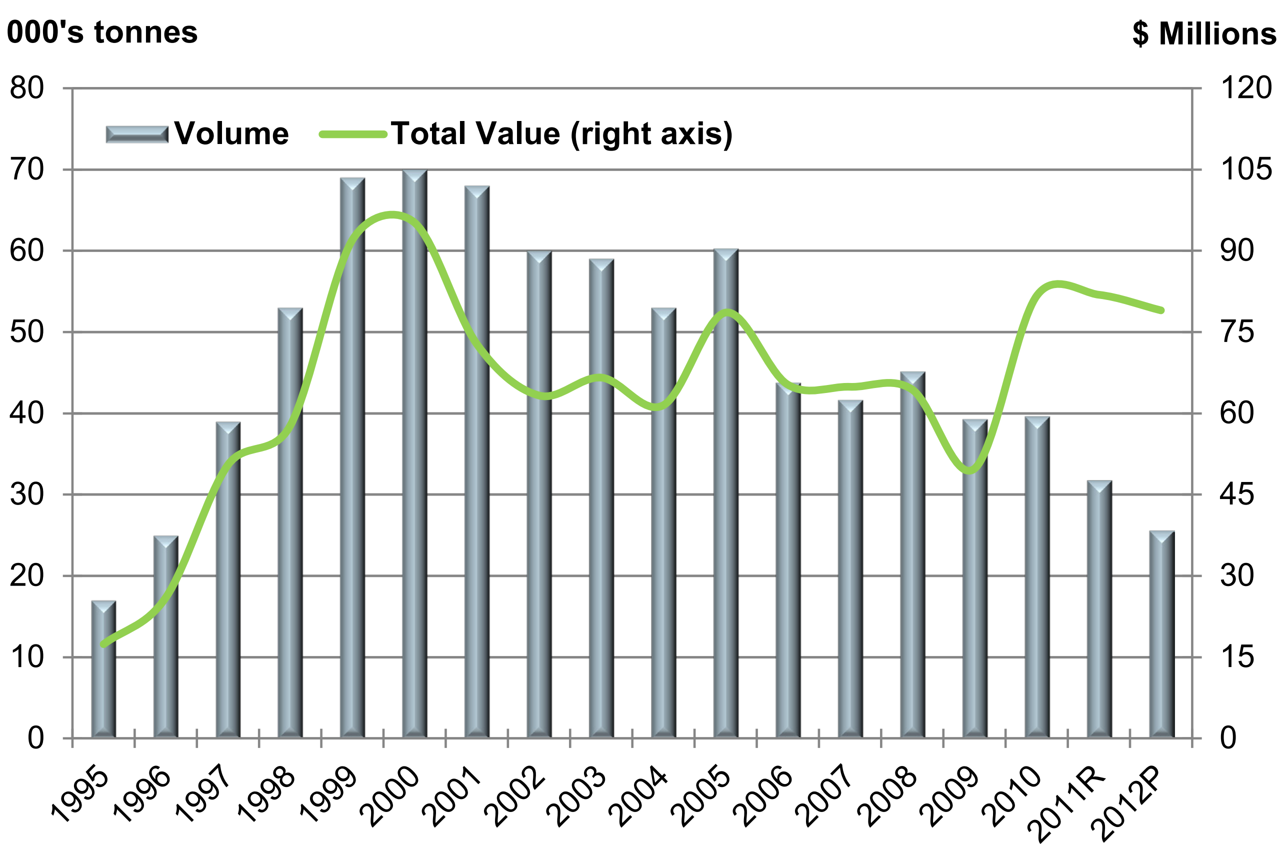
Source: DFO; DFA

GROUNDFISH

Groundfish accounted for 10.2 per cent of total capture fisheries landings in 2012 and 13.7 per cent of total landed value. Landings decreased 19.4 per cent to 25,621 tonnes, and the corresponding landed value declined 3.5 per cent to $79 million. While the majority of groundfish species experienced declines in their harvest volumes, landings of yellowtail flounder, redfish and cod recorded the most notable decreases.

There was a decline of 54.4 per cent in yellowtail flounder landings, from 3,955 tonnes in 2011 to 1,803 tonnes in 2012, due to decreased fishing effort. Redfish landings declined 56.5 per cent to 1,336 tonnes as the result of lower fishing effort during the winter fishery in NAFO Division 3Ps. Cod landings were down 16.5 per cent, from 9,746 tonnes in 2011 to 8,139 tonnes in 2012, mainly the result of lower fishing effort during the winter fishery in NAFO Division 3Ps and a quota reduction in NAFO Division 4R. Turbot landings were down 2.1 per cent, to 10,823 tonnes in 2012, while the associated landed value increased 1.6 per cent to $54 million.

GROUNDFISH LANDINGS
NEWFOUNDLAND AND LABRADOR



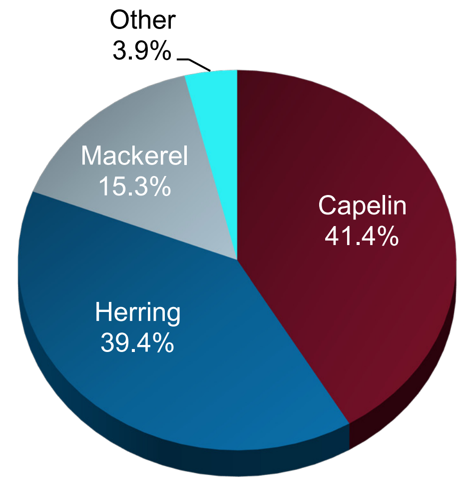
Source: DFO; DFA

R = Revised; P = Preliminary

Pelagics

Pelagics comprised 23.3 per cent of total capture fisheries landings in 2012, and 2.9 per cent of total landed value. Landings decreased 6.3 per cent, from 62,569 tonnes in 2011 to 58,616 tonnes in 2012. The corresponding landed value was down 18.0 per cent, from $20 million in 2011 to $17 million in 2012, primarily the result of lower mackerel landings. Mackerel landings dropped 65.3 per cent, from 7,337 tonnes in 2011 to 2,545 tonnes in 2012, due to lower availability of fish to the commercial fishery. Capelin landings rose 3.2 per cent to 31,145 tonnes and the associated landed value increased 27.4 per cent to $6.9 million. Herring landings and landed value remained on par with the previous year.

Pelagics Landed Value by Species Group, 2012

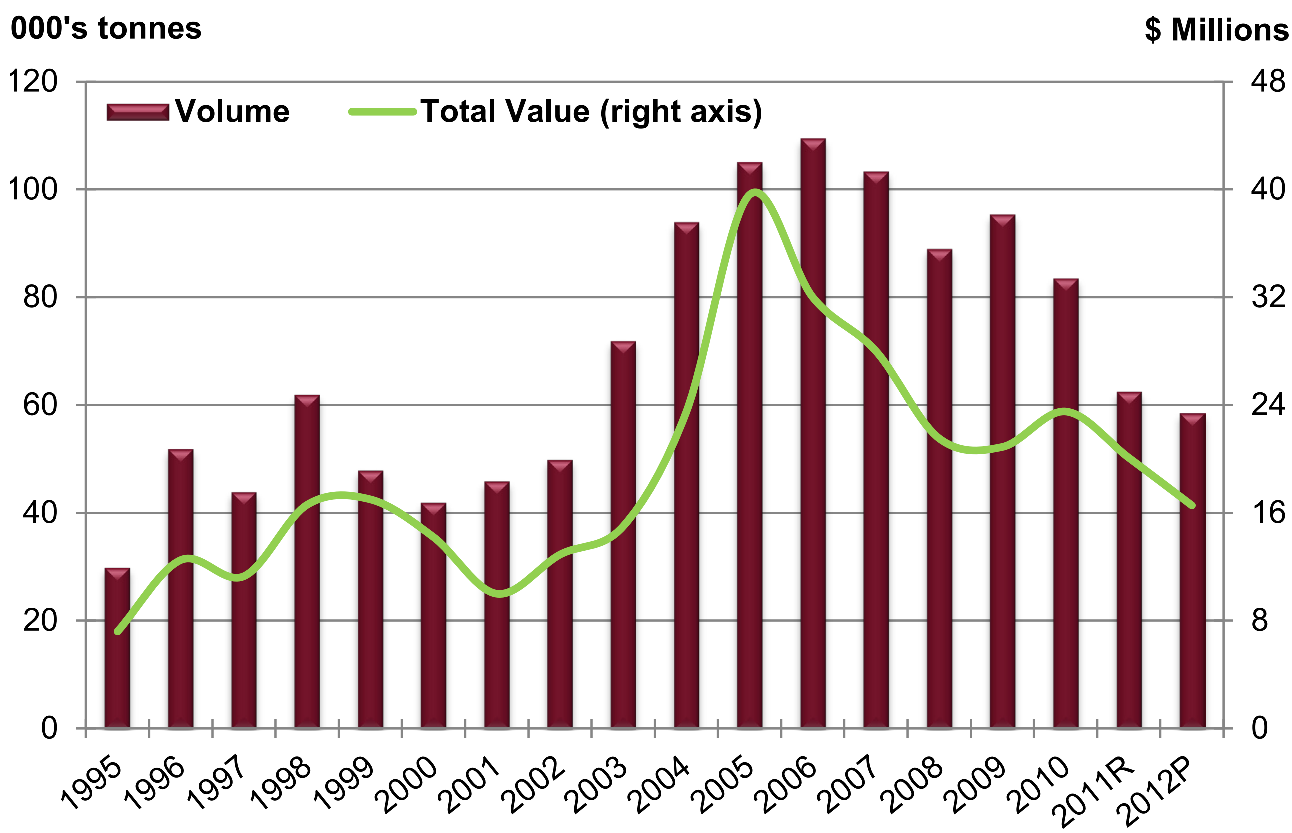


Note: Pelagics landed value = $17 million.

Source: DFO; DFA

Pelagics Landings

Newfoundland and Labrador



Source: DFO; DFA

R = Revised; P = Preliminary

Seals

Restrictions on the sale of seal products continue to challenge this fishery. However, seal landings increased in 2012 in comparison to 2011. This is due to an increase in harvesting effort. Landings in the province were up 78.2 per cent in 2012, to 67,567 seals from 37,918 seals in 2011. The associated landed value more than doubled, reaching $1.6 million compared to $735,000 in the previous year. Efforts to resolve market access include World Trade Organization (WTO) action and a European Court of Justice legal case.

Landed Volume and Value
Newfoundland and Labrador

SPECIES GROUP	2011 REVISED		2012 PRELIMINARY		2011/2012 COMPARISON	
	VOLUME (TONNES)	VALUE (000'S)	VOLUME (TONNES)	VALUE (000'S)	% VOLUME	% VALUE
SHELLFISH						
Snow Crab	52,951	$250,978	50,514	$217,140	-4.6%	-13.5%
Shrimp	86,813	$188,920	85,583	$191,588	-1.4%	1.4%
Surf Clams	22,216	$36,240	21,228	$34,629	-4.4%	-4.4%
Lobster	1,934	$16,895	2,152	$19,613	11.3%	16.1%
Whelk	6,067	$7,796	4,802	$6,349	-20.9%	-18.6%
Scallops	1,420	$2,565	1,545	$2,823	8.8%	10.1%
Other Shellfish	2,953	$7,636	1,891	$6,099	-36.0%	-20.1%
Total Shellfish	174,354	$511,030	167,715	$478,240	-3.8%	-6.4%
GROUNDFISH						
Turbot (Greenland Halibut)	11,050	$52,968	10,823	$53,801	-2.1%	1.6%
Cod	9,746	$11,228	8,139	$9,390	-16.5%	-16.4%
Yellowtail Flounder	3,955	$2,534	1,803	$1,253	-54.4%	-50.6%
Redfish	3,069	$1,529	1,336	$680	-56.5%	-55.6%
Greysole/Witch	647	$567	567	$500	-12.4%	-11.8%
Monkfish	304	$595	185	$363	-39.1%	-38.9%
Pollock	190	$174	338	$316	77.9%	81.9%
American Plaice	829	$576	487	$309	-41.3%	-46.4%
Hake	272	$238	253	$221	-7.0%	-7.0%
Skate	594	$148	539	$138	-9.3%	-7.0%
Other Groundfish	1,142	$11,335	1,151	$12,039	0.8%	6.2%
TOTAL GROUNDFISH	31,798	$81,891	25,621	$79,009	-19.4%	-3.5%
PELAGICS						
Capelin	30,166	$5,387	31,145	$6,860	3.2%	27.4%
Herring	24,863	$6,523	24,871	$6,525	0.0%	0.0%
Mackerel	7,337	$7,232	2,545	$2,525	-65.3%	-65.1%
Other Pelagics	203	$1,052	55	$641	-72.9%	-39.1%
TOTAL PELAGICS	62,569	$20,194	58,616	$16,551	-6.3%	-18.0%
Seals (number)	37,918	$735	67,567	$1,647	78.2%	124.0%
TOTAL	268,721	$613,850	251,952	$575,447	-6.2%	-6.3%

Note:
- Species components may not sum to total due to independent rounding.
- The values of redfish and yellowtail flounder may be understated as they may not be representative of port prices.
- Total volume does not include seals.

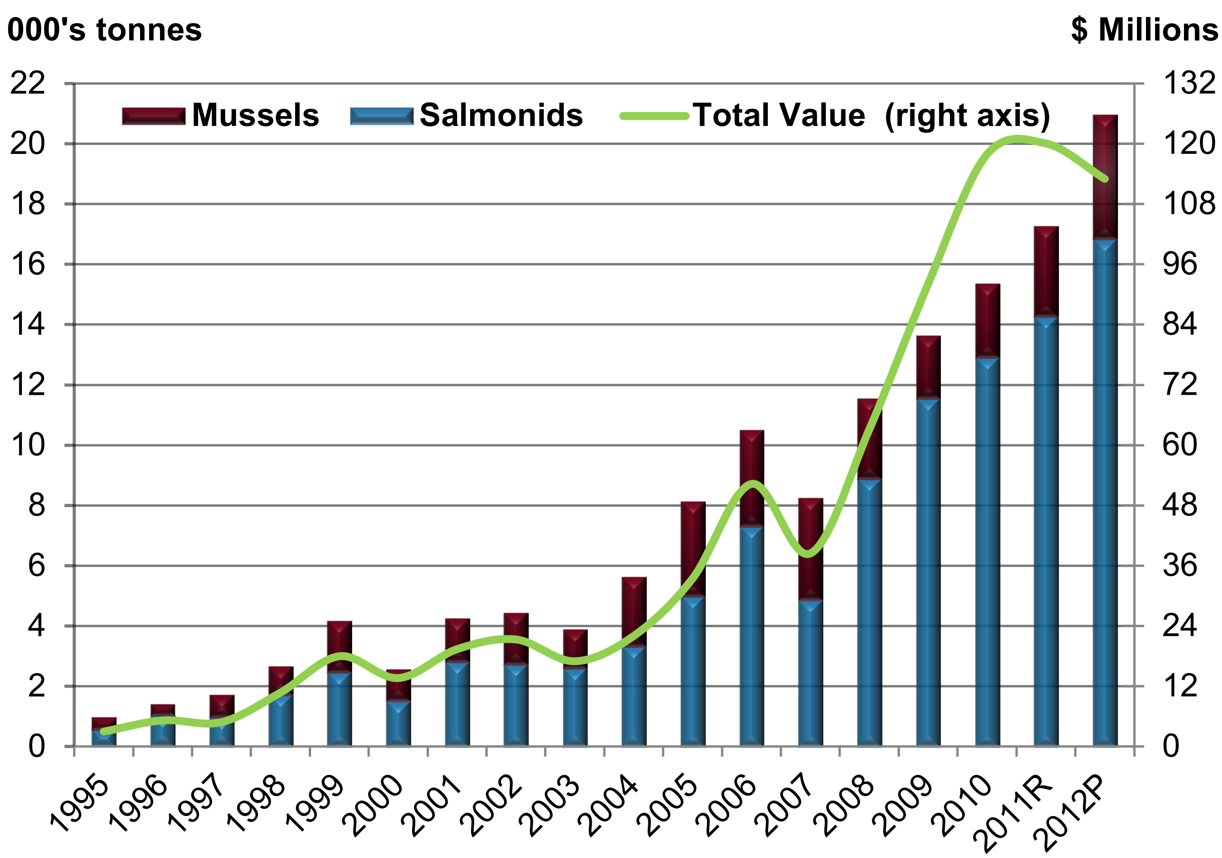
Source: DFO; DFA

Aquaculture

In 2012, the production volume of the Newfoundland and Labrador aquaculture industry continued to grow. Aquaculture production rose 23.0 per cent, from 17,264 tonnes in 2011 to 21,228 tonnes in 2012. This increase was driven by the continued growth of the salmonid sector and a rejuvenated mussel sector. The total market value decreased 6.0 per cent, from $120 million in 2011 to $113 million in 2012. While production increased in both sectors, there was a drastic decline in market prices for cultured salmon, due to increased volume and depressed economies worldwide. According to Urner Barry Publications Incorporated, the average market price for whole salmon was US$2.43 per pound in 2012, down from US$3.35 per pound in 2011.

Aquaculture Production

Newfoundland and Labrador



Source: DFO; DFA

R = Revised; P = Preliminary

Salmonids

Commercial production within the salmonid sector is focused on Atlantic salmon and steelhead trout. There were 84 commercial salmonid site licenses that cover a combined area of 2,205 hectares in 2012 (see map on page 30).

In 2012, salmonid production reached 16,831 tonnes, valued at $99 million. This represents an increase in production of 18.0 per cent over 2011 levels. Market prices have declined since 2011 to levels not experienced since 2005. The decrease in market prices was a result of increased production worldwide.

DFA continues to work towards the development of biosecure infrastructure solutions to meet the demands of the expanding salmonid sector. Construction began on the aquaculture inflow wharf in Harbour Breton and an extension of the aquaculture wharf in Pools Cove was initiated. In addition, DFA continued to collect oceanographic data on the south coast via the deployment of new satellite technology.

Mussels

Commercial shellfish aquaculture production is concentrated on the blue mussel. There were 51 commercial shellfish site licenses that cover a combined area of 3,843 hectares in 2012 (see map on page 30). Mussel production reached an all-time high in 2012. It increased by 1,397 tonnes to 4,397 tonnes and was valued at $14 million.

Mussel sales rebounded in 2012. The industry pursued more diverse product forms and expanded into new and existing markets. DFA has supported industry in key product development and marketing initiatives that have resulted in increased sales for the industry.

Mussels

The aquaculture industry continues to be a fast growing food production sector in the province, providing economic growth and long-term employment in many rural regions. As with many industries, production and value of mussels have experienced fluctuations. The province's mussel sector is an example of an industry that has shown significant growth over the last couple of decades but has also seen some low periods during that time. In 1995, mussel production totalled only 400 tonnes with an approximate value of $340,000. In 2012, mussel production totalled 4,397 tonnes and was worth $14 million.

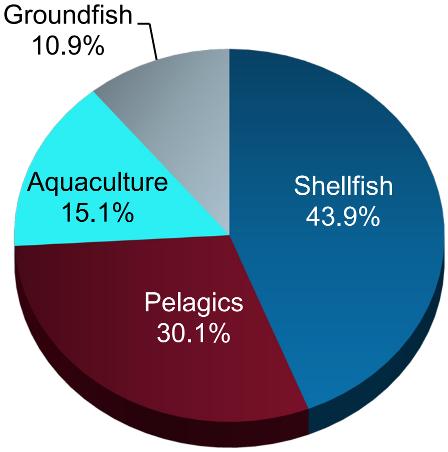
In 2008 and 2009, there was a decline in mussel production, which was a direct result of the global recession and significantly reduced consumer demand in Canada and the United States. The loss of markets resulted in a reduced cash flow and an increased inventory of product. In 2009, DFA and the mussel sector identified marketing as the first step to be addressed to help promote and move the industry into the future. In 2010, a Mussel Market Study was commissioned by DFA. It outlined several recommendations designed to develop and maintain sustainable markets.

The department supported the mussel sector by providing funds through its Fisheries Technology and New Opportunities Program (FTNOP) and the Aquaculture Strategic Development Program to help promote and develop new markets, diversify product lines, upgrade and install state-of-the-art production and processing equipment, and develop and implement industry certification standards. Over the last few years, the mussel sector has witnessed consolidation which has contributed to greater success in the industry. Mussel growers have pooled inventory to ensure processors and marketers have sufficient product to meet the demands of their clients.

The investment of funds by DFA and industry, along with the hard work and dedication from all sector stakeholders, resulted in positive growth over the last three years. The sector has positioned itself to ensure this growth persists through increased production, collaboration between producers, processors and marketers, and the development of new product lines and new markets.

Production Overview

Production Volume by Species 2012



Note: Total production volume = 136,961 tonnes.

Source: DFO; DFA

In 2012, there were 100 active processing facilities in the province, down from 103 in 2011. Of these, 83 were primary facilities, 3 were secondary, 4 were aquaculture and 10 were retail. Total seafood production declined 4.7 per cent, from 143,708 tonnes in 2011 to 136,961 tonnes in 2012. This decrease in production is the result of lower landings.

Shellfish

Shellfish production decreased 5.6 per cent, from 63,773 tonnes in 2011 to 60,184 tonnes in 2012. This decrease is mainly attributed to lower snow crab production. Snow crab sections for the United States market decreased 20.3 per cent, from 19,269 tonnes in 2011 to 15,360 tonnes in 2012. Japanese snow crab sections, however, increased by 19.3 per cent, to 11,860 tonnes in 2012 after a decline in the previous year. Sections for the Japanese and United States markets combined, accounted for 19.9 per cent of total seafood production. Cooked and peeled coldwater shrimp production totalled 17,910 tonnes in 2012, down 7.2 per cent from 19,296 tonnes in 2011, and accounted for 13.1 per cent of total seafood production. Shellfish represented 43.9 per cent of total production in 2012 compared to 44.4 per cent in 2011.

Pelagics

Pelagics production decreased 5.4 per cent, from 43,475 tonnes in 2011 to 41,123 tonnes in 2012. There was a notable fall in mackerel production as the result of lower landings. Mackerel production decreased 56.0 per cent, from 6,926 tonnes in 2011 to 3,051 tonnes in 2012. Herring production declined 6.8 per cent, from 13,532 tonnes in 2011 to 12,617 tonnes in 2012. Capelin production, however, increased 9.1 per cent, from 19,848 tonnes in 2011 to 21,646 tonnes in 2012. Pelagics production comprised 30.1 per cent of total seafood production in 2012.

Groundfish

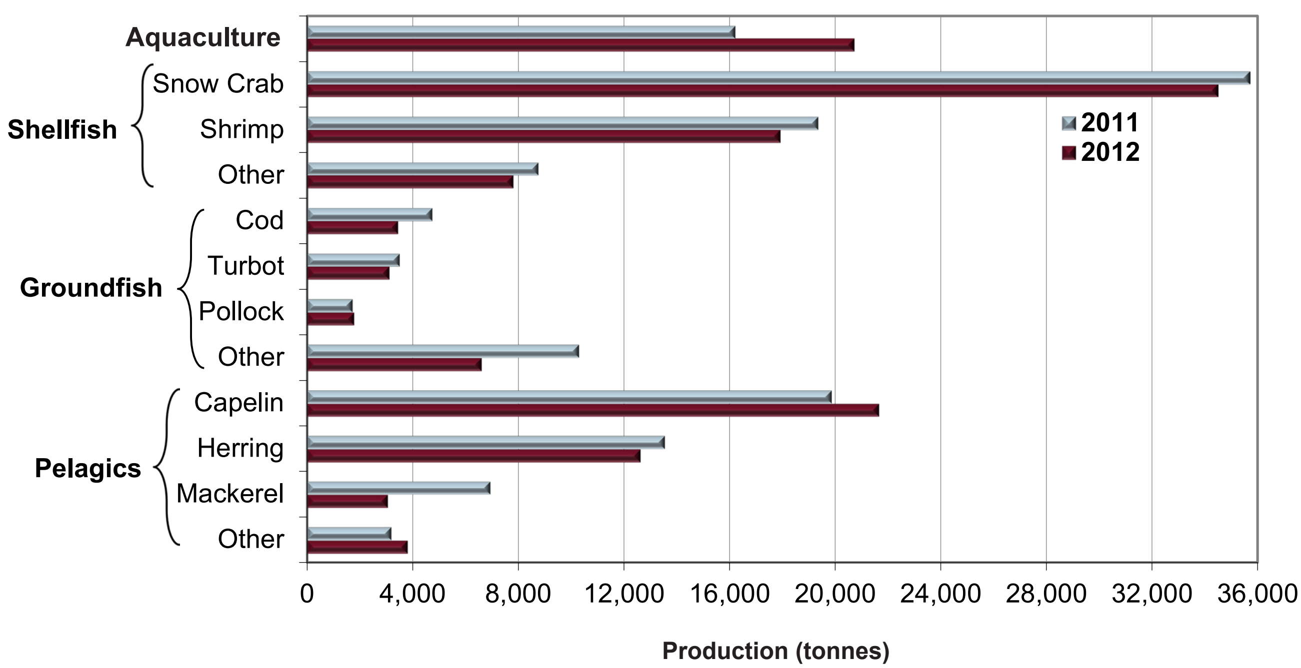
Groundfish processing decreased significantly in 2012, recording a 26.2 per cent drop compared to the previous year. Production declined from 20,247 tonnes in 2011 to 14,947 tonnes in 2012. Much of this decline is the result of lower production for cod and yellowtail flounder, down 27.4 per cent and 89.8 per cent respectively. Groundfish production accounted for 10.9 per cent of the 2012 total seafood production.

Aquaculture

Aquaculture production comprised 15.1 per cent of total seafood production in 2012, up from 11.3 per cent in 2011, due to higher volumes of salmonids and mussels.

Production Volume by Key Species

Newfoundland and Labrador



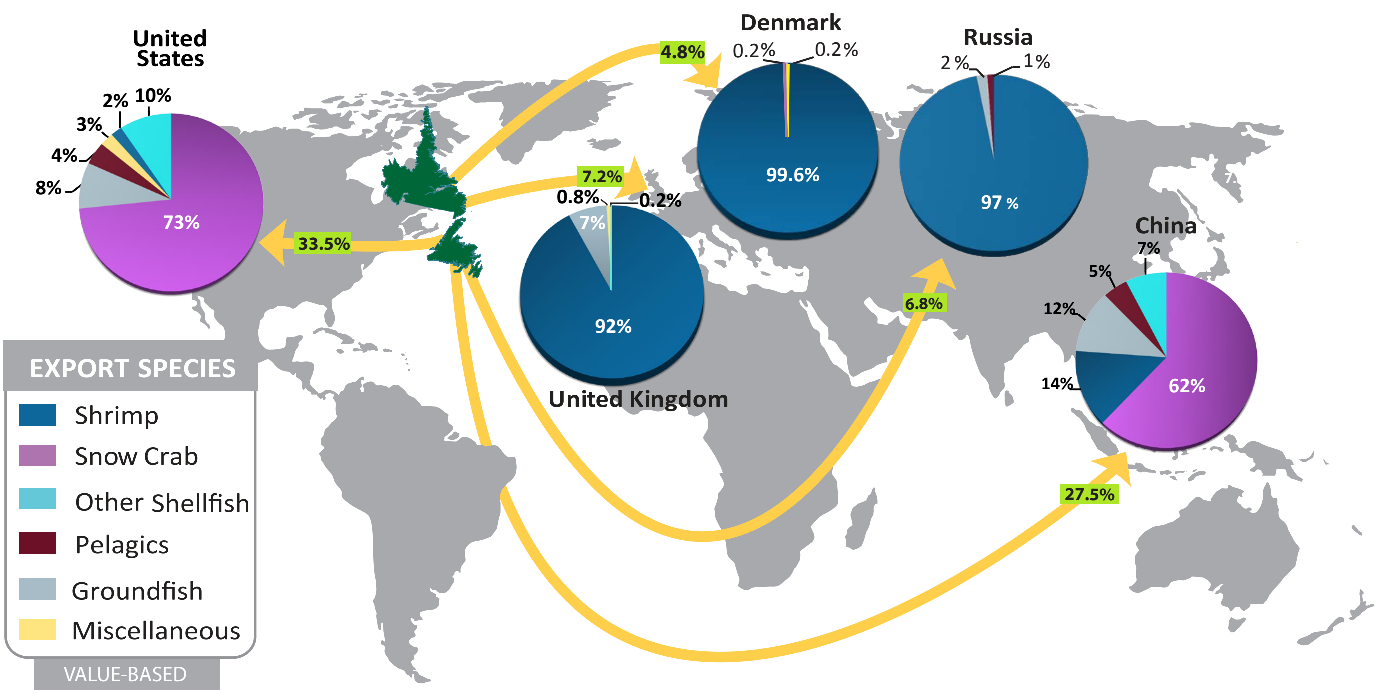
Note: The breakdown of some species is suppressed due to a low number of producers.
Source: DFA

Market Overview

Newfoundland and Labrador continued to export significant volumes of seafood products globally in 2012. From January to November 2012, the province exported nearly $740 million worth of seafood. This is down 10.7 per cent from the same period in 2011. The global economic environment, unfavourable exchange rates, and lower market prices for a number of seafood products contributed to this decline. Export volume for the first 11 months of 2012 was approximately 130,000 tonnes, which represented a decline of 15.2 per cent relative to the same period in 2011.

The United States continued to be the largest export market for Newfoundland and Labrador seafood in 2012, representing 33.5 per cent of total export value. China followed, representing 27.5 per cent of export value. Other key markets, based on export value, included the United Kingdom at 7.2 per cent, Russia at 6.8 per cent, and Denmark at 4.8 per cent. These top markets represented approximately 79.8 per cent of the province's value of seafood exports.

Top Five World Market Destinations for Seafood Products Newfoundland and Labrador, 2012



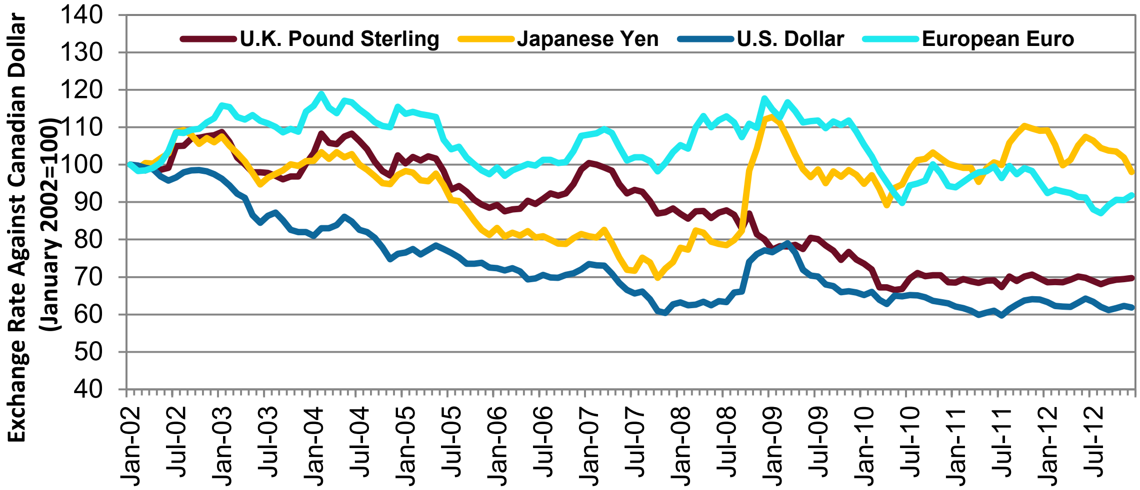
Newfoundland Labrador

Department of Finance
Newfoundland & Labrador Statistics Agency
Edited by Department of Fisheries and Aquaculture

Note: Each pie chart represents the distribution of products within the identified country based on export value.

Source: Statistics Canada

Selected Foreign Exchange Rates
Indexed to January 2002



Source: Bank of Canada

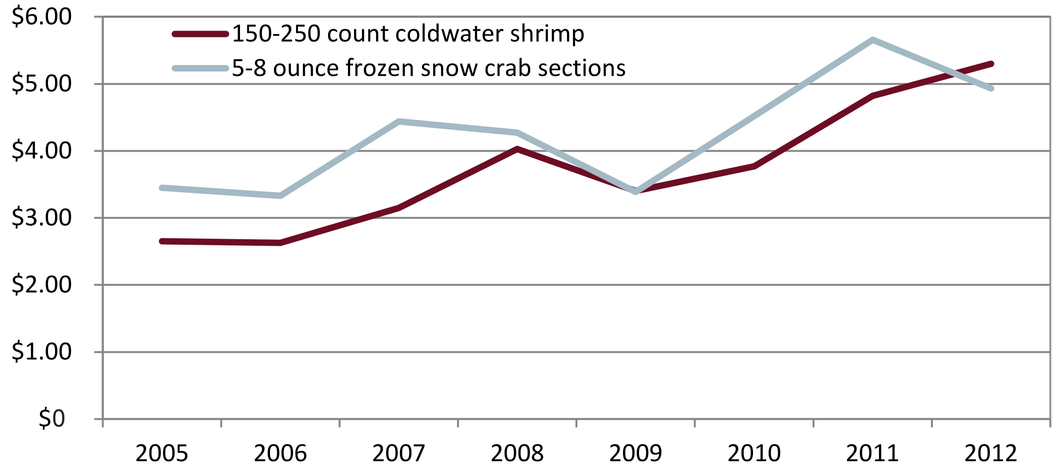
The global economic climate plays an important role in seafood markets. In 2012, the United States began a slow economic recovery while the European Union's (EU) continuing debt and austerity challenges affected seafood consumption. China's economy continued to experience slow growth, however, the country is consuming increasing amounts of imported seafood products which provides opportunities for the Newfoundland and Labrador seafood industry. China continued to be a major reprocessor of fishery products and place competitive pressure on some sectors of the industry. There has been slowing domestic seafood consumption in Japan due to an aging population. Japan continues to be an important market for Newfoundland and Labrador snow crab.

The Canadian dollar has appreciated considerably over the past number of years versus the United States dollar and the Euro. A strong Canadian dollar makes Canada's goods more expensive in these markets. This results in lower profits for domestic Canadian producers. The Canadian dollar was at or above par with the United States dollar through 2012, resulting in diminishing returns to Newfoundland and Labrador producers. The Canadian dollar was also stronger against the Euro and the UK Pound Sterling, which caused the same effect in the respective markets of these currencies.

Snow Crab

Newfoundland and Labrador producers exported $333 million worth of snow crab in the first 11 months of 2012. This accounted for the highest value of all Newfoundland and Labrador seafood species exports. Market prices for snow crab have declined somewhat from the record levels reached in 2011, however, they remained strong in 2012. According to Urner Barry Publications Inc., the average price for 5-8 ounce sections was US$4.91 per pound in 2012, down approximately 14.5 per cent from 2011. The United States was the largest export destination for the province's snow crab, accounting for 54.1 per cent of export value, with China following at almost 37.5 per cent. China remains a major reprocessing destination for snow crab, with finished products ultimately exported to Japan and other markets such

Average Market Prices



Source: Urner Barry Publications Inc.

as the United States and Europe. Other Asian countries (i.e., Indonesia, Thailand and Japan) accounted for the majority of the remaining exports.

Shrimp

Shrimp exports were over $217 million from January to November 2012. Market prices for cooked and peeled shrimp were stable in both the United States and Europe. The average market price for 150-250 count shrimp was US$5.30, according to Urner Barry Publications Inc., up 10 per cent from the average of US$4.82 in 2011. The major markets for cooked and peeled shrimp were the United Kingdom (68.1 per cent), the United States (11.8 per cent), and Denmark (11.6 per cent). The major markets for shell-on, frozen-at-sea shrimp were Russia, Denmark, China, and Iceland.

Cod

Total export value for cod was approximately $11.3 million for the first 11 months of 2012, which was down 24.4 per cent from $15.0 million for the same time period in 2011. This is the result of lower landings and increased competition in major whitefish markets. The United States and the United Kingdom continue to be the largest export destinations for Newfoundland and Labrador cod, at 54.7 percent and 31.7 percent respectively.

Pelagics

While the unit value of pelagics increased in 2012, total export value and volume decreased. The value of mackerel exports decreased significantly to $2.6 million from $15.0 million in the January to November 2011 period. The value of herring exports declined from $11.2 million to $7.5 million, and capelin decreased slightly from $22.6 million to $20.3 million. Major mackerel markets were the United States, Jamaica, and China at 33.3 per cent, 16.2 per cent, and 14.2 per cent of export value respectively. The major export destination for herring was the United States at 82.2 per cent of its export value. China was the main export destination for capelin, while Taiwan and the United States were also top export markets for capelin.

SPECIAL FEATURE

Culinary Olympics

In October 2012, chefs from 54 countries gathered in Erfurt, Germany, to compete in the World Culinary Olympics. Through the financial support of DFA and other sponsors, Culinary Team Canada, with local chef Roger Andrews, finished in fourth place overall out of a field of 35 national teams. They received one of the four gold medals awarded in the Restaurant of Nations competition and a silver medal in the Cold Platter Display Table competition, in which only one gold medal was awarded.

Newfoundland and Labrador seafood was featured prominently in Culinary Team Canada's entries, as well as Roger's individual entry for which he won a bronze medal. Culinary Team Canada used salmon from Bay d'Espoir and lobster, and in his individual entries, Roger used halibut, trout, cod, lobster, mussels, squid, and shrimp – all from Newfoundland and Labrador.

The road to the World Culinary Olympics began four years ago. DFA funding was used to support regular team training, travel, and participation in events like the 2010 World Culinary Cup in Luxembourg. Through this continued partnership, the team worked closely with DFA on a number of projects, including judging the Mussel Match-Up Chef competition in New York, hosting a seafood cooking demonstration during Public Service Week 2011, and preparing nutritional information for a number of seafood recipes developed by the department.

In addition to Culinary Team Canada, DFA also supported a smaller team of three chefs from Newfoundland and Labrador. Chefs Roary MacPherson and Andrew Hodge, with support member Brian Piercey, entered the individual competitions and both were awarded diplomas of excellence. All their dishes featured Newfoundland and Labrador seafood, including salmon, squid, trout, shrimp, cod, halibut, and scallops.

Roary MacPherson and Andrew Hodge will be working at the Newfoundland and Labrador reception during the International Boston Seafood Show in March 2013, and will produce delectable seafood dishes at the DFA booth during the show.

For many years the department has worked collaboratively with professional chefs to help promote Newfoundland and Labrador seafood. High profile chefs are often food influencers among fellow chefs, food enthusiasts, and student chefs, and therefore have the ability to influence the food decisions of a broad range of people.

Resource Status

Management measures for commercial fish stocks, including the Total Allowable Catch (TAC), are established and regulated by the federal government through DFO. Fish stocks on the Grand Banks that straddle Canada's 200-mile limit are managed by NAFO.

The shellfish fishery remains the most valuable, and while there appears to be a decline in shrimp and snow crab stocks in some areas, other shellfish stocks remain stable. Most groundfish stocks remain at low levels, although several stocks on the Grand Banks appear to be improving with the yellowtail flounder stock considered to be fully recovered.

Snow Crab

The snow crab resource has been relatively stable on the east coast (NAFO Division 3L) of the province in recent years, while it has declined in the north. The TAC for the snow crab fishery in 2012 was set at 52,502 tonnes, a reduction of 5 per cent from a TAC of 55,237 tonnes in 2011. The quota was reduced in NAFO Divisions 3K (by 22 per cent), 2J (by 11 per cent), and 3Ps (by 9 per cent), while the quota was increased in NAFO Divisions 3LNO (by 2 per cent), and 4R3Pn (by 3 per cent).

Northern Shrimp

The Northern shrimp resource extends from the Grand Banks to the Davis Strait. Biomass estimates of Northern shrimp in southern areas have declined from historically high levels in recent years. Landings by the Newfoundland and Labrador inshore fleet increased from 44,240 tonnes in 2011 to 46,445 tonnes in 2012. In 2012, the TAC in SFA 6 was increased by 15 per cent to 60,245 tonnes. The TAC for Northern shrimp in SFA 7, which is managed by NAFO, was reduced by 38 per cent to 12,000 tonnes in 2012 and will be further reduced by 28 per cent to 8,600 tonnes in 2013. Canada's allocation of shrimp in SFA 7 is 83 per cent.

Gulf Shrimp

The province's Gulf shrimp fleet fishes in the Esquiman Channel portion of the Gulf of St. Lawrence. The fleet's TAC has been fully harvested in recent years, with the exception of 2009 in which landings declined due to market conditions. The abundance of Gulf shrimp has declined in some areas, but overall the stock remains at a healthy level. The TAC in the Esquiman Channel was increased by 15 per cent from 9,089 tonnes in 2011 to 10,452 tonnes in 2012. The Newfoundland and Labrador-based fleet is allocated 65 per cent of the TAC in the Esquiman Channel.

Total Allowable Catch (tonnes)
Newfoundland and Labrador 2012

SPECIES GROUP	2011	2012
SHELLFISH		
Crab	55,237	52,502
Gulf (4R) Shrimp (Newfoundland and Labrador allocation)	5,917	6,803
Northern Shrimp		
-inshore	45,104	46,266
-offshore/special allocations (Atlantic-wide)	106,497	129,191
GROUNDFISH		
3Ps Cod (15.6% allocated to St. Pierre et Miquelon, France)	11,500	11,500
4RS3Pn Cod (Newfoundland and Labrador and Québec)	2,000	1,500
Redfish Unit 2 (3.6% allocated to St. Pierre et Miquelon, France)	8,500	8,500
NAFO Stocks		
2+3KLMNO Turbot (Canada 36%)	17,185	16,326
3LNO Yellowtail Flounder (Canada 97.5%)	17,000	17,000
3O Redfish (Canada 30%)	20,000	20,000
3LN Redfish (Canada 42.6%)	6,000	6,000
PELAGICS		
Herring (Newfoundland and Labrador stocks + 4R)	30,874	30,341
Mackerel (Atlantic-wide)	60,000	36,000
Capelin (Newfoundland and Labrador stocks + 4R)	35,591	35,591

Source: DFO; DFA

Cod

The Northern cod (NAFO Divisions 2J3KL) stock consists of an inshore and offshore component. The offshore component has been under a directed fishing moratorium since 1992. A limited inshore fishery was conducted from 1998 to 2002, and again from 2006 to 2012. In 2012, commercial harvesters were permitted an allowance of 3,750 pounds per license holder. The Northern cod stock remains well below historical levels, but has increased from the levels observed in the 1994-2005 period.

The TAC for the south coast cod (NAFO Division 3Ps) stock was set at 15,000 tonnes from 2001 to 2006, but reduced to 13,000 tonnes in 2007 and 2008 based on scientific information. The TAC was further reduced to 11,500 tonnes in 2009 and remained at this level for the past three years. The biomass of NAFO Division 3Ps cod has increased considerably since 2009, and recent scientific information indicates continued growth in the short term.

The Northern Gulf of St. Lawrence cod (NAFO Divisions 4RS3Pn) stock remains well below its historical level. In 2003, the stock was placed under a directed fishing moratorium, but the fishery reopened in 2004 with a TAC of 3,500 tonnes. Due to signs of improvement, the TAC was increased to 6,000 tonnes in 2006 and to 7,000 tonnes from 2007 to 2009. However, the TAC was reduced to 4,000 tonnes in 2010, to 2,000 tonnes in 2011, and to 1,500 tonnes in 2012 due to a declining stock biomass.

Unit 2 Redfish

Unit 2 redfish is located on the south coast of the island and in parts of the Laurentian Channel. The stock has been relatively stable over the past several years, with little growth due to low recruitment. Since 2007, the TAC has been set at 8,500 tonnes. Landings have declined in recent years due to reduced fishing effort.

NAFO-Managed Stocks

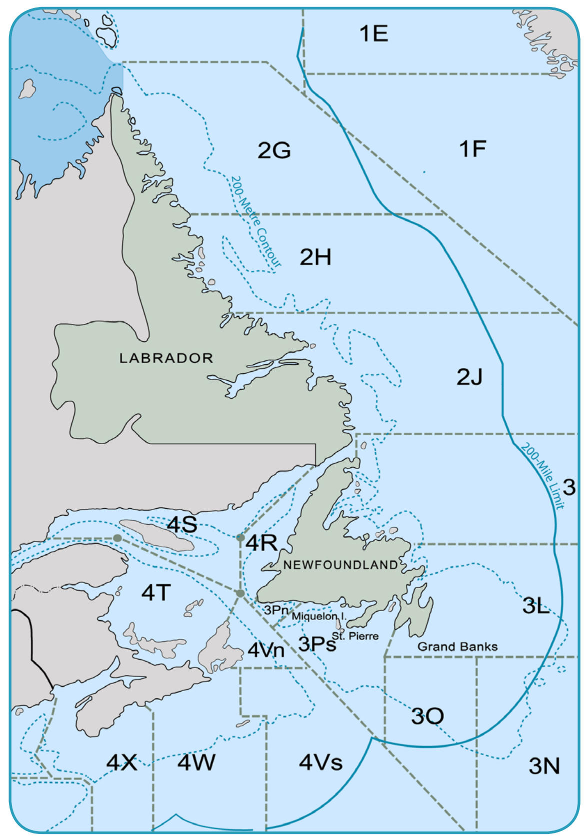
2+3KLMNO Turbot (Greenland Halibut)

The TAC for Greenland halibut was set at 16,000 tonnes in 2007 and remained at this level until 2010, during which NAFO adopted a new management strategy evaluation approach for this stock. Under the approach, the TAC was increased to 17,185 tonnes in 2011, but due to recent indications of a short-term decline in the stock, the TAC was reduced by 5 per cent to 16,326 tonnes in 2012 and will be further reduced by 5 per cent to 15,510 tonnes in 2013. Canada's allocation is 36 per cent of the quota, which is mainly fished by Newfoundland and Labrador-based vessels.

3LNO Yellowtail

The yellowtail flounder resource in NAFO Divisions 3LNO has experienced growth in the past several years. Indicators of stock status continue to be positive, and yellowtail flounder is considered to be fully recovered to levels equivalent to those of the 1980s. The TAC has been set at 17,000 tonnes since 2009 and will remain at this level in 2013. Canada's share of this stock is 97.5 per cent, which is harvested by offshore vessels based in Newfoundland and Labrador.

Fisheries Management Divisions



Source: NAFO

Other Groundfish

The following straddling groundfish stocks, which are managed by NAFO, will remain under moratoria in 2013: 3NO cod, 3NO witch flounder, and 3LNO American plaice. The NAFO Division 3LN redfish fishery, which was under moratorium in 2009, was reopened in 2010 with a TAC of 3,500 tonnes. This TAC was increased to 6,000 tonnes in 2011 and 2012, and will increase further to 6,500 tonnes in 2013. Canada's share of this stock is 42.6 per cent.

The Celtic Explorer Research Trip

The Centre for Fisheries Ecosystems Research (CFER) chartered the RV Celtic Explorer from the Irish Marine Institute to conduct an offshore survey during the spring of 2012. The vessel is a state-of-the-art 65-metre fisheries research vessel, capable of offshore acoustic surveys and other oceanographic work. The research trip was led by Dr. George Rose, Director of CFER at the Fisheries and Marine Institute of Memorial University of Newfoundland (MI), and is the second offshore survey to be conducted using the RV Celtic Explorer since the establishment of the Centre in 2010.

The purpose of this research trip was to provide important information on commercial fish species, marine ecology, oceanography, and methods of fisheries scientific research, resulting in a better understanding of the current status of Newfoundland and Labrador's marine ecosystem.

The vessel left Ireland on April 30, crossing the North Atlantic Ocean. Along the transect, acoustic data and measures of oceanographic conditions were collected. The vessel left St. John's on May 8, 2012, to conduct the offshore survey moving towards the south coast (NAFO Division 3Ps) of the province. The vessel moved east to the southern Grand Banks (NAFO Division 3NO) and continued to the Flemish Cap before moving north into the Bonavista Corridor, returning to St. John's on June 2, 2012.

The acoustic technology available on the vessel was used to conduct a multi-species acoustic survey in NAFO Division 3Ps and to locate cod and other species such as redfish, sand lance, capelin, and shrimp throughout the trip. The Newfoundland and Labrador component of the 2012 survey consisted of 4,500 nautical miles of acoustic survey data and 51 fishing trawl sets. Oceanographic and biological samples of cod, capelin, shrimp, and other species were also collected for life history and ecology studies.

During the research trip, pop-up satellite tags were deployed on large cod to provide information on their migration patterns and behaviour. The tags are designed to stay on the cod for a period of time and then they automatically detach, relaying all the information via satellite. A total of 25 cod were tagged in the survey areas. This is groundbreaking research, as this is the first study to use this type of a tag on cod.

Departmental Initiatives

During 2012, the department continued to work with stakeholders through a number of ongoing and new initiatives towards the achievement of the long-term viability of the province's seafood industry.

Aquaculture

- Construction began on a new biosecure aquaculture inflow wharf in Harbour Breton.
- The aquaculture inflow wharf in Pools Cove was extended to safely accommodate larger feed vessels.
- The department continued its oceanographic data gathering efforts with the deployment of three remote data collection stations. Real-time data is retrieved from the stations via satellite link.
- Funds were provided to industry through FTNOP and the Aquaculture Strategic Development Program for marketing initiatives, certification programs, evaluation of a trout strain, researching sea lice control, waste management coordination, and training.

Trade

- DFA continued to participate in the Canada-EU Comprehensive Economic and Trade Agreement (CETA) negotiations and monitor the Canada-Japan free trade negotiations and the Trans-Pacific Partnership negotiations to ensure the province's interests are represented. Real-market access achieved in those negotiations could result in significant benefits to the seafood industry.
- DFA worked towards the elimination of tariffs in key markets. Efforts resulted in the changes to the EU Autonomous Tariff Rate Quota (ATRQ) significantly benefiting seafood producers. The new annual quota for the 2013-15 ATRQ applied to cooked and peeled shrimp is 30,000 tonnes and allows 9,000 tonnes of shell-on shrimp to enter the EU at a 0% tariff.

Lobster Sustainability Plan

- Last year was the first full year for the sustainability and conservation plan developed by the Fish, Food and Allied Workers (FFAW) on behalf of lobster harvesters in Newfoundland and Labrador. This initiative is funded jointly by the FFAW, the Government of Canada, and the Government of Newfoundland and Labrador on a 40/30/30 basis.
- The plan, approved under the Atlantic Lobster Sustainability Measures Program, encourages long-term sustainability and economic prosperity for the lobster fishery in Atlantic Canada by supporting conservation practices that maintain and enhance lobster stocks, and improve catch monitoring and fishing effort reporting.

- The Lobster Enterprise Retirement Program (LERP) represents a major element of the Conservation and Sustainability Plan for the Newfoundland Lobster Fishery. The LERP is intended to improve the income levels of fish harvesters and the economic viability of lobster dependent fishing enterprises. The intent is to maximize the number of enterprise retirements in designated Lobster Fishing Areas, while at the same time providing exiting enterprise owners with an opportunity to receive fair value for their fishing enterprises. The program will run until March 2014, unless all of the program funding has been spent prior to this date.
- Five rounds of bidding took place in 2012 and 162 offers were accepted.

Sealing Industry

Key activities under the provincial Sealing Industry Communications and Advocacy Strategy included:

- supporting the federal government in its legal action through the World Trade Organization to remove the EU ban on seal products;
- supporting the Fur Institute of Canada and the Inuit Tapiriit Kanatami in their legal efforts to have the EU seal product ban annulled;
- advocating for the development of mandatory training and certification requirements to support professionalization in the sealing industry;
- coordinating an integrated approach on seal management and market development;
- supporting the Canadian Sealers Association organizational review;
- supporting government and industry efforts to finalize the Canada-China agreement for market access of edible seal products into China;
- supporting sealing industry efforts to stop the ban on harp seal fur products in the Russian Federation, Belarus and Kazakhstan;
- supporting sealing industry efforts to maintain the harvest during a downward shift in the market;
- providing an inventory loan to the seal processing industry for the purchase of raw material to protect the viability of the province’s seal industry while challenges at WTO and the European court of justice are ongoing; and
- supporting the development of an educational film to demonstrate the attributes of the seal hunt that accurately explain its origins and current relevance.

Marketing

- DFA and the provincial seafood industry participated in key international seafood shows, including the International Boston Seafood Show, European Seafood Exposition, World Food Moscow, Seafood Barcelona, and China Fisheries and Seafood Expo.
- The Government of Newfoundland and Labrador worked with industry stakeholders towards the implementation of sales and marketing recommendations identified in the

Report of the Independent Chair: MOU Steering Committee, Newfoundland and Labrador Fishing Industry Rationalization and Restructuring.

- DFA contributed to the Lobster Council of Canada towards a lobster traceability pilot project.
- DFA supported the Newfoundland and Labrador Culinary Olympic Team in preparation for the Culinary Olympics in Erfurt, Germany, in 2012.
- DFA provided financial assistance to industry stakeholders towards obtaining Marine Stewardship Council certification.
- The department participated in a foodservice and retail promotion for Canadian seafood and agri-food products in Hong Kong, in collaboration with a number of other provinces and the Government of Canada.
- In partnership with the Restaurant Association of Newfoundland and Labrador, the Newfoundland and Labrador Chef's Association, and the Department of Natural Resources, DFA participated in "From This Rock" culinary events highlighting Newfoundland and Labrador agri-food and seafood products.
- DFA partnered with the Department of Innovation, Business and Rural Development, the Atlantic Provinces, and the Atlantic Canada Opportunities Agency on an India food television series promoting seafood products in Atlantic Canada.

Fisheries Technology and New Opportunities Program

- DFA invested $1.3 million into fisheries research and development projects under FTNOP in 2012.
- In the harvesting sector, funding was provided for projects such as: the final year of a three-year operational energy efficiency audit to identify cost-saving measures and improve harvesters' competitiveness and economic performance; exploratory fisheries for turbot and white hake; development of a turbot fishery using pots rather than gillnets; a crab offloading efficiency evaluation, which will identify improved offloading processes/automation; completion of an online e-simulator education program for stability management, which is now available free of charge to harvesters across Canada; and a feasibility study for remote sensing of lost snow crab pots using side scan sonar.
- In the processing sector, funding was provided for projects such as: an automated mastering process for crab, which will ease human resource demands and improve ergonomics; development of a fisheries nutritional booklet and a crab information booklet; laser vision technology to inspect mussels, which will eliminate the need for manual sorting and increase efficiency; and ongoing development of a sea cucumber skinning machine, which will eliminate the need for manual processing.
- To enhance marketing, funding was provided for projects such as: marketing materials and website updates; market development for pelagics and shellfish; certification of mussel aquaculture to the Canadian Organic Aquaculture Standard and the

Global Aquaculture Practices Standard; and participation in promotional events and international trade shows. All of these initiatives help support FTNOP's objective of increasing the international competitiveness of our seafood industry.

Fisheries Research Grant Program

The Fisheries Research Grant Program funded several research initiatives in 2012, including:

- A tagging project for cod off the southern portion of the island to determine exploitation rates and provide insight into migration patterns, as well as research projects on cod in the Northern Gulf of St. Lawrence that aim to provide information on life history characteristics of this stock. These initiatives are being carried out by DFO and FFAW in collaboration with DFA.
- The use of innovative satellite tagging to track the distribution and migration patterns of cod off Newfoundland and Labrador, which is being carried out by the Centre for Fisheries Ecosystems Research.
- The recruitment portion of the post-season snow crab survey. This survey determines the biomass and recruitment prospects of the province's snow crab resource, carried out by DFO in partnership with the FFAW.
- A survey in Connaigre Bay to investigate interactions between aquaculture sites and lobster and snow crab fisheries in the area, carried out by DFO in partnership with the FFAW, Cold Ocean Salmon and DFA.
- A study to investigate interactions between the province's shrimp fishery and the snow crab resource, carried out by MI, in partnership with the FFAW, Canadian Centre for Fisheries Innovation, DFO and DFA.

Inspection Program

- The number of inspections totalled 4,519 in 2012, up from 3,681 in 2011. Inspections pertain to raw product requirements; handling and holding conditions on vessels, trailers and unloading sites; and point of export inspections at Port aux Basques. There were 410 inspections conducted at retail operations to ensure fish purchases were in accordance with the *Fish Inspection Act* and regulations.
- There were 32 audits conducted on licensed processing facilities in 2012. These audits ensure that each license holder is complying with the requirements specified under the *Fish Inspection Act* and regulations.
- In 2012, four charges were laid for violations of the *Fish Inspection Act* and regulations.
- The Quality Compliance and Enforcement Program (QCEP) completed its fifth year. Only three QCEP courses remain to be completed in the sixth year. Once these courses are completed, eligible candidates will graduate with an Advanced Diploma in Compliance and Enforcement.
- The training focuses on inspections, investigations, enforcement, courtroom procedures, policies, and legislation. All inspectors are required to complete this training to enhance their inspection skills and to be in accordance with other law enforcement agencies.

The Floating Classroom

An Ocean Education Initiative for Schools

The “Floating Classroom” is a 42-foot inshore tour/research vessel, the *MV Coastal Explorer*, equipped with state-of-the-art marine technology that provides students with hands-on at-sea learning experiences. The model was conceived and field tested by Captain Jan Negrijn, an experienced marine educator and operator of a tour company offering educational cruises in Terra Nova National Park.

DFA committed $150,000 over three years to the Ocean Learning Partnership (OLP), which was formed in collaboration with Captain Negrijn, to expand on the “floating classroom” model and integrate new ocean technologies (such as multi-beam sonar and a remotely operated vehicle). The goal of this Ocean Education Initiative is to stimulate interest in ocean sciences and technologies, and generate awareness among students and teachers about the diverse range of career opportunities in ocean-related sectors.

“Today’s kids…Tomorrow’s ocean professionals”

This initiative provides great learning opportunities for youth in this province as there is currently no dedicated program in the Newfoundland and Labrador school system to foster awareness and understanding of the coastal and marine environment. Through a collaborative approach, the OLP aims to fill this gap while linking to current curriculum outcomes. With funding from government and industry partners, the field program has expanded from Terra Nova National Park to the Holyrood Marine Base, and will be delivered in the Bonne Bay Marine Station in 2013. This past year, over 300 students participated in the floating classroom.

Program topics incorporate coastal and ocean ecology, climate change and ocean science, marine conservation, and sustainable fisheries. Interactive experiences include hauling crab pots, deploying plankton tows, dissecting squid, and mapping the seabed. As a funding partner, DFA is providing input as new learning modules are developed. Moving forward, the OLP will build online resources to link students across the province with marine professionals, real world projects, and activities at the field sites.

Ocean ‘education and awareness’ is a priority action area under the DFA-led provincial Coastal and Ocean Management Strategy and Policy Framework.

Outlook for 2013

Global seafood demand is expected to remain strong in 2013. Consumers demand species and products that provide a greater value at the retail level. The economy in the United States is recovering from the debt crisis. This will likely contribute to increased seafood consumption in 2013. Despite continued slow economic growth in China, the country's seafood imports are rising, which will provide market opportunities for the Newfoundland and Labrador seafood industry. China will also remain a major reprocessor of seafood products and may continue to place competitive pressure on the processing sector. In addition, CETA negotiations could bode well for the Newfoundland and Labrador seafood industry.

Capture Fisheries

In 2013, fish landings are expected to remain on par with 2012. Anticipated quota reductions in some fisheries, such as snow crab and inshore shrimp, will likely contribute to lower landings in these fisheries. These declines may be offset by increases in other fisheries, depending on harvesting effort and species availability.

Cooked and peeled coldwater shrimp may experience market challenges in 2013. There was slow movement of product in 2012, as well as continued competition from warm water shrimp. On a positive note, shell-on shrimp markets remain strong. In recent years, the supply of coldwater shrimp has been declining globally. This, combined with the increased quota for cooked and peeled shrimp under the 2013-15 ATRQ, could positively impact the value of the Newfoundland and Labrador shrimp industry in 2013 and beyond.

Global supply of snow crab in 2013 is expected to be lower than 2012, which should result in favourable market prices. Snow crab remains competitive with other crab species. It appears as though the global supply of lobster and cod may be higher in 2013, which could be challenging for producers of these species.

Aquaculture

Aquaculture production is expected to continue rising in 2013, due to both increased growth in the mussel sector and expansion in the salmonid sector. In 2013, salmon prices are expected to recover and remain at a higher level than was experienced in 2012. Higher prices will stimulate salmonid production, contributing to increased production value in 2013. Mussel production and market value are expected to be stable into 2013. DFA and the Newfoundland and Labrador Aquaculture Industry Association will continue to work collaboratively on supporting improved operational efficiencies and market development to ensure long-term growth in the mussel sector.


Licensed Fish Processing Plants
Newfoundland and Labrador, 2012
Location of Plant
Nain
Makkovik
Cartwright
Black Tickle
Charlottetown
Pinsent's Arm
Mary's Harbour
Cook's Harbour (2)
Griquet
St. Anthony
L'Anse au Loup
L'Anse au Clair
Black Duck Cove
Anchor Point
New Ferolle
Conche
Fleur de Lys (2)
La Scie
Twillingate
Fogo Island
Cow Head
Jackson Arm
Rocky Harbour
Trout River
New-Wes-Valley
Cox's Cove
Corner Brook
Benoit's Cove (2)
Centreville
Bonavista
Glovertown
Old Perlican (2)
Clarenville
New Harbour
Carbonear
Port de Grave (2)
Arnold's Cove
Codroy
St. Alban's
Burgeo
Hermitage
Fair Haven (2)
Channel-Port aux Basques
Burnt Islands
Harbour Breton (2)
Ship Harbour
South Dildo (3)
St. John's (3)
Grand Bank
Burin
Cape Broyle
Fortune
St. Lawrence
St. Mary's
Department of Finance
Newfoundland & Labrador Statistics Agency
Edited by Department of Fisheries and Aquaculture
Source: DFA

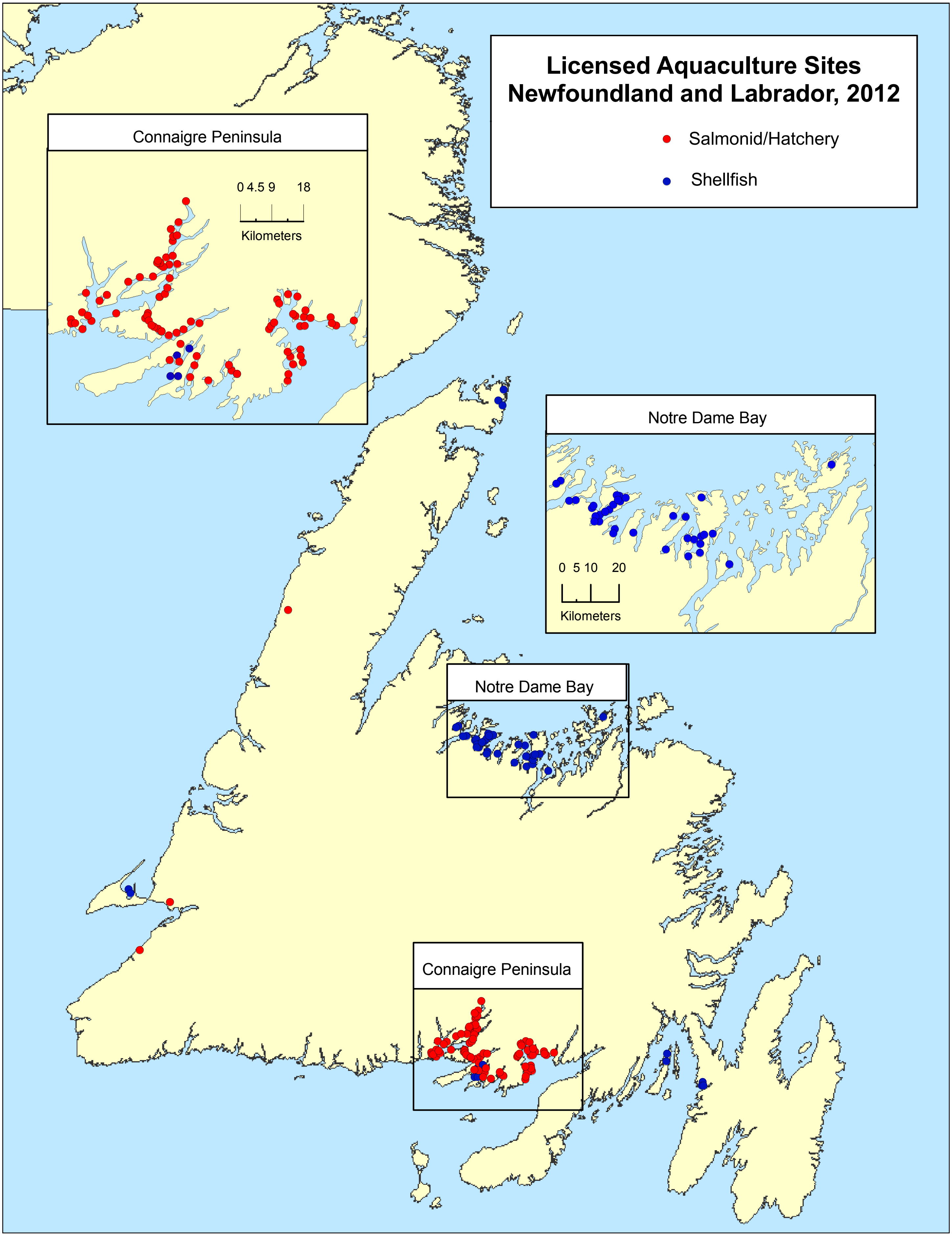

Licensed Aquaculture Sites
Newfoundland and Labrador, 2012
Salmonid/Hatchery
Shellfish
Connaigre Peninsula
0 4.5 9 18
Kilometers
Notre Dame Bay
0 5 10 20
Kilometers
Notre Dame Bay
Connaigre Peninsula

PHOTO REFERENCES

Front cover top images left to right: salmon, harvesting capelin, shrimp
Front cover feature image: Twillingate Harbour, courtesy of John Manuel
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