



# SEAFOOD INDUSTRY YEAR IN REVIEW 2011





# Message from the Minister



On behalf of the Department of Fisheries and Aquaculture, I am pleased to present the Seafood Industry Year in Review 2011. This publication highlights the performance of Newfoundland and Labrador's fishing and aquaculture industries. It also provides overall statistics for the seafood industry in the province, as well as an overview of the major policy initiatives that our department pursued in the past year.

The industry continues to be a fundamental employer in Newfoundland and Labrador, with over 20,000 people participating, mainly in rural parts of the province. Total production in the seafood industry for 2011 was valued at just over \$1.0 billion.

In July 2011, we opened the Centre for Aquaculture Health and Development in St. Alban's. This \$8.8 million facility will greatly assist with expanding the aquaculture industry, which currently employs almost 1,000 people. This industry is, without a doubt, a key part of our economic success, contributing to the development and prosperity of rural and coastal regions.

In 2011, aquaculture production reached over 17,000 tonnes, valued at \$120 million. With aquaculture continuing to grow rapidly throughout the world, our department will work hard to support growth right here at home.

Our seafood industry will move forward in 2012 and flourish, through a heightened focus on industry and government collaboration and innovative marketing. Our government will ensure that our fishing and aquaculture industries remain sustainable and viable. Both industries will continue to be pivotal parts of our province's economic stability. We are pleased to work with all industry stakeholders to accomplish these goals - goals that continue to provide dividends for our people.

**Darin T. King, PhD**

M.H.A., District of Grand Bank  
Minister



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**Publication Prepared by:**  
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Department of Fisheries and Aquaculture  
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*Bonavista*







Petty Harbour-Maddox Cove

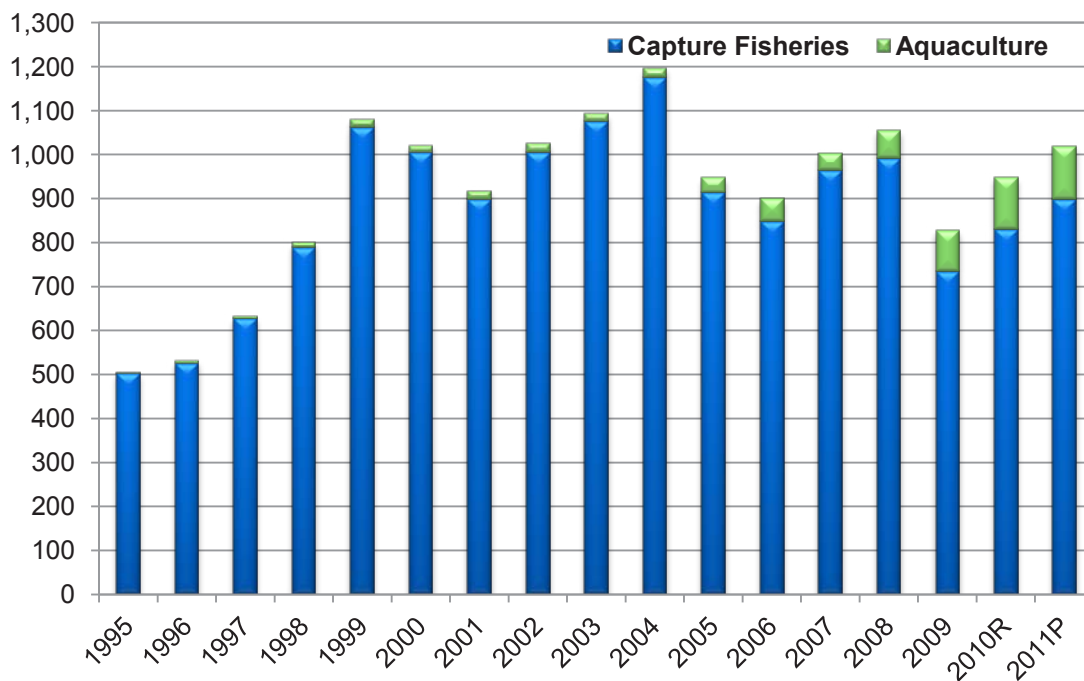
# SEAFOOD INDUSTRY PERFORMANCE 2011

Newfoundland and Labrador's seafood industry experienced another successful year in 2011. Higher market prices for key species, particularly snow crab and shrimp, combined with continued growth in the value of the aquaculture sector, resulted in a rise in total production value in 2011. Snow crab market prices for 5-8 ounce sections reached a record level. The market prices for cooked and peeled coldwater shrimp also reached a high in 2011. Total production was valued at over \$1.0 billion in 2011, representing growth of 7.3 per cent in comparison to the \$948 million recorded in 2010.

Commercial wild fishery landings declined slightly while aquaculture volume grew in 2011. Both the fishing and aquaculture industries saw a rise in production market value, up 6.2 and 1.8 per cent respectively. Despite this growth, the province's seafood industry continued to be negatively impacted by high fuel costs and a relatively strong Canadian dollar. The majority of the province's seafood products were exported to approximately 50 countries in 2011. The United States and China remained the province's primary export markets.

## PRODUCTION MARKET VALUE NEWFOUNDLAND AND LABRADOR

\$ Millions



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

R = Revised; P = Preliminary



*Preparing fish for processing plant*

## EMPLOYMENT

Employment in the fishing industry in 2011 remained relatively on par with the number of workers recorded in 2010. Total industry employment was down 0.6 per cent, to 21,289 workers compared to 21,426 workers in 2010.

There was an increase in aquaculture hatchery and grow-out employment in 2011, while declines in harvesting and processing employment were recorded. Hatchery and grow-out employment rose 28.5 per cent, to 505 persons in 2011. The number of fish harvesters remained similar to 2010, decreasing 0.6 per cent, to 10,882 persons. Processing plants process seafood from the wild and from aquaculture operations. Employment in the processing sector decreased 1.9 per cent, to 9,902 persons in 2011 compared to 10,090 persons in 2010. 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

	2010R	2011P	% CHANGE
Hatchery & Grow-out (Aquaculture)*	393	505	28.5%
Harvesting (Capture Fisheries)	10,943	10,882	-0.6%
Processing (Aquaculture & Capture Fisheries)	10,090	9,902	-1.9%
<b>Total</b>	<b>21,426</b>	<b>21,289</b>	<b>-0.6%</b>

*\*Aquaculture hatchery and grow-out employment data are collected through licensing renewals and are delayed by approximately one year.*

Source: DFA; Professional Fish Harvesters Certification Board

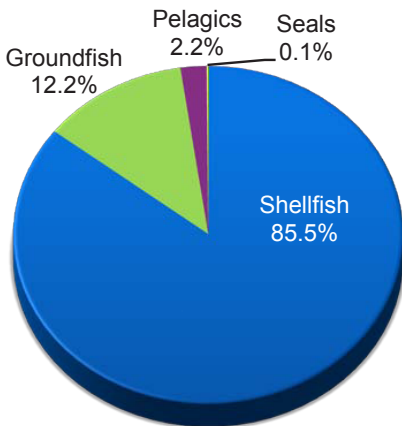
R = Revised; P = Preliminary



Cow Head

# CAPTURE FISHERIES

## Capture Fisheries Landed Value by Species Group, 2011

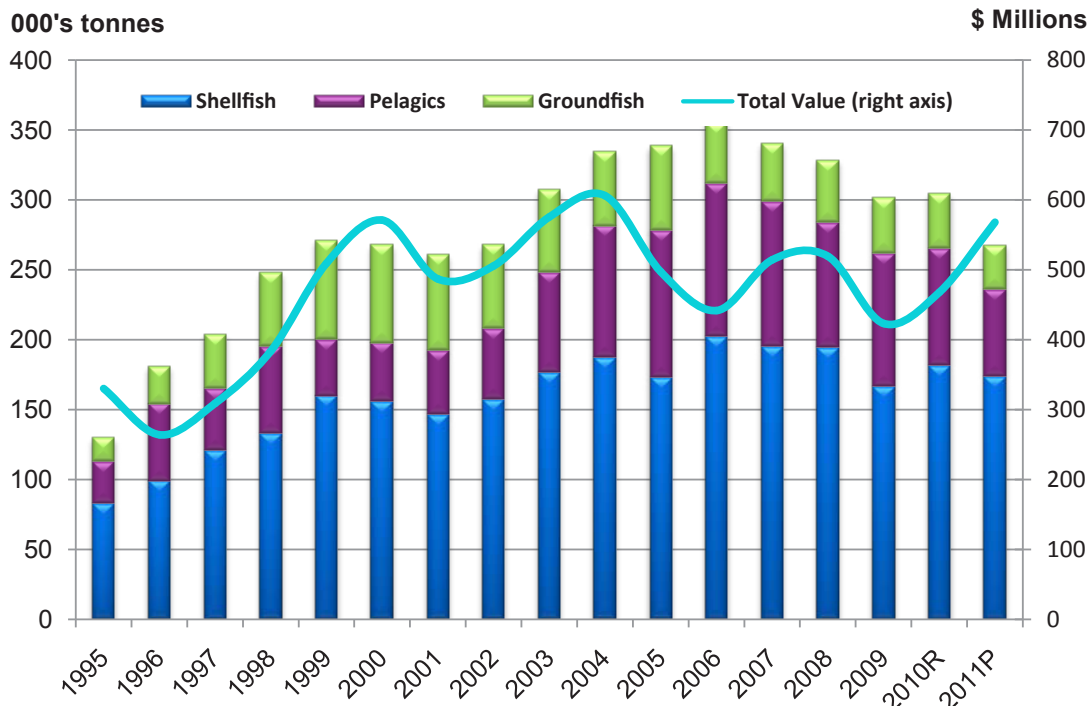


Note: Total landed value = \$568 million.

Source: DFO; DFA

The commercial fishery fared well in 2011, largely as a result of higher raw material prices for key species. While fish landings were lower compared to those of 2010, significant growth was realized for the associated landed value. Overall, landings totalled 267,910 tonnes in 2011, down 12.1 per cent compared to 2010. This decline is mainly the result of lower mackerel landings and a shrimp quota reduction. The total landed value of the 2011 harvest was \$568 million, up 21.3 per cent compared to \$468 million recorded in the previous year. This increase was the result of higher raw material prices paid for key species, particularly snow crab and shrimp. (See table on page 9.)

## FISH LANDINGS BY SPECIES GROUP NEWFOUNDLAND AND LABRADOR



Source: DFO; DFA

R = Revised; P = Preliminary

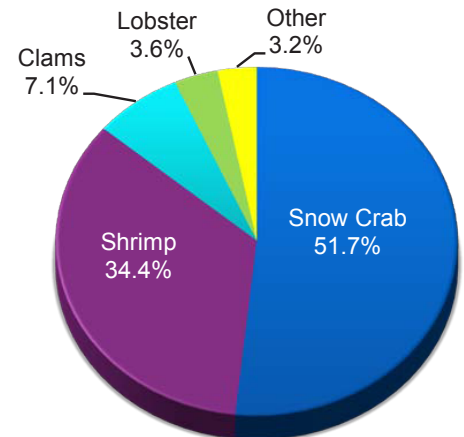


Coldwater shrimp

## SHELLFISH

The shellfish sector continued to be a major player in capture fisheries in 2011, comprising 64.9 per cent of total landings and generating 85.5 per cent of total landed value. Shellfish landings declined in 2011, mainly due to lower shrimp catches. Landings totalled 173,813 tonnes, down 4.3 per cent compared to 181,615 tonnes caught in 2010. Despite lower landings, the corresponding landed value jumped 34.2 per cent, to \$485 million, up from \$362 million in 2010. This growth is the result of higher raw material prices for snow crab and shrimp.

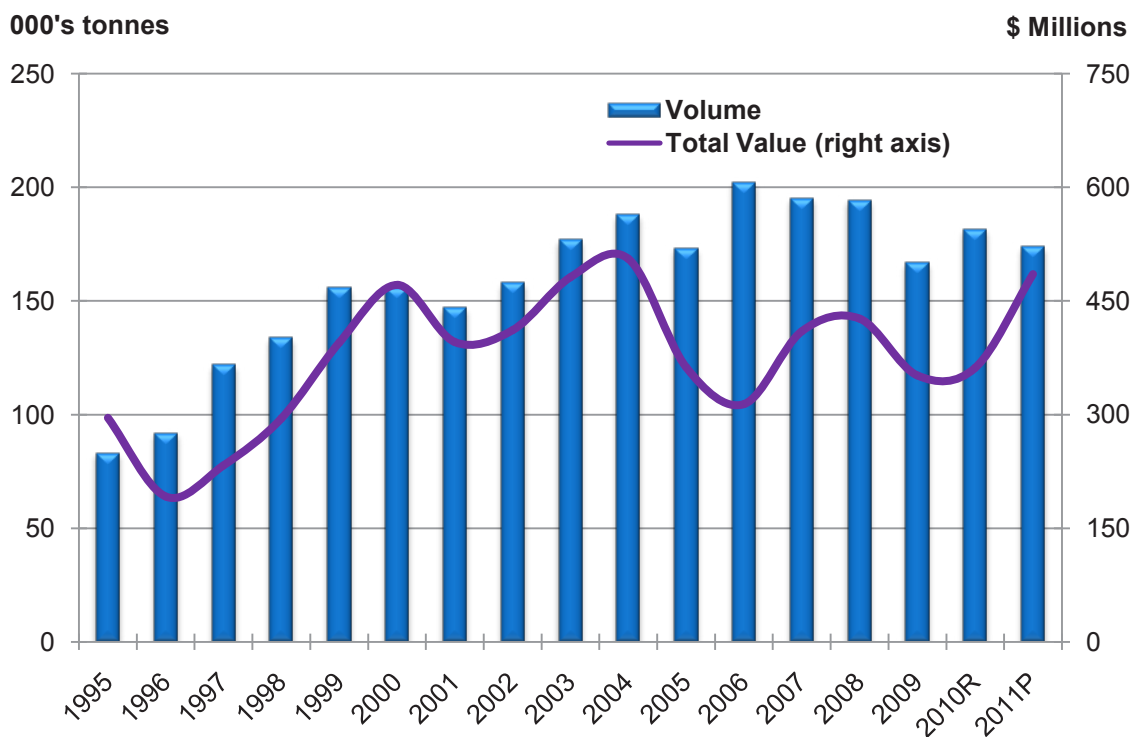
### Shellfish Landed Value by Species Group, 2011



Note: Shellfish landed value = \$485 million.

Source: DFO; DFA

## SHELLFISH LANDINGS NEWFOUNDLAND AND LABRADOR



Source: DFO; DFA

R = Revised; P = Preliminary



*Snow Crab*

### **Shrimp**

Shrimp landings declined 8.7 per cent in 2011, to 86,813 tonnes from 95,077 tonnes in 2010. This decrease is due to lower landings for both inshore and offshore fleets, which declined 8.1 and 10.0 per cent respectively. Over the past year there were quota cuts in Shrimp Fishing Area (SFA) 6 (the inshore allocation was reduced by 14 per cent while the offshore declined by 4 per cent) and in SFA 7 (down 40 per cent in both the inshore and offshore). While landings were down, the overall landed value of shrimp increased 20.1 per cent to \$167 million, up from \$139 million in 2010, due to higher raw material prices. The minimum raw material price paid for inshore and gulf shrimp was \$0.65 per pound in 2011 compared to \$0.48 per pound in 2010.

### **Snow Crab**

Overall snow crab landings in the province rose 1.4 per cent, to 52,946 tonnes in 2011 compared to 52,229 tonnes the previous year. The associated landed value recorded a significant increase, up 61.4 per cent to \$251 million in 2011 from \$155 million in 2010. This is due to a significantly higher average raw material price paid per pound for snow crab (\$2.15 in 2011 compared to \$1.35 in 2010).

### **Other Shellfish**

Surf clam landings and landed value recorded a slight decline compared to 2010. Both were down 1.3 per cent in 2011. Lobster landings and corresponding landed value decreased in comparison to the previous year, recording a decline of 24.0 per cent to 1,973 tonnes and 8.6 per cent to \$17 million respectively. The decrease is largely the result of lower catch rates. Whelk landings rose 8.7 per cent to 6,012 tonnes and the corresponding landed value increased 46.4 per cent to \$7.1 million as a result of an increase in the raw material price. An increase was also recorded for both scallop landings and landed value.

## **GROUND FISH**

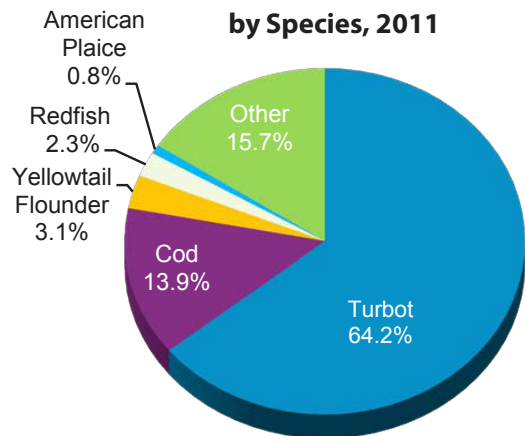
Groundfish accounted for 11.8 per cent of total capture fisheries landings in 2011 and 12.2 per cent of total landed value. Landings decreased 20.1 per cent to 31,677 tonnes, and the corresponding landed value declined 14.8 per cent to \$70 million. While the majority of groundfish species experienced declines in their harvest volumes, landings of yellowtail flounder and cod recorded the most notable decreases.



Yellowtail flounder

There was a decline of 51.0 per cent in yellowtail flounder landings, from 8,079 tonnes in 2010 to 3,955 tonnes in 2011, partially due to a labour disruption early in the year. Cod landings were down 20.3 per cent, from 12,229 tonnes in 2010 to 9,747 tonnes in 2011, mainly the result of lower catches in the Northwest Atlantic Fisheries Organization (NAFO) Division 3Ps and a quota reduction in NAFO Division 4R. Turbot landings were down 3.0 per cent, to 11,236 tonnes in 2011, and the associated landed value decreased 12.3 per cent to \$45 million. (See map on page 20 for NAFO Divisions.)

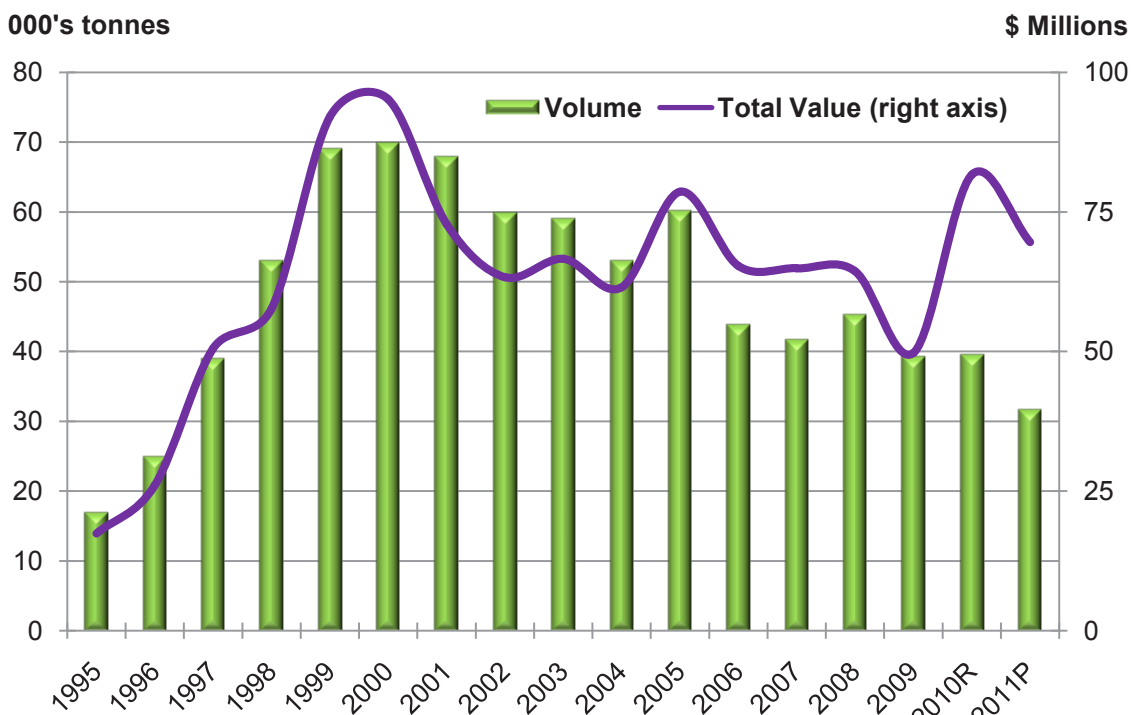
**Groundfish Landed Value by Species, 2011**



**Note:** Groundfish landed value = \$70 million.

**Source:** DFO; DFA

## GROUNDFISH LANDINGS NEWFOUNDLAND AND LABRADOR



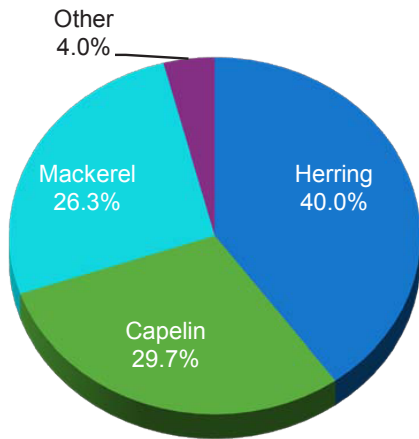
**Source:** DFO; DFA

**R = Revised; P = Preliminary**



Herring

### Pelagics Landed Value by Species, 2011



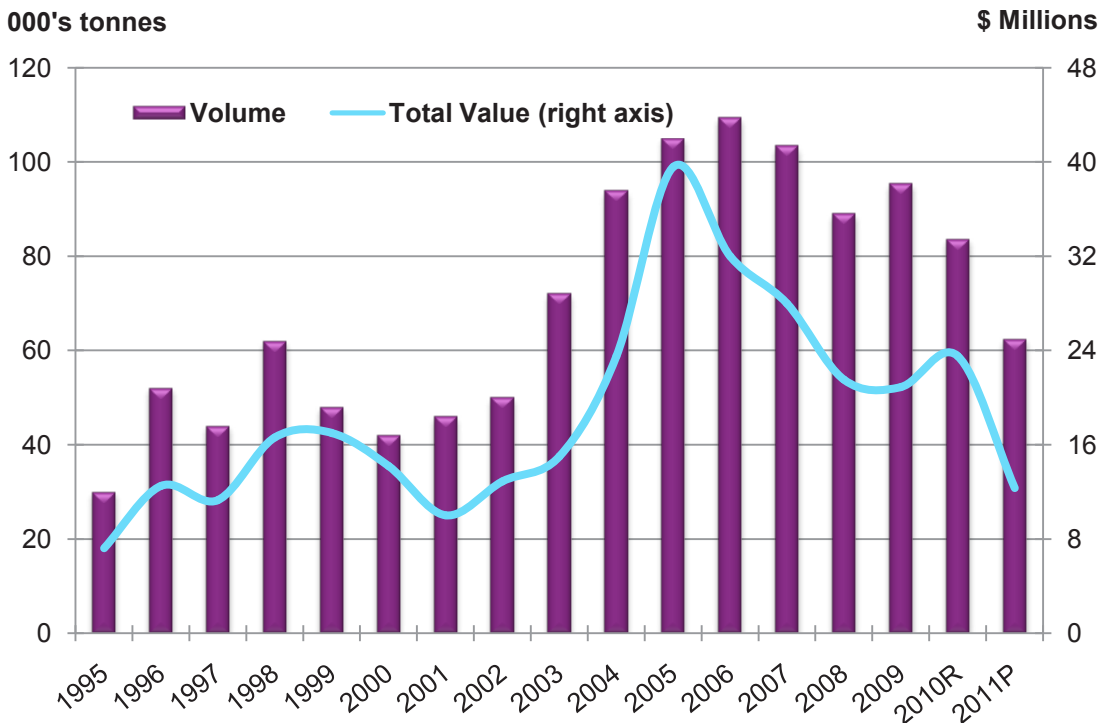
Note: Pelagics landed value = \$12 million.

Source: DFO; DFA

## PELAGICS

Pelagics comprised 23.3 per cent of total capture fisheries landings in 2011, and 2.2 per cent of total landed value. Landings decreased 25.3 per cent, from 83,604 tonnes in 2010 to 62,420 tonnes in 2011. The corresponding landed value was down 47.6 per cent, from \$24 million in 2010 to \$12 million in 2011, primarily the result of lower mackerel landings. Mackerel landings dropped 77.9 per cent, from 33,195 tonnes in 2010 to 7,332 tonnes in 2011, due to lower availability. Capelin landings and landed value both rose 24.4 per cent over 2010, to 30,143 tonnes and \$3.7 million respectively. Herring landings and landed value declined, down 4.5 and 4.3 per cent respectively.

## PELAGICS LANDINGS NEWFOUNDLAND AND LABRADOR



Source: DFO; DFA

R = Revised; P = Preliminary



*Seal harvesters*

## SEALS

Seal landings declined in 2011. Restrictions on the sale of seal products to some countries resulted in notable challenges for this fishery. Effort was reduced in 2011, as a result of lower market prices and poor ice conditions. Landings in the province were down 43.5 per cent in 2011, to 37,839 seals from 67,007 seals in 2010. The associated landed value decreased 43.2 per cent, to \$745,000 compared to \$1.3 million in the previous year.



*Goose Cove*

# LANDED VOLUME AND VALUE NEWFOUNDLAND AND LABRADOR

SPECIES GROUP	2010 REVISED		2011 PRELIMINARY		2010/2011 COMPARISON	
	VOLUME (TONNES)	VALUE (\$000'S)	VOLUME (TONNES)	VALUE (\$000'S)	% VOLUME	% VALUE
<b>SHELLFISH</b>						
Clams	22,845	\$35,093	22,557	\$34,640	-1.3%	-1.3%
Scallops	1,140	\$1,719	1,379	\$2,052	21.0%	19.4%
Lobster	2,597	\$18,853	1,973	\$17,239	-24.0%	-8.6%
Whelk	5,529	\$4,874	6,012	\$7,134	8.7%	46.4%
Shrimp	95,077	\$139,161	86,813	\$167,157	-8.7%	20.1%
Snow Crab	52,229	\$155,445	52,946	\$250,957	1.4%	61.4%
Other Shellfish	2,198	\$6,581	2,133	\$6,107	-3.0%	-7.2%
<b>TOTAL SHELLFISH</b>	<b>181,615</b>	<b>\$361,727</b>	<b>173,813</b>	<b>\$485,286</b>	<b>-4.3%</b>	<b>34.2%</b>
<b>GROUNDFISH</b>						
Cod	12,229	\$12,123	9,747	\$9,669	-20.3%	-20.2%
Redfish	2,584	\$1,603	2,870	\$1,601	11.1%	-0.1%
American Plaice	1,675	\$1,223	811	\$585	-51.6%	-52.2%
Yellowtail Flounder	8,079	\$4,403	3,955	\$2,179	-51.0%	-50.5%
Greysole/Witch	757	\$537	645	\$459	-14.8%	-14.7%
Turbot (Greenland Halibut)	11,579	\$50,921	11,236	\$44,679	-3.0%	-12.3%
Pollock	338	\$199	194	\$105	-42.6%	-47.4%
Hake	515	\$179	272	\$231	-47.2%	29.0%
Monkfish	224	\$238	304	\$327	35.7%	37.3%
Skate	352	\$86	585	\$150	66.2%	75.0%
Other	1,334	\$10,133	1,058	\$9,572	-20.7%	-5.5%
<b>TOTAL GROUND FISH</b>	<b>39,666</b>	<b>\$81,645</b>	<b>31,677</b>	<b>\$69,556</b>	<b>-20.1%</b>	<b>-14.8%</b>
<b>PELAGICS</b>						
Herring	26,032	\$5,156	24,872	\$4,936	-4.5%	-4.3%
Mackerel	33,195	\$14,628	7,332	\$3,238	-77.9%	-77.9%
Capelin	24,240	\$2,939	30,143	\$3,655	24.4%	24.4%
Other	137	\$797	73	\$496	-46.7%	-37.7%
<b>TOTAL PELAGICS</b>	<b>83,604</b>	<b>\$23,520</b>	<b>62,420</b>	<b>\$12,324</b>	<b>-25.3%</b>	<b>-47.6%</b>
Seals (number)	67,007	\$1,311	37,839	\$745	-43.5%	-43.2%
<b>TOTAL</b>	<b>304,885</b>	<b>\$468,203</b>	<b>267,910</b>	<b>\$567,911</b>	<b>-12.1%</b>	<b>21.3%</b>

**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

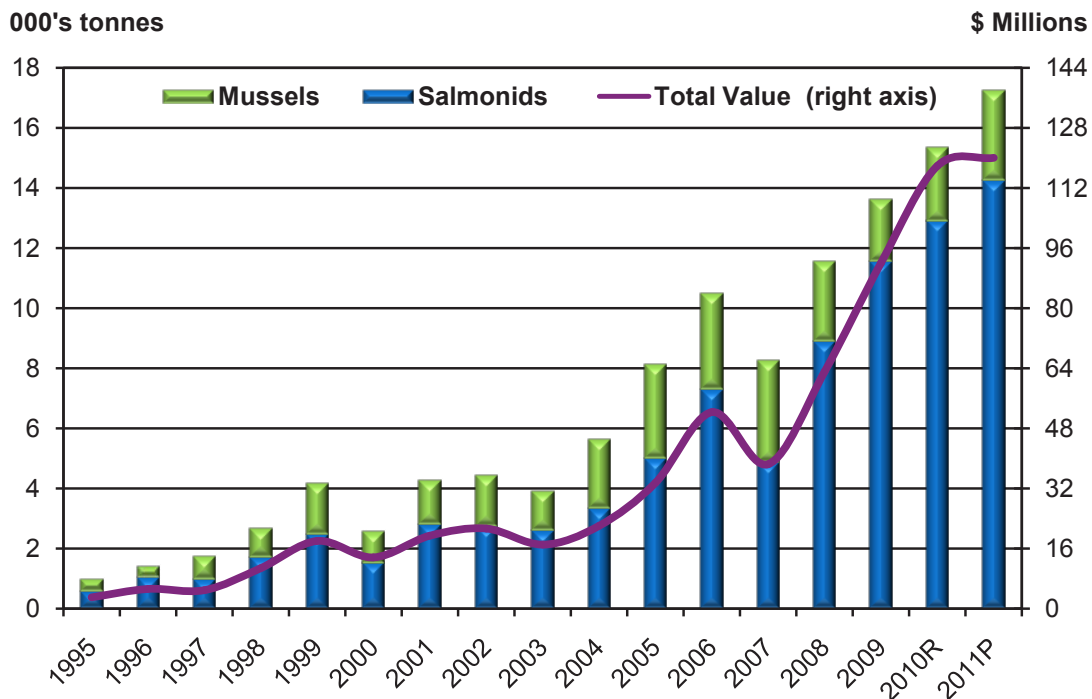


Salmonid site

# AQUACULTURE

In 2011, the Newfoundland and Labrador aquaculture industry continued to grow in terms of production and market value. Aquaculture production rose 12.4 per cent, from 15,360 tonnes in 2010 to 17,264 tonnes in 2011. This growth was facilitated by the continued expansion of the salmonid sector and a rebounding mussel sector. The total market value increased 1.8 per cent, from \$118 million in 2010 to \$120 million in 2011. Market value increases were driven by higher production in both the salmonid and mussel sectors.

## AQUACULTURE PRODUCTION NEWFOUNDLAND AND LABRADOR



Source: DFO; DFA

R = Revised; P = Preliminary



*Mussel site*

## SALMONIDS

Commercial production within the salmonid sector is focused on Atlantic salmon and steelhead trout. DFA has approved 81 commercial salmonid site licenses that cover a combined area of 2,056 hectares (see map on page 28). In 2011, production reached 14,264 tonnes, valued at \$112 million in the marketplace. Growth in total salmonid production was slowed due to downtime resulting from processing facility modernization efforts that will increase efficiencies in the future. The industry did, however, continue to expand with the stocking of sites in the Rencontre East area.

DFA continues to lead the development of critical infrastructure solutions required to meet the demands of the expanding salmonid sector. Specifically, 2011 has witnessed the opening of a number of DFA-led facilities, including new aquaculture-specific wharf facilities, salmonid hatcheries and the Centre for Aquaculture Health and Development in St. Alban's. In addition, DFA has begun collecting oceanographic data in the Coast of Bays region to facilitate the sustainable management of growing salmonid operations.

## MUSSELS

Commercial shellfish aquaculture production is concentrated on the blue mussel. DFA has approved 51 commercial shellfish site licenses that cover a combined area of 3,843 hectares (see map on page 28). Mussel production has trended upward over the last few years. In 2011, production climbed to 3,000 tonnes, valued at \$8 million in the marketplace.

Mussel aquaculture sales have rebounded from the modest numbers reported during the aftermath of the 2008 global economic downturn. DFA and industry have successfully worked together to identify and pursue market opportunities. As a result, consumer demand and market access have recovered in recent years.



# Centre for Aquaculture Health and Development

*Technician conducts sample analysis*



*Post mortem analysis*

DFA is committed to supporting the development of an aquaculture industry that is socially, economically and environmentally sustainable. A major initiative toward achieving this goal has been the ongoing development and expansion of aquatic animal health capacity. This expansion is exemplified by the new Centre for Aquaculture Health and Development (CAHD) that was opened by Premier Kathy Dunderdale in July 2011. This \$8.8 million facility is located in St. Alban's - the centre of the bustling salmonid aquaculture industry along Newfoundland's south coast.

The CAHD is a modern, world-class laboratory outfitted with state-of-the-art scientific equipment and live animal holding facilities. It serves as the primary diagnostic facility for the province's aquaculture industry and allows for an advanced fish health surveillance system. The CAHD is also the centre for the development of advanced biosecurity practices and applied clinical research. In addition, the Centre utilizes a Laboratory Information Management System to validate diagnostic results while exhibiting a superior quality assurance/control program. The CAHD is one of the few aquatic animal health facilities designed to reach a biocontainment level and attain accreditation in Canada. This investment demonstrates Newfoundland and Labrador's commitment to a progressive and sustainable industry. Such initiatives are attractive to private sector expansion and investment.

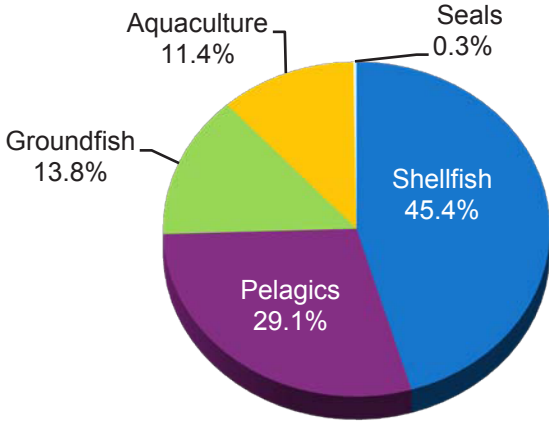
The facility also houses the regional office of DFA's Aquaculture Development and Aquatic Animal Health Divisions, with office space and a conference room that has telemedicine and continuing education capabilities. Aquaculture Development staff work closely with industry partners to ensure the effective delivery of provincial aquaculture policies and programs, aimed at facilitating the expansion and sustainable development of the industry.

In addition to being an important infrastructure development for the aquaculture industry, the CAHD is a welcomed contribution to the social and economic fabric of the Coast of Bays region. The opening of the CAHD has coincided with efforts to hire and retain highly skilled and educated employees to operate the facility. Indeed, the opening of the CAHD has contributed to excitement for the future of the aquaculture industry and the development of the Coast of Bays region.



*Cooked and peeled shrimp processing*

Production Volume by Species, 2011



**Note:** Total production volume = 140,211 tonnes

**Source:** DFA

## PRODUCTION OVERVIEW

In 2011, there were 114 licensed processing facilities in the province. Of these, 103 were in operation (89 primary, 1 secondary, 5 aquaculture and 8 retail). Total seafood production declined 17.9 per cent, from 170,843 tonnes in 2010 to 140,211 tonnes in 2011. This decrease in production is largely the result of a drop in mackerel processing, which was down 78.0 per cent to 6,926 tonnes.

### SHELLFISH

Shellfish production increased 2.4 per cent, from 62,199 tonnes in 2010 to 63,699 tonnes in 2011. This increase is mainly attributed to higher shrimp and snow crab production. Cooked and peeled coldwater shrimp production was 19,296 tonnes in 2011, up 5.0 per cent from 18,371 tonnes in 2010, and accounted for 13.8 per cent of total seafood production. In 2011, there was more product sourced from the offshore sector and from imports for onshore processing than in previous years. Snow crab sections for the United States market increased 5.6 per cent, from 18,259 tonnes in 2010 to 19,275 tonnes in 2011. Japanese snow crab sections, however, declined by 8.4 per cent, to 9,950 tonnes in 2011 after rising the previous year. Snow crab sections for the Japanese and United States markets combined accounted for 20.8 per cent of total seafood production. Shellfish represented 45.4 per cent of total production in 2011 compared to 36.4 per cent in 2010.

### PELAGICS

Pelagics production decreased significantly in 2011, recording a 42.2 per cent decline, from 70,541 tonnes in 2010 to 40,776 tonnes in 2011. There was a significant fall in mackerel production, dropping 78.0 per cent, from 31,459 tonnes in 2010 to 6,926 tonnes in 2011 as the result of a drop in mackerel availability. Herring production also decreased significantly, down 34.5 per cent, from 16,537 tonnes in 2010 to 10,828 tonnes in 2011. Capelin production, however, increased 7.0 per cent, from 18,532 tonnes in 2010 to 19,827 tonnes in 2011. Pelagics production comprised 29.1 per cent of total seafood production in 2011.

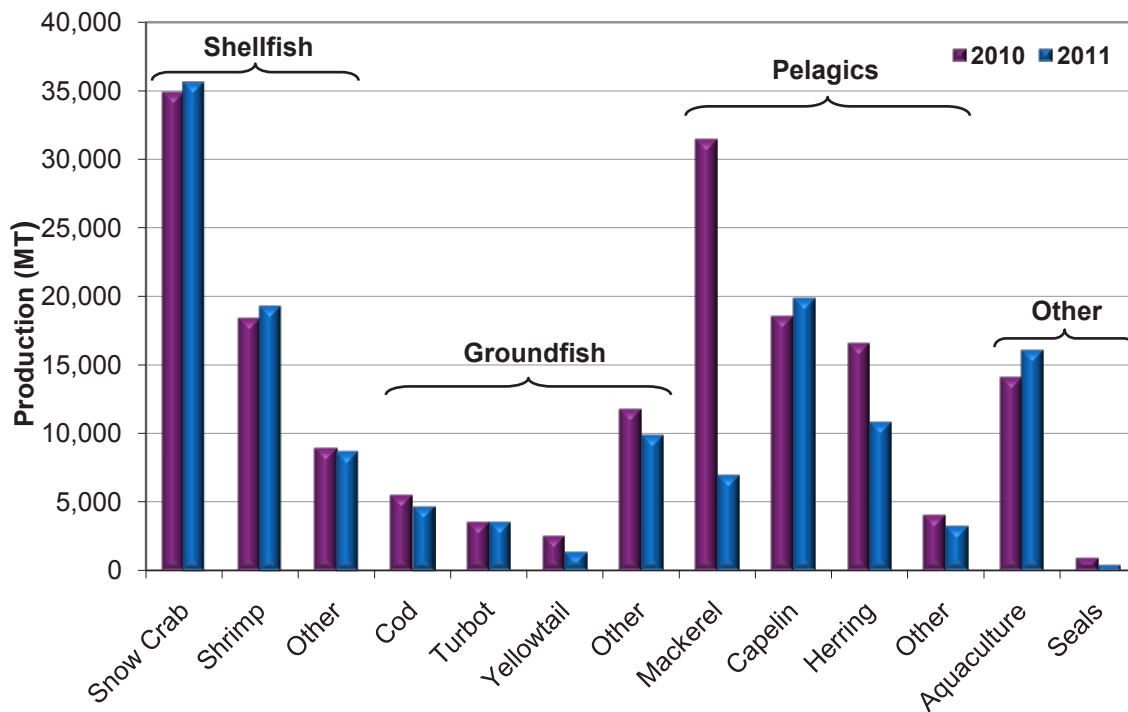


Processing plant workers

## GROUNDFISH

Groundfish processing decreased 16.4 per cent, from 23,205 tonnes in 2010 to 19,393 tonnes in 2011. Much of this decline is the result of lower production of yellowtail flounder and cod. Groundfish production accounted for 13.8 per cent of the 2011 total seafood production.

### PRODUCTION VOLUME BY KEY SPECIES NEWFOUNDLAND AND LABRADOR



Source: DFA



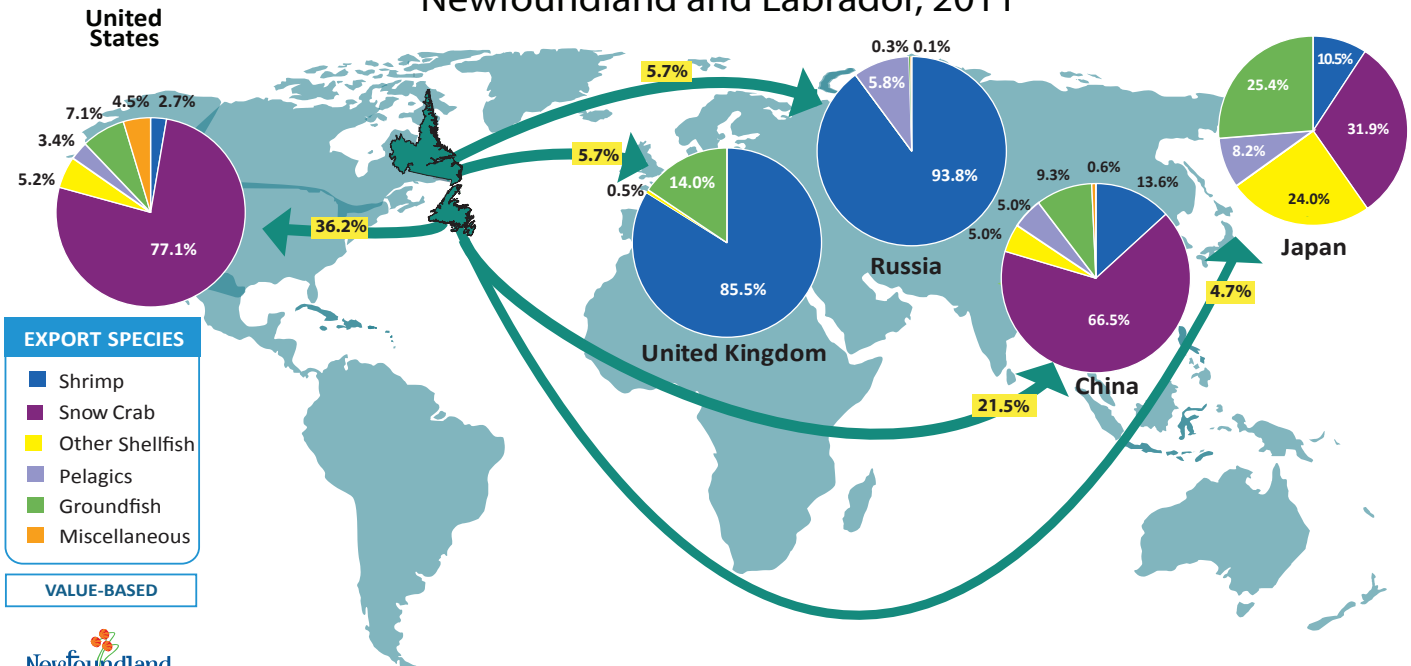
Assorted seafood

# MARKET OVERVIEW

The Newfoundland and Labrador seafood industry is export dependent. According to Statistics Canada, the province's seafood export value in the first 11 months of 2011 surpassed its total value in 2010, reaching \$830 million, up 11.7 per cent against the same period of the previous year. Improved global demand for seafood, higher market prices for snow crab and shrimp, and an increase in aquaculture exports contributed to this growth. The export volume, however, decreased 10.2 per cent compared to the same period in 2010, to approximately 152,000 tonnes in the first 11 months of 2011. Annual exports in 2011 are expected to reach 160,000 tonnes with a value of around \$880 million, compared to 181,000 tonnes and \$780 million in 2010.

The United States and China continued to be the province's largest seafood markets in 2011, representing 36.2 and 21.5 per cent respectively of total export value. Other key markets, based on export value, included the United Kingdom (5.7 per cent), Russia (5.7 per cent) and Japan (4.7 per cent). These top markets comprised 73.8 per cent of the provincial export value. The remaining portion was exported to about 50 other countries.

## Top Five World Market Destinations for Seafood Products Newfoundland and Labrador, 2011



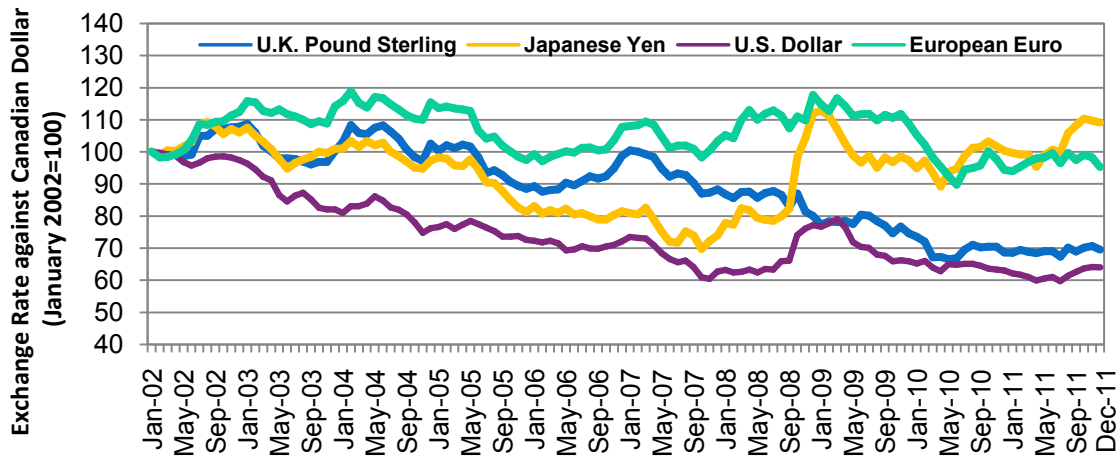
Department of Finance  
Newfoundland & Labrador Statistics Agency  
Edited by Department of Fisheries and Aquaculture

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

**Source:** Statistics Canada

## SELECTED FOREIGN EXCHANGE RATES

INDEXED TO JANUARY 2002



Source: Bank of Canada

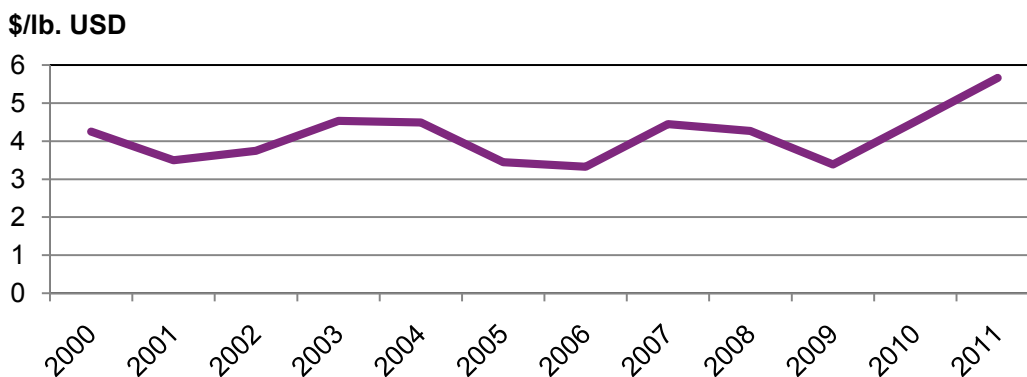
The strong Canadian dollar continued to impact the province's seafood industry in 2011. Sales to our major trading partners are negatively impacted by an appreciation of the Canadian dollar. For example, if Canadian producers received \$1.00 per pound of product in 2002 from each country depicted in the chart above, assuming no change in the price level, the actual price received in December 2011 would vary due to changing exchange rates. Under these assumptions, Canadian producers would now receive \$0.64 per pound from the United States, \$0.70 from the United Kingdom, \$0.95 from Europe and \$1.09 from Japan. The exchange rate between Canada and Japan is therefore the most favourable of the four, creating opportunities for higher returns for Canadian seafood.

## SNOW CRAB

Snow crab exports accounted for the highest value of all Newfoundland and Labrador seafood exports in 2011, at over \$400 million. Market prices for snow crab reached a record level. The average price for 5-8 ounce sections was US\$5.66 per pound in 2011, up 25.2 per cent from

## AVERAGE MARKET PRICES

5-8 OUNCE FROZEN CRAB SECTIONS



Source: Urner Barry Publications Inc.

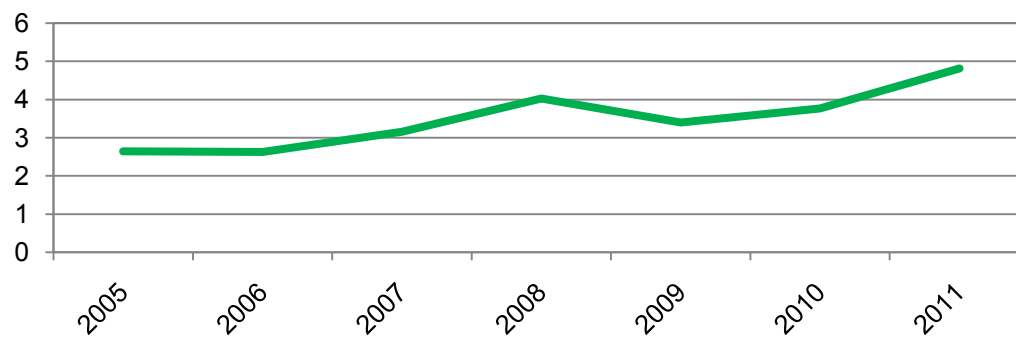
2010 and up 67.0 per cent from 2009. The United States continued to be the largest importer of the province's snow crab, accounting for 60.6 per cent of total export value, with China and Japan following at 31.2 and 3.3 per cent respectively. Traditionally, Japan was the second largest market for Newfoundland and Labrador snow crab. Now, much of the province's snow crab is shipped to China and reprocessed for the Japanese and other markets.

## SHRIMP

Total export value for shrimp was nearly \$212 million in 2011. Market prices for cooked and peeled shrimp showed significant gains. The average market price for 150-250 count shrimp was US\$4.82, up 27.9 per cent from 2010 and 41.8 per cent from 2009. The major markets for cooked and peeled shrimp were the United Kingdom (47.3 per cent), Denmark (22.3 per cent), the Netherlands (11.5 per cent) and the United States (10.6 per cent). The major markets for offshore frozen shrimp were Russia, China, Iceland and Denmark.

### AVERAGE MARKET PRICES 150-250 COUNT COLDWATER SHRIMP

\$/lb. USD



Source: Urner Barry Publications Inc.

## COD

Export value of cod decreased in 2011, from \$21 million in 2010 to \$15 million, partially the result of lower landings. The United States and the United Kingdom were the largest export destinations, at 46.9 and 40.1 per cent of export value respectively.

## PELAGICS

Pelagic market prices showed increases for some species in 2011. The export value of capelin was over \$22 million, up 38.5 per cent from 2010, with Asia being the major export destination, accounting for 88.9 per cent of total capelin export value. Mackerel exports were nearly \$15 million, down 50.5 per cent from 2010, due to a reduction in landings. The main destinations were Russia (13.2 per cent), the United States (12.0 per cent) and Georgia (12.0 per cent). The United States was the major destination for herring exports at 50.1 per cent, with Nigeria and Japan following at 14.8 and 12.9 per cent respectively.



*Cooked shrimp for packaging*

## 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. While shrimp stocks have declined in some areas, other key shellfish stocks remain relatively stable. Most groundfish stocks remain at low levels, although several stocks on the Grand Banks, including American plaice and cod, appear to be improving. The yellowtail flounder stock is considered to be fully recovered.

### SNOW CRAB

The snow crab resource has been relatively stable in the southern areas of the province in recent years, although it appears to be declining in the north. The TAC for the snow crab fishery in 2011 was set at 55,237 tonnes, a slight reduction from a TAC of 56,064 tonnes in 2010. The quota was reduced in NAFO Division 3K (17 per cent), while the quota was increased in Divisions 3LNO (3 per cent), 3Ps (8 per cent), and 4R3Pn (14 per cent). There was no change in the quota in Division 2J in 2011.

### NORTHERN SHRIMP

The northern shrimp resource extends from the Grand Banks to the Davis Strait. Biomass estimates of northern shrimp in southern areas are declining from historically high levels. Landings by the Newfoundland and Labrador inshore and offshore sectors have declined in recent years. In 2011, the TAC in SFA 6 was reduced by 15 per cent to 52,387 tonnes. The TAC for northern shrimp in SFA 7, which is managed by NAFO, was reduced by 36 per cent to 19,200 tonnes in 2011. The TAC will be further reduced by 38 per cent to 12,000 tonnes in 2012. 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 taken in recent years, with the exception of 2009 in which landings declined due to market conditions. Although the abundance of Gulf shrimp has declined in recent years, the stock remains at a healthy level. The TAC in Esquiman Channel was reduced by 478 tonnes, from 9,567 tonnes in 2010 to 9,089 tonnes in 2011. The Newfoundland and Labrador-based fleet is allocated 66 per cent of the TAC.

## TOTAL ALLOWABLE CATCH (TONNES) NEWFOUNDLAND AND LABRADOR 2011

SPECIES GROUP		2010	2011
SHELLFISH	<b>SHELLFISH</b>		
	Crab	56,064	55,237
	Gulf (4R) Shrimp (Newfoundland and Labrador allocation)	6,228	5,917
	Northern Shrimp		
	-inshore	57,906	45,104
	-offshore/special allocations (Atlantic-wide)	102,893	97,604
GROUNDFISH	<b>GROUNDFISH</b>		
	3Ps Cod (15.6% allocated to St. Pierre et Miquelon, France)	11,500	11,500
	4RS3Pn Cod (Newfoundland and Labrador and Québec)	4,000	2,000
	Redfish Unit 2 (3.6% allocated to St. Pierre et Miquelon, France)	8,500	8,500
	<i>NAFO Stocks</i>		
	2+3KLMNO Turbot (Canada 36%)	16,000	17,185
	3LNO Yellowtail Flounder (Canada 97.5%)	17,000	17,000
	30 Redfish (Canada 30%)	20,000	20,000
3LN Redfish (Canada 42.6%)	3,500	6,000	
PELAGICS	<b>PELAGICS</b>		
	Herring (Newfoundland and Labrador stocks + 4R)	31,826	30,874
	Mackerel (Atlantic-wide)	60,000	60,000
	Capelin (Newfoundland and Labrador stocks + 4R)	41,691	35,591

Source: DFO; DFA

### COD

The northern cod (2J3KL) stock consists of inshore and offshore components. The offshore component has been under a moratorium on directed fishing since 1992. A limited inshore fishery was conducted from 1998 to 2002, and again from 2006 to 2011. In 2011, commercial harvesters were permitted an allowance of 3,750 pounds per license holder. The northern cod stock remains well below historical levels, however, it has increased from the levels observed in the 1994 to 2005 period.

The TAC for the south coast cod (3Ps) stock was set at 15,000 tonnes from 2001 to 2006, however, it was 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 in 2010 and 2011. The biomass of NAFO Division 3Ps cod has increased slightly since 2009, and recent scientific information indicates some growth in the short term.

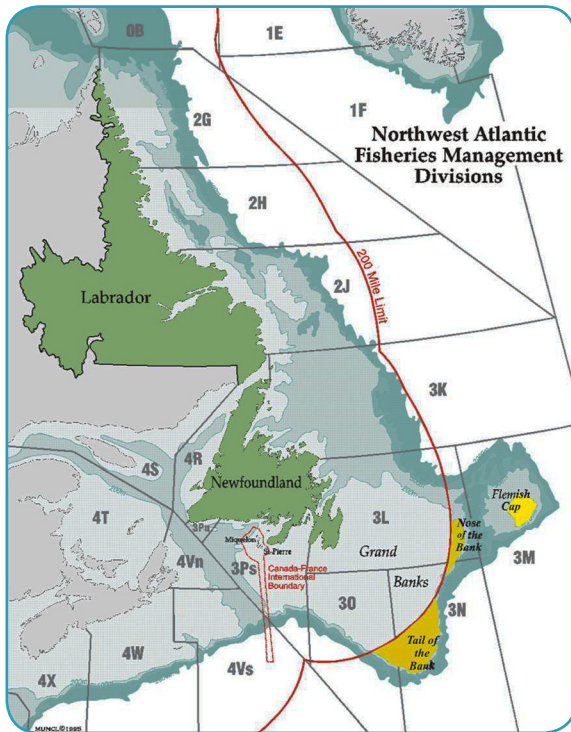
The northern Gulf of St. Lawrence cod (4RS3Pn) stock remains well below its historical level. In 2003, the stock was placed under a moratorium on directed fishing, however, the fishery reopened in 2004 with a TAC of 3,500 tonnes. Due to signs of improvement, the TAC was increased to 6,000 tonnes in 2006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



Makkovik plant

## UNIT 2 REDFISH

Unit 2 redfish is located on the south coast of the island portion of the province and in parts of the Laurentian Channel. The province's fleets traditionally harvest between 35 and 40 per cent of the Unit 2 redfish TAC. The stock has been relatively stable over the past several years, with little growth due to poor recruitment. Since 2007, the TAC has been set at 8,500 tonnes. Landings have increased in recent years, however, they remain low due to limited fishing effort.



Source: NAFO

## 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 this approach, the TAC was increased to 17,185 tonnes in 2011. Due to recent indications of a short-term decline in the stock, the TAC will be reduced by 5 per cent to 16,326 tonnes in 2012. Canada's allocation is 36 per cent of the quota, which is mainly harvested by Newfoundland and Labrador-based vessels.

### 3LNO Yellowtail Flounder

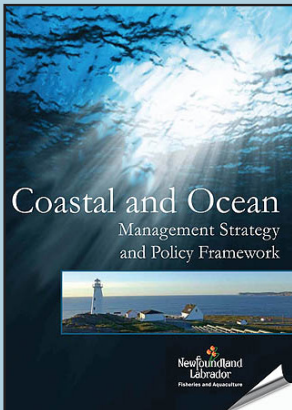
The yellowtail flounder resource in NAFO Division 3LNO has experienced growth in the past several years. Indicators of stock status continue to be positive and yellowtail flounder is considered to be fully recovered to levels equivalent to those of the

1980s. The TAC has been set at 17,000 tonnes since 2009 and will remain at this level in 2012. Canada's share of this stock is 97.5 per cent, which is harvested by offshore vessels based in Newfoundland and Labrador.

### Other Groundfish

The following straddling groundfish stocks, which are managed by NAFO, will remain under moratoria in 2012: 3NO cod, 3NO witch flounder and 3LNO American plaice. The 3LN redfish fishery, which was under a 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 will remain at this level in 2012. Canada's share of this stock is 42.6 per cent.

# Coastal and Ocean Management Strategy



The coastal and ocean environment is deeply linked to our province's culture, heritage, history, recreational enjoyment and economic prosperity. Activities along our coasts must be effectively managed to ensure healthy and productive coastal ecosystems and a strong economy.

This prompted the Government of Newfoundland and Labrador to address the challenges created by increased demands on the province's marine areas. On June 16, 2011, DFA released the provincial Coastal and Ocean Management Strategy and Policy Framework.

The strategy provides a long-term vision for the planning, management, conservation and sustainable use of the province's coastal and ocean areas and resources. Three over-arching strategic approaches to integrated coastal and ocean management are recommended in the strategy and will be guiding principles in moving forward:

- coordination across government;
- decisions based on information and research; and
- public education and awareness.

Addressing coastal issues is a shared responsibility and it is important that all coastal users are actively involved. In order to guide and facilitate provincial planning, the strategy provides direction for policy development and actions under six key coastal issues raised during public discussions:

- healthy marine environments;
- social, cultural and economic sustainability;
- coastal land use;
- competing needs and interests;
- coastal and marine infrastructure; and
- climate change.

The strategy was developed with input from a number of provincial departments and agencies, and through stakeholder and public consultations. DFA is actively engaged with other partners to support projects aimed at increasing the knowledge, best practices, and public awareness around local and regional coastal issues.



*Atlantic salmon*

## DEPARTMENTAL INITIATIVES

### Aquaculture

- In July, Premier Kathy Dunderdale officially opened the Centre for Aquaculture Health and Development in St. Alban's and aquaculture-specific wharves in Hermitage-Sandyville and Pool's Cove.
- Two wharves were acquired through the Government of Canada Ports Divestiture Program in 2010. In 2011, DFA refurbished the wharf in St. Alban's and design work continued on the wharf in Milltown.
- Salmonid hatcheries were constructed in St. Alban's and Stephenville, and an existing hatchery in Daniel's Harbour underwent expansion.
- DFA provided funds to mussel companies for market development under the Fisheries Technology and New Opportunities Program (FTNOP).
- DFA conducted baseline oceanographic research in support of further sustainable development of the aquaculture industry.

### Trade

- On March 17, the province announced its participation in the Canada-European Union Comprehensive Economic and Trade Agreement negotiations, thereby assuming a greater role at the negotiating table. Prior to this, the province monitored negotiations as observers. Real market access, including the elimination of tariffs and non-tariff barriers on seafood products entering the European Union, would result in substantial benefits to the province's seafood industry.
- The industry continued to avail of the European Union's reduced tariff under the Autonomous Tariff Rate Quota on shrimp.

### Lobster Sustainability Plan

- A lobster plan submitted by the Fish, Food and Allied Workers (FFAW) was approved as a partnership initiative under the federal Atlantic Lobster Sustainability Measures Program. The Government of Canada and the Government of Newfoundland and Labrador will each contribute over \$9 million towards this initiative.
- The program encourages the long-term sustainability and economic prosperity of the lobster fishery in Atlantic Canada by supporting conservation practices that maintain and enhance lobster stocks, and improve catch monitoring and fishing effort reporting.

### Sealing Industry

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

- Supporting the federal government in its legal action through the World Trade Organization to remove the European Union ban on seal products;



Conche

- Supporting the Fur Institute of Canada and the Inuit Tapiriit Kanatami in their legal efforts to have the European Union seal products 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; and
- Supporting sealing industry efforts to stop the ban on the import of harp seal fur products into the Russian Federation, Belarus and Kazakhstan.

## Marketing

- DFA and the provincial seafood industry participated in key international seafood shows, including the International Boston Seafood Show, the European Seafood Exposition, World Food Moscow and China Fisheries and Seafood Expo.
- The Government of Newfoundland and Labrador is moving forward with the sales and marketing recommendations identified in the *Report of the Independent Chair: MOU Steering Committee, Newfoundland and Labrador Fishing Industry Rationalization and Restructuring*. DFA is working with industry stakeholders to implement these recommendations.
- In partnership with the Atlantic Canada lobster industry, the federal government, the Atlantic provinces and Quebec, DFA provided \$25,000 to the Lobster Council of Canada.
- DFA contributed \$5,000 to the 2011 International Coldwater Prawn Forum in London, England. The FFAW and Newfoundland and Labrador seafood processors were members of the organizing committee.
- In 2011, DFA provided two \$10,000 sponsorships, one to the Newfoundland and Labrador Culinary Olympic Team and one to the Canadian Culinary Olympic Team, to support activities in preparation for the Culinary Olympics in Erfurt, Germany, in 2012.
- DFA provided financial assistance to industry stakeholders towards obtaining Marine Stewardship Council certification.

## Fisheries Technology and New Opportunities Program

DFA invested \$1.2 million into fisheries research and development projects under FTNOP.

- In the harvesting sector, funding was provided for projects, including testing of pot technology for harvesting turbot; exploratory fisheries for northern stone crab, whelk and Atlantic saury; and an e-simulator distance education program for stability management, which will be available to fish harvesters across Canada.
- In the processing sector, support was provided for projects such as ongoing research on utilization of fish wastes as biodiesel; spinsheller technology to extract meat from the crab shoulders to obtain higher value from the resource; extraction of bio-medical grade

chitosan from shellfish waste; research on reduction and recycling of poly bags to reduce high volumes of waste disposed in landfills; development of a groundfish quality booklet to support enhanced quality of groundfish products; and laser vision technology for mussel quality.

- To enhance marketing, DFA invested in projects such as the development of corporate brochures, digital video discs and website upgrades; market development for sea cucumber; and aquaculture promotional events.

## Fisheries Research Grant Program

The Fisheries Research Grant Program funded several research projects in 2011, including:

- The continuation of an annual acoustic survey to monitor northern cod in Smith Sound, Trinity Bay. These surveys, conducted by Dr. George Rose and his research team at the Marine Institute, provide information on the distribution, growth, health, and movement of this inshore cod population;
- Research projects on northern cod and northern Gulf of St. Lawrence cod, carried out by DFO in partnership with the FFAW, which aim to provide information on life history characteristics of these stocks; and
- A Fisheries Improvement Project for NAFO Division 3Ps cod, administered by the World Wildlife Fund in partnership with Icewater Seafoods and DFA, which aims to ensure the long-term sustainability of 3Ps cod fisheries.

## Inspection Program

- The Quality Compliance and Enforcement Program completed its fourth year. The training focuses on compliance, enforcement, inspections and handling of fish products. All inspectors are required to complete this training to enhance their inspection and enforcement techniques.
- The number of inspections totalled 3,681, up from 2,474 in 2010, and included higher levels of inspection of fish exported via the Marine Atlantic terminals. These inspections increased from 437 in 2010 to 1,135 in 2011.
- Thirty-six audits were conducted on licensed processing facilities. These audits ensure that each license holder is complying with the requirements specified under the *Fish Inspection Act*.



DFA funds a scholarship to assist graduate students in the field of groundfish research. Above is Emily Zimmermann, winner of the Dr. Wilfred Templeman Memorial Scholarship.



# Fisheries Technology and New Opportunities Program

*Marine Institute's School of Fisheries is simulating real life situations experienced by fish harvesters to create safer working conditions.*



*Developing the e-simulator*

The Fisheries Technology and New Opportunities Program (FTNOP) was initially announced in the fall of 2007 as part of the Fishing Industry Renewal Strategy. As of April 1, 2011, FTNOP was extended for an additional three years with a continued commitment of \$2 million per year, for a combined total of \$6 million.

The primary objective of FTNOP is to provide support for harvesting, processing and marketing initiatives, with a goal of diversifying the industry and increasing its overall viability in the future.

The program is helping the fishing industry become more innovative and competitive in international markets by contributing to activities such as:

- quality enhancement;
- efficient utilization of resources;
- reduction of by-catch;
- safety;
- energy efficiency;
- new harvesting and processing technology;
- test fisheries/resource surveys;
- gear demonstration;
- mitigation of gear impacts; and
- product and market development.

The department welcomes proposals from licensed Newfoundland and Labrador harvesters or fish processing operators; research and development institutions, associations, and enterprises; fisheries organizations; community groups; consultants; engineering companies; vessel and machinery designers and fabricators; and corporate entities involved in the seafood industry.

In 2011, there were 58 applications received under the program, 35 of which were approved with a total commitment of \$1.2 million from the department. This investment leveraged an additional \$3.4 million from various industry partners.



Trout River

# OUTLOOK FOR 2012

Newfoundland and Labrador's seafood industry recorded growth in production value over the past two years, after falling to a low in 2009. Market prices for key species were relatively high during 2010 and 2011. Seafood markets remain healthy going into 2012, as consumer demand for seafood is very strong globally. However, a struggling economy in the United States and uncertainty in Europe and Asia may result in weaker prices as the year progresses.

## CAPTURE FISHERIES

Fish landings declined in 2011; however, the associated landed value rose significantly. In 2012, landings are expected to show marginal declines as the result of quota reductions in some fisheries.

Global supply of coldwater shrimp is expected to decrease in 2012, while demand remains relatively strong. Supply from Greenland, Iceland, Norway and Canada is expected to fall, which may result in rising prices for all coldwater shrimp in 2012. However, price increases could be dampened due to economic uncertainty in Europe.

2011 was a banner year for snow crab, with market prices reaching record levels. Prices began to soften slightly during the second half of 2011, however, remained strong on a historical level. Snow crab market prices are relatively high going into 2012. However, with the increase in the Alaskan snow crab quota (up 64 per cent over 2011), it is likely the higher supply will result in downward pressure on market prices.

## AQUACULTURE

Aquaculture production is expected to rise in 2012, largely due to continued expansion in the salmonid sector.

The salmonid sector is experiencing a period of rapid growth. As a result, total salmonid production is projected to increase in 2012. With increased global production, Atlantic salmon prices decreased in the fourth quarter of 2011. Furthermore, modest downward pressure on market value is expected to continue in 2012; however, increased production will likely offset a reduction in value.

Mussel production and market value are expected to be stable over the next few years. DFA and the Newfoundland and Labrador Aquaculture Industry Association will continue to work collaboratively on supporting improved operational efficiencies and market development.



St. Alban's

# Licensed Fish Processing Plants Newfoundland and Labrador, 2011

● Location of Plant (Total 114)

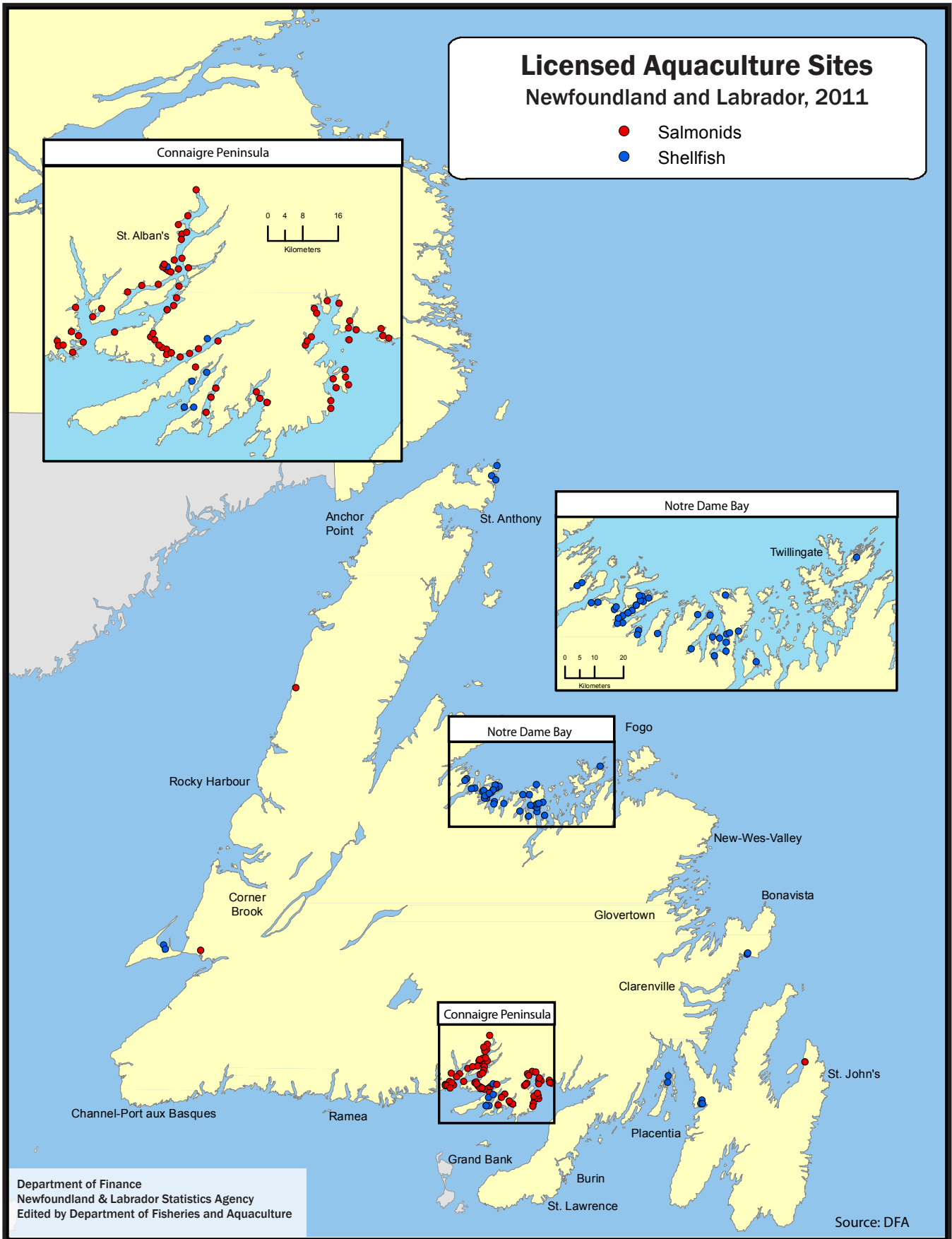


Department of Finance  
Newfoundland & Labrador Statistics Agency  
Edited by Department of Fisheries and Aquaculture

Source: DFA

## Licensed Aquaculture Sites Newfoundland and Labrador, 2011

- Salmonids
- Shellfish



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

Source: DFA

# Acronyms

CAHD-Centre for Aquaculture Health and Development  
DFA-Department of Fisheries and Aquaculture  
DFO-Fisheries and Oceans Canada  
FFAW-Fish, Food and Allied Workers  
FTNOP-Fisheries Technology and New Opportunities Program  
NAFO-Northwest Atlantic Fisheries Organization  
SFA-Shrimp Fishing Area  
TAC-Total Allowable Catch

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Pg. 9 Donna Grimes - Cow Head  
Pg. 10 Courtesy of Canadian Association for Prawn Producers - Coldwater shrimp  
Pg. 14 Donna Grimes - Goose Cove  
Pg. 16 Mike Warren - Salmonid site - St. Alban's  
Pg. 24 Courtesy of Canadian Association for Prawn Producers - Cooked shrimp  
Pg. 26 Gary Butt - Makkovik plant  
Pg. 27 Jordan Rees - Coastal shot  
Pg. 28 Mike Warren - Atlantic salmon in water - St. Alban's  
Pg. 29 Donna Grimes - Conche  
Pg. 31 Shannon Fisher - Fishing Vessel Stability Simulator  
Pg. 32 Donna Grimes - Trout river  
Pg. 32 Nicole Hynes - St. Alban's aquaculture site



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