



Newfoundland
Labrador

Fisheries and Aquaculture

ANNUAL REPORT

2012-13



MESSAGE FROM THE MINISTER



As Minister of Fisheries and Aquaculture, I am pleased to present the department's 2012-13 Annual Report. I am accountable for the results contained in this report, which was prepared in accordance with the Transparency and Accountability Act. This report details the progress that has been made towards achieving objectives outlined in our 2011-14 Strategic Plan.

Our policies, programs, and investments in 2012-13 continued to address the three key issues: fishing industry sustainability and viability; aquaculture expansion and sustainability; and coastal and ocean management. Exports of our seafood products to international markets remained strong, with marketing support from the Provincial Government that helped differentiate our products globally. The Fisheries Technology and New Opportunities

Program continued to foster research and development activity to give our industry a competitive edge. Newfoundland and Labrador remains the only province in Canada that is solely funding its own offshore fisheries research through the Centre for Fisheries Ecosystems Research and other partnerships. More than 3,100 inspections were carried out by the Provincial Government during harvesting, processing, handling, transportation, and storage of seafood products to protect our reputation as one of the finest suppliers of seafood in the world. The Provincial Government's support of the seal industry continued through international advocacy abroad and financial support here at home. In addition, investments in aquaculture have sustained growth in an industry that now employs approximately 1,000 people within the province and generates more than \$100 million annually in economic activity.

This government spends more on the fisheries than any other province in Atlantic Canada. Clearly, our support is diverse and comprehensive, and is producing benefits for the industry, and our province. There have been several achievements over the past year that demonstrate how this government partners with industry to support innovative approaches. One highlight was the establishment of the Newfoundland and Labrador Fish Harvesting Safety Association, which now promotes safety education and awareness initiatives. Another highlight was our \$3.6 million loan to Carino Processing Limited, which served as inventory financing to protect the viability of the province's seal industry. That loan was repaid in full, and generated meaningful economic activity for rural communities.

I am pleased with the results achieved by the department throughout 2012-13, and would like to thank everyone within the Provincial Government and in industry who contributed to our success. Our billion dollar seafood industry is a key economic driver for the provincial economy, and will continue to be through careful stewardship, strategic investment, and collaboration with leaders in all aspects of the industry.

A handwritten signature in black ink that reads "Derrick Dalley". The signature is written in a cursive, flowing style.

DERRICK DALLEY, MHA
The Isles of Notre Dame
Minister

Acronyms and Abbreviations

ACAP - Atlantic Coastal Action Program
ACOA - Atlantic Canada Opportunities Agency
AIS - Aquatic Invasive Species
ATRQ - Autonomous Tariff Rate Quota
BAP - Best Aquaculture Practices
BMA - Bay Management Area
CASD - Centre for Aquaculture and Seafood Development
CETA - Comprehensive Economic and Trade Agreement
CFER - Centre for Fisheries Ecosystems Research
CFIA - Canadian Food Inspection Agency
CMA - Coastal Management Area
CNLCOM - Canada-Newfoundland and Labrador Committee on Oceans Management
CSA - Canadian Sealers Association
DFA - Department of Fisheries and Aquaculture
DFO - Fisheries and Oceans Canada
EU - European Union
FFAW - Fish, Food and Allied Workers
FIC - Fur Institute of Canada
FIP - Fisheries Improvement Project
FTNOP - Fisheries Technology and New Opportunities Program
IBRD - Department of Innovation, Business and Rural Development
ISAv - Infectious Salmon Anaemia virus
MI - Marine Institute
MSC - Marine Stewardship Council
NAFO - Northwest Atlantic Fisheries Organization
NAIA - Newfoundland Aquaculture Industry Association
NL-FHSA - Newfoundland and Labrador Fish Harvesting Safety Association
PBR - Production-Based Region
PCON - Provincial Coastal and Ocean Network
PFHCB - Professional Fish Harvesters Certification Board
ROCOM - Regional Oversight Committee on Oceans Management
SPONL - Seafood Processors of Newfoundland and Labrador
WHSCC - Workplace Health, Safety and Compensation Commission
WTO - World Trade Organization
WWF - World Wildlife Fund

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Planning Services Division
Department of Fisheries and Aquaculture
September 2013

DEPARTMENTAL OVERVIEW



Introduction

The Department of Fisheries and Aquaculture (DFA) supports and encourages the development and sustainability of the province's fishing and aquaculture industries. The department is responsible for the licensing and regulation of fish processing for both sectors.

The department has invested in extensive research and development, seafood marketing, aquaculture infrastructure, and representation to the Federal Government on behalf of the industry and global markets to support the sustainable development of these key industries of Newfoundland and Labrador. DFA contributes to the expansion and sustainable management of the province's growing aquaculture industry through extension services, the development of infrastructure, and investment incentives. DFA leads the province's Coastal and Ocean Management Strategy and Policy Framework (the Strategy), which demonstrates government's commitment to the planning, management, conservation, and sustainability of the coastal and ocean resources of the province.

This Annual Report outlines the work accomplished by DFA throughout the 2012-13 fiscal year, in the delivery of its commitments regarding the development and sustainability of the fishing and aquaculture industries. This report is the second for the 2011-14 planning cycle and reports on the indicators set out for the second objectives in the 2011-14 Strategic Plan. The report also provides a detailed overview of the highlights, expenditures, and collaborative activities of DFA throughout 2012-13.

Vision

The vision of the Department of Fisheries and Aquaculture is sustainable fishing and aquaculture industries that achieve their optimum economic contribution to the Province of Newfoundland and Labrador.

Mission

By March 31, 2017, the Department of Fisheries and Aquaculture will have supported both the strengthening of the fishing industry and the expansion of the aquaculture industry to create sustainable and economic opportunities for the province.

Lines of Business

Policy and Planning

The department develops, implements, and provides advice on fisheries and aquaculture policies in support of resource and industry management, research, growth, and development. Specific activities include fisheries and aquaculture policy review, analysis, and development; review of fisheries management plans and scientific assessments conducted by Fisheries and Oceans Canada (DFO); strategic planning; program development and review; review and analysis of legislation; information management and administration; seafood trade policy research and analysis; collection, compilation, and presentation of statistical data; support to fisheries and aquaculture science; and the completion of economic, financial, and statistical analysis.

Through this line of business, the department maintains close affiliations with other government departments and agencies that have programs that impact on the province's seafood industry. In addition, the department represents the province's interest in national and international venues and provides input into resource assessment and ocean management processes of DFO, and international bodies responsible for fisheries assessment and management. Specifically, the department assesses scientific advice for various stocks and species, participates in resource assessment and management advisory committees, and assesses the environmental impact of development upon fisheries resources.

The department plays a lead role in fisheries and integrated ocean management within the province by promoting and supporting initiatives that allow for more organized and efficient structures to deal with ocean management issues. A focus is placed on those initiatives that impact on the province's fishing and aquaculture industries, as outlined in the province's Coastal and Ocean Management Strategy and Policy Framework.

Inspection, Compliance, and Regulatory Enforcement

DFA provides policy direction and support to its inspection staff in the delivery of compliance and enforcement programs. The department conducts comprehensive inspection, compliance, and enforcement duties for the fishing and aquaculture industries within its legislative authority.

Inspectors ensure the seafood industry utilizes proper handling techniques and meets regulatory requirements, and they conduct inspections at fish buying stations, processing plants, aquaculture sites, dockside, and on board vessels. In addition, the department is responsible for auditing fish buyers and processors located throughout the province to ensure compliance with regulations, policies, and conditions of licenses.

Aquaculture and inspection staff examine aquaculture sites for the presence of disease, compliance with the Code of Containment, and proper site boundary markings. Programs related to the maintenance, biosecurity, surveillance, and regulation of fish health on aquaculture sites throughout the province are included in this line of business. These activities ensure compliance with the *Fish Inspection Act* and Regulations, the *Aquaculture Act* and Regulations, and ministerial directives. The department reviews infractions of the acts and directives and takes appropriate legal action.

Innovation and Development

DFA places a strong emphasis on fisheries and aquaculture research, innovation, and development. It assists the fishing and aquaculture industries through the provision of technical and financial support in the development of culturing, harvesting, processing, and marketing. Innovation within the fisheries sector is fostered through extensive interaction with the private sector, industry-related organizations, other government departments, and academia.

The department provides financial assistance for industry-led research and development projects in the fishing industry through the Fisheries Technology and New Opportunities Program (FTNOP). This support includes the following activities:

Harvesting and Resource Development:

Although harvesting is an area of federal jurisdiction, the primary focus of this activity is to oversee the design and implementation of fisheries development projects with a focus on the assessment of species with underdeveloped fisheries, enhancing quality, resource surveys, development of commercial species, and the utilization of appropriate on-board handling technologies aimed at maximizing catch value. DFA is also responsible for providing a range of technical services to the fishing industry, including expertise on vessel efficiency, sustainable fishing technology, and safety.

Processing Development:

The goal of this activity is to enhance the productivity and competitiveness of the processing sector with a focus on the development of value-added and secondary production, development of underutilized species, and by-product recovery. Assistance is provided in the form of technical and financial support related to product development, design and recommendations on packaging systems to plant processing specifications, processing efficiency, and general product research and development.



Aquatic Animal Health

Aquaculture Development:

The department provides for the administration, planning, development, and delivery of aquaculture policy and programs with the goal of ensuring the orderly and sustainable development of aquaculture. This includes the assessment of species and sites, the review of development proposals, and the conducting of research to overcome biological, technical, and/or economic impediments to development. These activities support evidence-based policy decisions leading to an orderly, sustainable aquaculture industry.

Licensing and Quality Assurance

DFA is responsible for the issuance of fish buyers' licenses, fish processing licenses, and aquaculture site licenses, as well as the development and implementation of policies and regulations related to each type of license. The department provides processing licensing policies and procedures to the Fish Processing Licensing Board (the Board). The Board reviews and makes recommendations to the Minister of Fisheries and Aquaculture on all requests for new processing licenses, transfers of licenses, and changes of operator for fish processing plants, as well as appeals for reinstatement of licenses cancelled due to inactivity. In its role as a licensing agency for aquaculture, as regulated under the *Aquaculture Act*, the department coordinates input from all relevant provincial and federal agencies, as well as any organizations, groups, or individuals who have interests in aquaculture development. Other activities include:

Administration of licensing systems and databases:

Administration of the licensing systems and databases includes the collection and analysis of all statistical information associated with fish purchases, production, and employment, and cataloguing the current and past history of fish buyers' and fish processing licenses. Through these licensing processes, the department collects processing and aquaculture statistics. Statistics collected include processing plant production, fish purchases, plant employment, production on aquaculture farms, aquaculture employment, fisheries and aquaculture infrastructure, financial information, and inspection information. DFA is in the process of establishing a new licensing information management system for both aquaculture and processing licenses.

Maintenance and delivery of the Quality Assurance Program:

The Quality Assurance Program supports the department's efforts to promote quality awareness in the fishing industry. The department monitors and assesses the quality of fish at dockside, in transport, and as it enters plants for processing; develops and evaluates new techniques to assess quality; produces and disseminates information on quality issues to industry participants; and implements measures for quality enhancement.

Seafood Marketing

DFA provides marketing support services to the Newfoundland and Labrador seafood industry and works with industry on innovative and collective approaches to seafood marketing. The department's primary seafood marketing activities include:

Market Development:

The department works with the seafood industry to increase market awareness of and demand for Newfoundland and Labrador seafood products and to increase seafood sales to markets throughout the world. Market support services offered to industry include participation in trade shows and missions, advertising, foodservice and retail promotions, and support for private sector marketing initiatives.



The International Boston Seafood Show

Market Intelligence and Analysis:

DFA provides market analysis and support to industry by coordinating the collection and dissemination of timely market intelligence and information to industry stakeholders. This information is provided to the Standing Fish Price-Setting Panel (in support of fish price collective bargaining initiatives), processor and harvester associations such as the Association of Seafood Producers, the Seafood Processors of Newfoundland and Labrador (SPONL), and the Fish, Food and Allied Workers (FFAW). Information is also provided to the Newfoundland Aquaculture Industry Association (NAIA) and aquaculture companies.

Outreach:

The department interacts with other Provincial Government departments, the seafood and market development branches of other seafood producing provinces, federal departments and agencies such as the Atlantic Canada Opportunities Agency (ACOA), Agriculture and Agri-Food Canada, Fisheries and Oceans Canada, and Foreign Affairs and International Trade to coordinate participation in various trade shows and missions and implementation of other marketing and promotional activities.

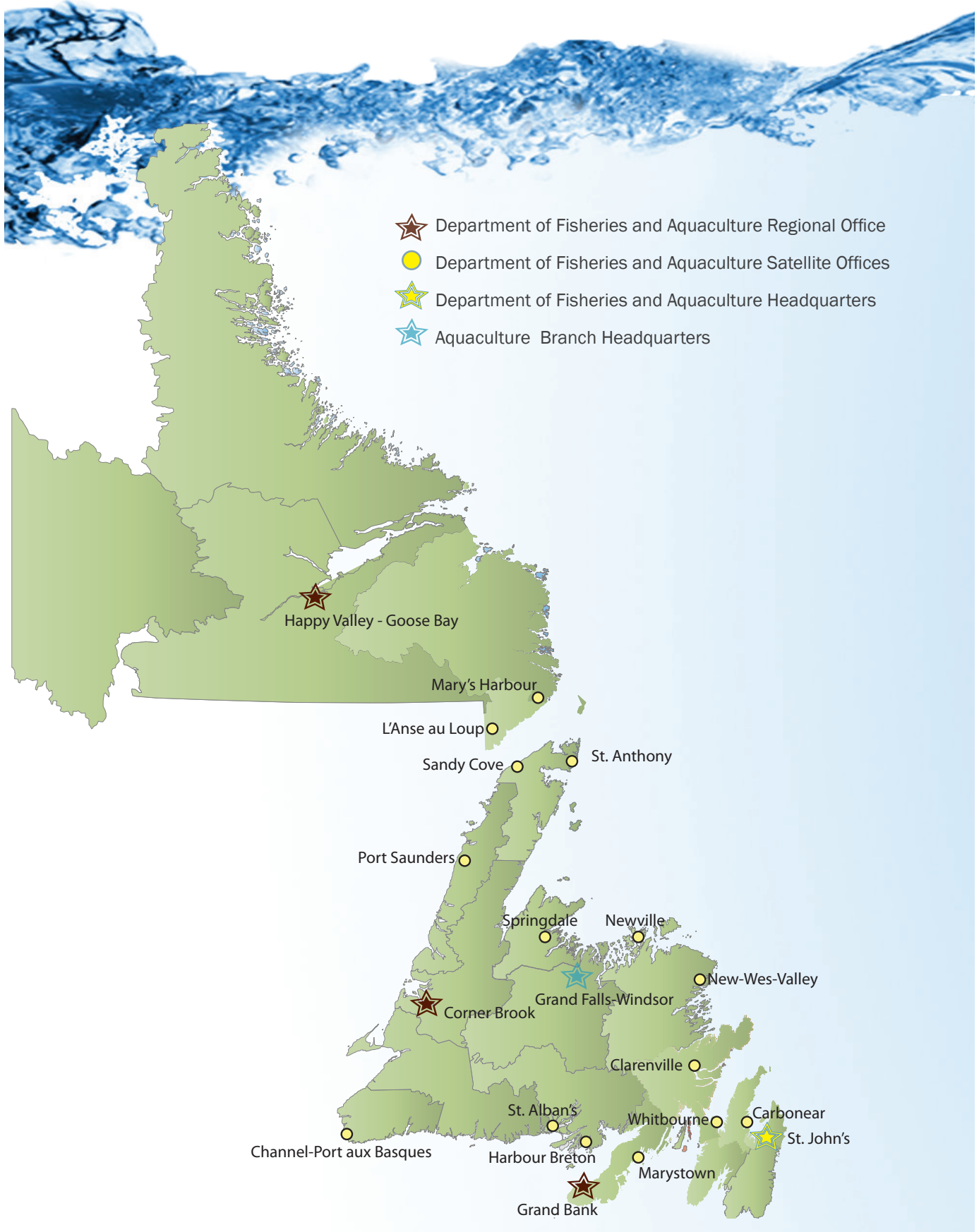
Mandate

The mandate of the Department of Fisheries and Aquaculture is:

Extracting the optimum sustainable economic benefit from the fishing and aquaculture industries through the promotion, development, encouragement, conservation, and regulation of fisheries and aquaculture and the provision of long-term strategic direction on the sustainable use of coastal and ocean resources in Newfoundland and Labrador.

Departmental Map

DFA headquarters is located in St. John's and the Aquaculture Branch main office is located in Grand Falls-Windsor. The department had 3 regional offices and 15 satellite offices situated throughout the province in 2012-13.



Legislation

The department's work is guided by the following provincial and federal legislation:

Provincial Legislation

- *Aquaculture Act* and Regulations
- *Business Investment Corporation Act* (Fisheries Loan Guarantee Program)
- *Fish Inspection Act* and Regulations
 - Fish Inspection Administrative Regulations
 - Fish Inspection Operations Regulations
 - Fish Inspection Ticket Offences Regulations
 - In-province Retail Fish Establishment Regulations

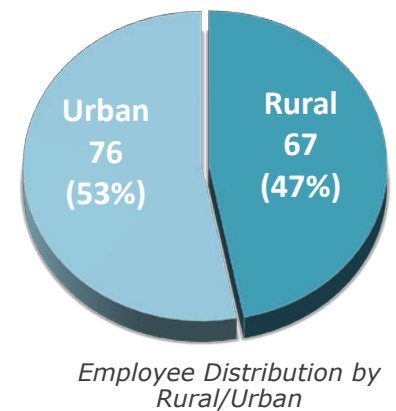
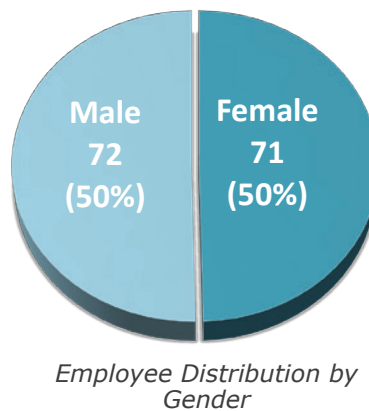
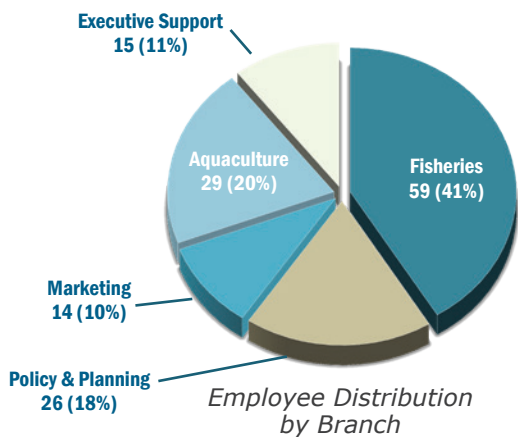
- *Fish Processing Licensing Board Act*
- *Fisheries Act (Schedule C of the Executive Council Act)*
- *Fisheries Restructuring Act*
- *Fishing Industry Collective Bargaining Act*
- *Professional Fish Harvesters Act*
- Fish Processing Licensing Policy Manual

Federal Legislation

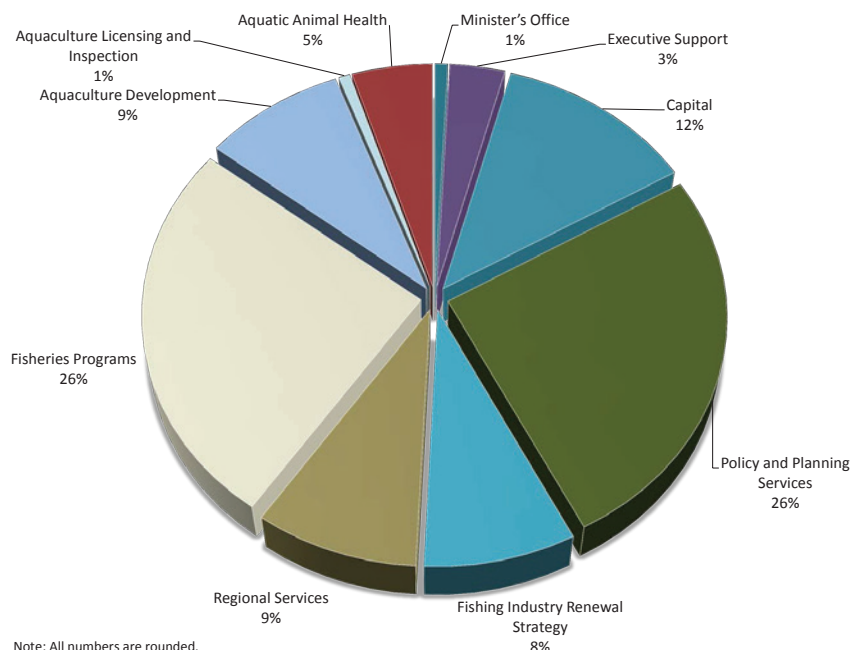
- *Fisheries Act*
- *Fish Inspection Act*
- *Oceans Act*
- Marine Mammal Regulations

Number of Employees

The department employs 143 people, working in 4 branches: a) Fisheries; b) Aquaculture; c) Marketing and Development; and d) Policy and Planning.



Distribution of Actual Net Expenditures 2012-13



Note: All numbers are rounded.

**Department of Fisheries and Aquaculture
Statement (Unaudited) of Expenditures and Related Revenue**

Summary for the Year Ended March 31, 2013*	ESTIMATES		
	Original	Amended	Actual
	\$	\$	\$
EXECUTIVE AND SUPPORT SERVICES			
Minister's Office			
Minister's Office	412,300	397,300	302,907
General Administration			
Executive Support	1,122,700	1,308,700	1,297,902
Capital	6,220,000	6,220,000	4,683,890
Policy and Planning Services			
Planning and Administration	1,035,500	1,177,000	1,070,408
Revenue - Provincial	-2,000	-2,000	-59,242
Sustainable Fisheries Resources and Oceans Policy	9,117,800	9,122,800	8,834,957
Fishing Industry Renewal Strategy			
Coordination and Support Services	2,733,200	3,733,200	3,154,044
Executive and Support Services Subtotal	20,639,500	21,957,000	19,284,866
FISHERIES			
Regional Services			
Administration and Support Services	3,780,300	3,725,300	3,403,579
Revenue - Provincial	-44,500	-44,500	-8,867
Fisheries Programs			
Seafood Marketing and Support Services	5,518,100	1,448,100	1,251,572
Licensing and Quality Assurance	676,600	752,100	492,264
Revenue - Provincial	-300,000	-300,000	-203,435
Compliance and Enforcement	640,100	558,100	496,922
Fisheries Innovation and Development	4,190,300	4,903,400	4,245,368
Seal Product Inventory Financing	3,600,000	5,600,000	5,598,859
Revenue - Provincial	-	-	-2,048,749
Fisheries Subtotal	18,060,900	16,642,500	13,227,513
AQUACULTURE			
Aquaculture Development			
Aquaculture Development and Management	2,293,800	2,289,700	1,886,343
Aquaculture Capital Equity Investment	6,500,000	6,500,000	1,826,836
Revenue - Provincial	-	-	-382,000
Aquaculture Licensing and Inspection			
Aquaculture Licensing and Inspection	304,800	289,800	260,538
Aquatic Animal Health			
Aquatic Animal Health	1,881,200	2,001,200	1,897,335
Aquaculture Subtotal	10,979,800	11,080,700	5,489,052
Department Total	49,680,200	49,680,200	38,001,431

*Source Document: Report on Program Expenditures and Revenues of the Consolidated Revenue Fund for the Year Ended 31 March 2013 (Unaudited).

Note: Audited financial statements are not required of the Department of Fisheries and Aquaculture.

DFA Annual Report 2012-13



SHARED COMMITMENTS

Throughout the 2012-13 fiscal year, the department continued to work collaboratively with industry stakeholders and partners, including other jurisdictions and government departments, academic institutions, and public bodies, towards the achievement of the goals set out in its 2011-14 Strategic Plan. Following are examples of collaborative activities the department was engaged in that supported the strategic direction of government.

Strategic Direction 1: Enhance the Sustainability of the Provincial Aquaculture Industry

In 2012-13, DFA worked with industry stakeholders and other government departments to promote the sustainability of the aquaculture industry in Newfoundland and Labrador. DFA partnered with the Department of Innovation, Business and Rural Development (IBRD) to assist New Brunswick-based Silk Stevens Limited in establishing operations in Grand Falls-Windsor.

DFA partnered with the Department of Transportation and Works in the expansion and construction of aquaculture wharves, which support the sustainable development of the industry. During this fiscal year, the department provided \$1 million for the expansion of the inflow wharf in Pool's Cove and awarded a \$5.2 million contract for the construction of a new wharf in Harbour Breton. Dedicated aquaculture wharves enable improved disease management and biosecurity protocols. By controlling the flow of activities at aquaculture

AQUACULTURE

The growth of the aquaculture industry in the province has attracted New Brunswick-based Silk Stevens Limited to establish operations in Grand Falls-Windsor. DFA partnered with IBRD to assist the company in opening its new office, and a \$125,000 term loan was provided through the Provincial Government's Business Attraction Fund. Silk Stevens Limited is an engineering and business consulting company and its new operations in Grand Falls-Windsor will provide engineering services to the provincial aquaculture industry. This project will also help create new economic and employment opportunities in the province. It is estimated that, over a five-year period, the net benefit to the provincial economy will reach \$2.16 million and that 11 jobs will be created from this initiative.

wharves, the department is better able to mitigate the potential spread of pathogens and improve overall industry biosecurity.

Strategic Direction 2:

Strengthen the Role of the Fishing Industry as a Key Pillar of Sustainable Economic Growth Within the Province

In 2012-13, the department enhanced fisheries research and development through collaboration with industry, government, and academic institutions under FTNOP. Through FTNOP, the department supported a variety of research and development projects for harvesting, processing, and marketing initiatives. Projects focused on energy efficiency audits, the development of a turbot pot fishery, crab offloading efficiency evaluations, the online e-simulator education program, remote sensing of lost snow crab pots, the development of environmentally friendly bottom trawls, innovative methods to process crab and sea cucumber, full utilization of capelin, the development of fisheries nutrition information, Marine Stewardship Certification of mussel aquaculture, and market research and promotion. In total, DFA invested \$1.7 million in fisheries research and development projects under the program in 2012-13 and this investment has leveraged an additional \$4.2 million from the industry and other partners.

Seafood Nutrition Information

DFA partnered with SPONL to develop a seafood nutritional information package. SPONL worked with a seafood consulting firm and an accredited lab to determine the nutritional value of approximately 30 key seafood products in the province. This information will enable producers to accurately document the nutritional value of their products and allow consumers to compare seafood with alternative products. The department provided financial support of \$46,150 through FTNOP toward this initiative.



Whole Cooked Cold Water Shrimp



Cooked and Peeled Cold Water Shrimp



IQF Frozen Cold Water Shrimp



COMMON MARKET NAME(S)

- North Atlantic Shrimp (*Pandalus borealis*)
- Cold Water Shrimp
- Northern Pink Shrimp

FISHING AREA

- FAO 21

HARVESTING SEASONS

- April to October
- Quota Fishery

HARVEST METHOD

- Trawl

FOOD SAFETY

- HACCP
- Canadian Food Inspection Agency (CFIA)

PRODUCT FORMS

- Frozen
- Cooked and Peeled

PRODUCT SIZING

- Full range of product sizes

PACK WEIGHT

- 1 lb, 5 lb, 10 lb, 20lb.

PRODUCT/MARKET USE

- Retail, food service and secondary processing

OTHER INFORMATION

- Texture: Firm
- Flavour: Sweet, Shrimp Flavour

North Atlantic Cold Water Shrimp is harvested from the clean, cold North Atlantic Ocean surrounding Newfoundland and Labrador, Canada. This natural shellfish product is harvested from a wild capture regulated and sustainable fishery. Cold Water Shrimp is nutritious and an excellent source of protein and minerals. These tender flavourful Shrimp are popular throughout Europe, North America and Asia.

Nutritional Information

Atlantic Shrimp (cooked and peeled)

Per 100 g	
Calories	60
Total Fat	0.5 g
Saturated Fat	0.1 g
Omega-3 Fatty Acids	0.2 g
Cholesterol	125 mg
Sodium	680 mg
Protein	13 g

The above nutritional information was prepared from a sample of cooked, peeled and frozen cold water shrimp. Values may vary according to process and season.

COOKED NORTH ATLANTIC SHRIMP (*Pandalus borealis*)



During 2012-13, the department continued to work with the seafood industry to increase market awareness and promote Newfoundland and Labrador seafood products in global markets. Departmental officials, in partnership with industry stakeholders, attended trade events which included the International Boston Seafood Show, European Seafood Exposition, World Food Moscow, Seafood Barcelona, and China Fisheries and Seafood Expo.

The department worked with Service NL, the Workplace Health, Safety and Compensation Commission (WHSCC), the Professional Fish Harvesters Certification Board (PFHCB), and other partners including the Federal Government, the FFAW, academic institutions, and industry, on fisheries safety. Collaborative efforts resulted in the establishment of the Newfoundland and Labrador Fish Harvesting Safety Association (NL-FHSA). In line with the strategic directions of government, ensuring safety in the fishing industry contributes to efficiency, thereby strengthening the role of the industry as a key pillar of sustainable economic growth within the province.

Newfoundland and Labrador Fish Harvesting Safety Association

The NL-FHSA was established in April 2012 as a joint venture of the Government of Newfoundland and Labrador, WHSCC, and PFHCB. This association represents a tremendous cooperative effort, as the development of the association's structure and mission was also supported by the Newfoundland and Labrador Federation of Labour, Newfoundland and Labrador Employers' Council, Service NL, DFA, FFAW, DFO, Canadian Coast Guard, Marine Institute (MI), and SafetyNet. DFA committed \$500,000 to support the association while the fish harvesting industry, made up of industry representatives, the PFHCB, and the Fisherman's Benefit Trust, is contributing \$585,000 and WHSCC is contributing \$253,060.

The association is comprised of 13 board members, including 11 voting board members representing the fish harvesting industry and 2 ex-officio members from DFA and WHSCC. The NL-FHSA will work to promote safety education and awareness initiatives, and to reduce workplace injuries, illness, and fatalities in the fishing industry.



Hauling caplin

The department also collaborated with PFHCB to improve the efficiency and safety of fishing vessels through a workshop on fishing vessel design. This workshop was held in Gander in November 2012 and was specific to the under 40-foot vessel sector. Its aim was to improve the working environment for crew members through new vessel designs. Participants came from the harvesting sector, FFAW, DFO, National Research Council Canada, Memorial University of Newfoundland, and MI.

During 2012-13, the department worked with stakeholders to further promote the sustainable management of the lobster fishery. In partnership with the Atlantic Canadian lobster industry, the Federal Government, the Atlantic provinces, and Quebec, the department supported the lobster traceability pilot project led by the Lobster Council of Canada. The department also partnered with the Federal Government and FFAW to implement the Conservation and Sustainability Plan for the Newfoundland Lobster Fishery (the Plan).



Preparing lobster pots

Conservation and Sustainability Plan for the Newfoundland Lobster Fishery

DFA, in collaboration with the Federal Government and the FFAW, implemented the Conservation and Sustainability Plan for the Newfoundland Lobster Fishery. The Plan encourages long-term sustainability and economic prosperity for the lobster fishery by supporting conservation practices that maintain and enhance lobster stocks, and improve catch monitoring and fishing effort reporting. The Lobster Enterprise Retirement Program is a major element of the Plan, which aims 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 the program coverage area while providing exiting enterprise owners with an opportunity to receive “fair value” for their fishing enterprise. To date, seven rounds of bidding have taken place and 197 lobster enterprises have been retired.

Strategic Direction 3:

Enhance the Province's Position on Fishery and Oceans Matters Falling Under Federal Jurisdiction

While the Federal Government has jurisdiction over fisheries resource management and international relations, provincial and territorial governments have interests and responsibilities in the industry. Throughout the fiscal year, the department has worked with partners at the local, national, and international levels of government to enhance the province's position on fisheries and aquaculture matters that fall under federal jurisdiction.

Throughout 2012-13, the Minister, Deputy Minister, and senior officials of the department attended meetings of the Canadian Council of Fisheries and Aquaculture Ministers, the Atlantic Council of Fisheries and Aquaculture Ministers, associated committees, task groups, and working groups. Through those meetings, the department worked strategically and cooperatively with other jurisdictions on a variety of fisheries and aquaculture-related issues of national/regional importance, including the aquatic invasive species regulatory initiative, the release of aquaculture substances regulatory regime, and changes to the Employment Insurance Program.

The department further demonstrated its commitment to promoting the sealing industry in this fiscal year. In partnership with the FFAW and PFHCB, the department continued to support the reorganization of the Canadian Sealers Association and contributed \$28,250 to the organization. This is the final installment of a two-year commitment to the association, valued at \$76,250. The Canadian Sealers Association (CSA) represents the interests of over 11,000 licensed sealers and is dedicated to promoting best practices, sustainable and humane harvesting methods, and full utilization of the harvested resources. The department also supported the industry in attending trade expositions to promote and display Newfoundland and Labrador seal products.

Sealing Industry

The department worked with industry to protect the future viability of the province's seal harvest. On April 5, 2012, the Minister announced a \$3.6 million loan to the Carino Processing Limited for its purchase of raw material. In return, the company made its commitment to the future of the industry by making a matching contribution for processing and marketing activities. The loan is intended to ensure adequate raw material is available to Carino to address market demands as they arise, and to ensure hundreds of harvesters secure an income. This initiative is in support of the industry while ongoing challenges to the World Trade Organization (WTO) and the European Court of Justice take place.



Minister Dalley supporting the sealing industry

In September 2012, the department participated in the 34th Annual Meeting of the Northwest Atlantic Fisheries Organization (NAFO) as a member of the Canadian delegation. DFA partnered with other delegates, including the FFAW and representatives of the Canadian offshore groundfish and shrimp industries. Together they provided advice to the Federal Government on the position for Canada at NAFO regarding management and conservation of straddling fish stocks.

The department continued to work with industry, other jurisdictions, and government departments to expand market access and address seafood tariffs in key markets. While the Federal Government has sole jurisdiction over the negotiation of international trade agreements, provinces and territories are now playing a more direct and significant role in the multilateral and bilateral international trade negotiations. In 2012-13, the department continued to participate in the Canada-European Union (EU) Comprehensive Economic and Trade Agreement (CETA) negotiations and monitored and assessed the Canada-Japan free trade negotiations and the Trans-Pacific Partnership negotiations, to ensure the seafood industry's interests are represented at the table. Real market access achieved in those negotiations could result in significant benefits to the Newfoundland and Labrador seafood industry.

Through the Fisheries Research Grant Program, the department further supported the sustainable management of the fishing industry in collaboration with the Centre for Fisheries Ecosystems Research (CFER), Canadian Centre for Fisheries Innovation, MI, DFO, the FFAW, the World Wildlife Fund (WWF), and industry. A number of research initiatives were undertaken in this fiscal year, including a satellite tagging project for Atlantic cod,



Autonomous Tariff Rate Quota

The department worked with industry and IBRD to advance concerns over the renewal of the EU Autonomous Tariff Rate Quota (ATRQ) and pressured the Federal Government to lobby with the EU for the interests of Newfoundland and Labrador seafood producers. Efforts resulted in the renewal of the ATRQ for the period 2013-15, significantly benefiting seafood producers. The 2013-15 ATRQ increased the annual tariff-free quota of cooked and peeled shrimp to 30,000 tonnes from 20,000 tonnes, and allowed 9,000 tonnes of shell-on shrimp to enter the EU annually at a zero per cent tariff. The EU, a principal market for Newfoundland and Labrador cold-water shrimp, imposes a 20 per cent tariff on cooked and peeled shrimp and a 12 per cent tariff on shell-on shrimp outside of the ATRQ. The department will continue to work with industry, other jurisdictions, and government departments towards the elimination of tariffs on seafood in key markets.

Cooked and peeled shrimp

the recruitment portion of the post-season snow crab survey, a survey in Connaigre Bay to research interactions between aquaculture sites and the lobster and crab fisheries, and a study to investigate interactions between the province's shrimp fishery and the snow crab resource.

In this fiscal year, DFA continued to collaborate with other government departments and agencies, academia, and industry stakeholders in coastal and ocean policy development and management.

- In partnership with the Federal Government, academia, and industry, the department supported a number of coastal projects which contributed to the implementation of action items identified in the provincial Coastal and Ocean Management Strategy and Policy Framework. Projects included: the Ocean Education Initiative for Schools through the Oceans Learning Partnership; MI Ocean Net's Youth and the Oceans Conference Series; MI Ocean Net's Friends of Beaches Network; Atlantic Coastal Action Program (ACAP) Humber Arm's Books for Boats; ACAP Humber Arm's Coastal Matters Lecture Series; and research projects related to aquatic invasive species.
- DFA continued to chair the Provincial Coastal and Ocean Network (PCON) and met with other departments/agencies to identify gaps and opportunities for coastal action planning.
- DFA co-chaired the Regional Oversight Committee on Oceans Management (ROCOM) with DFO, which brought together senior executives from federal and provincial departments to discuss ocean management priorities for the province.
- DFA attended meetings of Coastal Management Area (CMA) committees to discuss the future of coastal management planning with regional stakeholders. The department also held several information sessions on coastal and ocean integrated management and aquatic invasive species in partnership with the Federal Government.

Coastal and Ocean Management Information Sessions

With assistance from the Office of Public Engagement, the department, in partnership with DFO, held coastal and ocean integrated management public information sessions in Marystown, Bay d'Espoir, and Placentia in fall 2012. The sessions aimed to further engage stakeholders and coastal/ocean users in coastal management activities being conducted by CMA committees and identify options for moving forward with committee activities. CMA committees are supported by DFA and DFO as venues for information sharing and conflict resolution among stakeholders on local issues.



Town of Placentia



STRATEGIC ISSUE 1:

FISHING INDUSTRY

SUSTAINABILITY AND VIABILITY

Goal:

By March 31, 2014, the Department of Fisheries and Aquaculture will have supported the fishing industry in becoming more sustainable and internationally competitive.

Objective 2:

By March 31, 2013, the Department of Fisheries and Aquaculture will have furthered initiatives to support industry sustainability and international competitiveness.

Measure:

Furthered initiatives to support industry sustainability and international competitiveness.

Opening Discussion

The fishing industry constitutes an invaluable component of the province's economy and contributes to the ongoing viability of the coastal communities. It is therefore essential that the fisheries be conducted in a manner that ensures the sustainability of the resources and the viability of the industry for generations to come. As such, DFA has undertaken a number of initiatives to improve the sustainability and viability of the fishing industry with a key interest in improving efficiency in the fishing industry, investing in fisheries science, advancing innovation and technology, supporting research for sustainable fishing practices, and promoting sustainable fisheries management.

Newfoundland and Labrador is a significant seafood exporter with over 80 per cent of its seafood production shipped to global markets. Therefore, supporting the seafood industry's international competitiveness is another important focus for the province. In this regard, DFA strives to develop positive industry partnerships and works with stakeholders, the Federal Government, and other Provincial Government departments to address market access issues in bilateral/multilateral trade agreement negotiations and to foster market opportunities and promote Newfoundland and Labrador seafood products in global markets. These endeavours support government's strategic direction to strengthen the role of the fishing industry as a key pillar of sustainable economic growth within the province.

Indicator 1.1: Continued to promote sustainable fisheries management.

Canada's fisheries resources are managed by Fisheries and Oceans Canada, while fish stocks on the Grand Banks that straddle the 200-mile limit are managed by NAFO. To advocate Newfoundland and Labrador's position on sustainable management of fisheries resources adjacent to the province, DFA participated in various fisheries management processes of DFO and NAFO in 2012-13. DFA also invested in fisheries science and research initiatives in order to inform the decision-making processes to ensure fisheries are sustainable. During this fiscal year, the department:

- Continued to participate in national and international meetings within the NAFO context to promote the province's priorities for the sustainable management of straddling fish stocks. As a member of the Canadian Delegation to NAFO, DFA promoted sustainable fisheries management practices by stressing the importance of, for example, adopting management measures that are in line with scientific advice, ensuring the accuracy of catch estimates, and further refining and developing rebuilding plans for straddling stocks that remain under moratoria;
- Supported the sustainable management of the province's cod fishery. DFA participated in the Newfoundland and Labrador Cod Recovery Working Group meetings with DFO, FFAW, Ocean Choice International, WWF, and other groups to develop rebuilding plans for the northern, south coast, and Northern Gulf cod stocks that are compliant with the Precautionary Approach. DFA also participated in working group meetings to further refine Precautionary Approach management frameworks already in place for fish stocks, such as northern shrimp and harp seals;
- Partnered with WWF and Icewater Seafoods to implement a Fisheries Improvement Project (FIP) for south coast cod, which was established to ensure the sustainability of this cod fishery, including compliance with the standards of the Marine Stewardship Council (MSC). DFA supported activities that were identified by the FIP as essential to ensure the sustainability of this cod stock, including the implementation of rebuilding plans and also a tagging project, towards which DFA provided funding in order to enhance the province's knowledge of the south coast cod stock;
- Participated in various stock assessment meetings in order to inform the province's positions and priorities for promoting sustainable fisheries management. DFA also attended fisheries management advisory committee meetings to communicate the department's position on sustainable fisheries management, including meetings in relation to quotas. These advisory meetings discussed issues related to groundfish adjacent to this province, as well as crab, shrimp, capelin, mackerel, and harp seals;
- Supported fisheries research initiatives, through the department's Fisheries Research Grant Program, in order to enhance the province's understanding of adjacent fish stocks and thus inform sustainable management decisions. These included studies to investigate the distribution and migration patterns of the province's cod stocks through tagging, as well as a post-season snow crab survey in order to assess the biomass and

recruitment prospects of snow crab in all areas off Newfoundland and Labrador. The department also supported ecosystem-based research initiatives, including studies to assess interactions between shrimp trawling and the snow crab fisheries, the effectiveness of the Hawke Channel gillnet and trawling closure off the coast of Labrador, and the interactions between aquaculture sites and the lobster and crab resource in Connaigre Bay; and

- Provided approximately \$3.7 million to fund the 2012-13 activities of CFER in order to increase fisheries science capabilities in Newfoundland and Labrador. The scientific information and expertise provided through CFER is resulting in a better understanding of fish stocks and the health of Newfoundland and Labrador's marine ecosystem. The knowledge gained through CFER will help inform decisions that promote sustainable fisheries management and will also enable the province to more effectively participate in decision-making processes.

Throughout 2012-13, DFA invested a total of \$1.7 million in 41 fisheries research and development projects under FTNOP, and this investment leveraged an additional \$4.2 million from the industry and other partners. All of these projects helped support the FTNOP objective of increasing the overall viability of the Newfoundland and Labrador seafood industry, thereby leading to improved fishing industry sustainability and international competitiveness.

Harvesting projects funded through FTNOP included:

- The final year of a three-year operational energy efficiency audit. This project assisted industry to identify cost-saving measures and thus improved harvesters' competitiveness and economic performance in the fishing industry;
- Development of a turbot fishery using pots rather than gillnets to protect inshore snow crab stocks;
- A crab offloading efficiency evaluation to identify improved offloading processes/ automation;
- Completion of an online e-simulator education program for vessel stability management. This program is now available free of charge to harvesters across Canada. The goal of this initiative is to provide harvesters a greater understanding of vessel stability and safety;
- A feasibility study for remote sensing of lost snow crab pots using side scan sonar. This initiative aims to help harvesters conduct fishing activities with minimal loss, as well as to protect the ocean ecosystem; and
- Development of environmentally friendly bottom trawls to reduce the impact of fishing on the seabed.

Processing projects funded through FTNOP included:

- An automated mastering process for crab, in order to lessen human resource demands in processing facilities;

- Laser vision technology for mussels, which will eliminate the need for manual sorting and will increase efficiency; and
- Ongoing development of a sea cucumber skinning machine, in order to eliminate the need for manual processing.

In 2012-13, DFA furthered initiatives on industry rationalization. The department partnered with the Federal Government and the FFAW to implement the Conservation and Sustainability Plan for the Newfoundland Lobster Fishery. Through the implementation of the Lobster Enterprise Retirement Program, which is a major element of the lobster plan, lobster license holders were able to sell their licenses and retire their fishing enterprises through a reverse auction process. To date, seven rounds of bidding have taken place and a total of 197 lobster fishing enterprises have exited the industry.

Indicator 1.2: Continued work to expand market access and address seafood tariffs in key markets.

Newfoundland and Labrador is a significant exporter of seafood products. However, high tariffs and other trade barriers in many countries negatively impact upon our seafood producers' access to international markets. To eliminate trade barriers and pursue potential export growth, DFA continued to partner with other departments and industry stakeholders on projects to expand market access and address tariffs in key markets during 2012-13.

- DFA continued to work with IBRD and other stakeholders in the ongoing trade negotiations, including Canada-EU CETA negotiations, Canada-Japan Economic Partnership Agreement negotiations, and Trans-Pacific Partnership Free Trade Agreement negotiations. The Provincial Government's goal is real market access, including the elimination of high tariffs on seafood and the establishment of mechanisms to deal with trade irritants. DFA officials attended meetings, debriefs, conference calls, and rounds of negotiations to ensure the province's interests with regard to the fisheries are advanced to the Federal Government negotiators and are reflected in the final agreement. Real market access in these agreements will result in positive benefits to the Newfoundland and Labrador seafood industry.
- DFA worked with industry and IBRD to advance the province's position for the renewal of the EU ATRQ and pressed the Federal Government to lobby with the EU for the interests of the Newfoundland and Labrador seafood producers. Efforts resulted in the renewal of the ATRQ for the period 2013-15, which greatly benefited the seafood industry. The 2013-15 ATRQ increased the annual tariff-free quota of cooked and peeled shrimp to 30,000 tonnes from 20,000 tonnes and allowed 9,000 tonnes of shell-on shrimp to enter the EU annually at a zero per cent tariff. This renewed ATRQ improved market access for Newfoundland and Labrador shrimp producers and increased producers' competitiveness in the European market.

- DFA supported initiatives that promote the sealing industry and worked to expand market access for seal and seal products as part of its sealing industry communications, advocacy, and development strategy. During this fiscal year, the department:
 - Partnered with federal, provincial and territorial representatives, industry stakeholders, and members of the Fur Institute of Canada (FIC), to initiate the planning and development of a comprehensive, multi-year domestic and international communications and advocacy strategy;
 - Collaborated with federal and provincial representatives, and industry stakeholders, to develop standards for sealer professionalization as part of the work of the Canadian Council of Professional Fish Harvesters Steering Committee on sealer professionalization. In line with DFA's sealing industry communication strategy, enhancing professionalization of sealers can promote the Newfoundland and Labrador sealing industry as a humane harvest of the seal resource, thereby encouraging market access for our seal products;
 - Participated in the regional advisory meetings to address seal management issues and market access concerns;
 - Pressed the Federal Government to ensure all efforts to revoke a seal ban in Russia, Belarus, Kazakhstan, and Taiwan are pursued. In several meetings with DFO during 2012-13, DFA supported Canada's advancement of WTO action and encouraged the Federal Government to continue efforts to achieve full commercial access to the Chinese market;
 - Met with officials of Foreign Affairs and International Trade Canada to exchange information on the WTO legal challenge on the EU seal products ban;
 - Worked with industry, PFHCB, and the Canadian Food Inspection Agency (CFIA) to identify and address outstanding requirements to complete the Code of Practice for seal products. The implementation of the Code of Practice will enable the certification of edible seal products for consumers in China and thus encourage market access for seal products. In February 2013, DFA Minister Derrick Dalley wrote CFIA President George Da Pont discussing the readiness of DFA and CFIA to support industry access to markets in China;
 - Collaborated on initiatives of the FIC's Seals and Sealing Network Committee to open markets; and
 - Assisted the sealing industry with an inventory loan to purchase seals. This initiative aims to secure market access for seal products and also to provide income to hundreds of harvesters in rural areas.

Indicator 1.3: Worked with industry to expand market opportunities.

In 2012-13, through the Compliance and Enforcement Program, DFA worked to improve seafood product quality in the province and, as such, increased seafood producers' competitiveness and expanded market opportunities in the marketplace.

- DFA conducted 3,102 inspections pertaining to raw product requirements; handling and holding conditions on vessels, trailers, and unloading sites; and point of export inspections at Port aux Basques.
- DFA conducted 40 audits on licensed processing facilities to ensure that each license holder is complying with the requirements specified under the *Fish Inspection Act* and regulations.
- Enforcement actions undertaken by DFA were comprised of 4 charges for violations of the *Fish Inspection Act* and Regulations, 17 Summary Offence Tickets, and 41 official warnings for non-compliance with product labelling, processing/buying violations, holding/handling conditions, and employee hygiene/sanitation.

DFA partnered with industry to participate in various international seafood shows, and invested in market research and promotion, to increase market awareness and acceptance of Newfoundland and Labrador seafood products in the global market.

- In 2012-13, DFA exhibited with seafood companies at the European Seafood Exposition (April 24-26, 2012), World Food Moscow (September 17-20, 2012), the Seafood Barcelona Trade Show (October 15-17, 2012), the China Fisheries and Seafood Expo (November 6-8, 2012), and the International Boston Seafood Show (March 10-12, 2013), to promote Newfoundland and Labrador seafood products in the world market. During the International Boston Seafood Show, DFA carried out sampling sessions where the province's seafood products were prominently featured by Newfoundland and Labrador chefs. DFA also hosted a networking reception for seafood producers to showcase the high quality products from Newfoundland and Labrador to industry representatives and international seafood buyers.
- DFA partnered with the Federal Government and other provinces on Hong Kong seafood promotions in September 2012, to highlight and promote increased consumption of seafood products in hotels, restaurants, and supermarkets in Hong Kong.
- DFA carried out market research activities and coordinated the hiring of external market research consultants to collect market information and intelligence for lobster, snow crab, shrimp, cod, capelin, mackerel, lumpfish roe, and whelk. This initiative supports raw material price negotiations for these species.
- In partnership with the Restaurant Association of Newfoundland and Labrador, the Newfoundland Association of Chefs and Cooks, 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 IBRD and ACOA on an India food TV series promoting Atlantic Canada seafood products.
- DFA worked to expand market opportunities for seal products. In 2012-13, the department partnered with CSA to develop marketing tools to promote seal products, and supported promotional activities of Vogue Furriers and Natural boutique.
- DFA funded marketing projects through FTNOP, including marketing materials and website updates, participation in aquaculture promotional events and international trade shows, development of a fisheries nutritional booklet and a crab information booklet, and promotion of MSC certification of mussel aquaculture.
- Sustainability and eco-certification plays an increasingly important role in gaining and maintaining market access in the global markets. As such, DFA has contributed over \$310,000 since 2008 to assist eco-certification initiatives undertaken by the fishing industry. In July 2012, Clearwater Seafoods Banquereau and Grand Bank Arctic surf clam fishery was certified as sustainable by MSC; DFA also provided funding for the pre-assessment of the province's lobster fishery in January 2013 for MSC certification. To date, 82 per cent of Newfoundland and Labrador seafood, by value, has been certified as sustainable or is in the assessment phase for certification.



Chef Vicky Ratnani cooking demo with Chef Steve Watson

Discussion of Results

Throughout the 2012-13 fiscal year, DFA undertook initiatives to further improve sustainability and viability of the fishing industry. The department promoted sustainable fisheries management in the province through participation in various fisheries management processes of DFO and NAFO, and investments in fisheries science initiatives through CFER and the Fisheries Research Grant Program. Also, the department invested heavily in research and development work through FTNOP, with emphasis on innovative approaches to harvesting and processing, energy efficiency, safety education and awareness, and market promotion. Additionally, DFA worked towards industry rationalization through the implementation of the Lobster Enterprise Retirement Program. A total of 197 lobster fishing enterprises have been retired from the fishery, resulting in improved income levels for remaining lobster harvesters and economic viability of the lobster fishery.

The Newfoundland and Labrador seafood industry is export dependent, therefore expanding access and opportunities in key markets remains a priority for the department. In 2012-13, DFA diligently conducted inspections and audits on licensed processing facilities to ensure quality in the seafood industry, therefore enhancing producers' competitiveness in the marketplace. DFA also worked with IBRD to advance the province's interests to the Federal Government with respect to the fisheries issues in the ongoing bilateral/multilateral trade agreement negotiations and achieved a favourable outcome of the renewal of the EU ATRQ. To expand market access for seal products, DFA supported Canada's advancement of WTO action, pursued full market access in China, and provided an inventory loan to the industry, which generated almost \$4.5 million in economic benefits to the province. Through DFA's support of eco-certification, participation in various international seafood shows, and investments in market research and promotion, DFA assisted seafood producers in their market development efforts and improved producers' competitiveness in the marketplace. All these endeavours supported government's strategic direction to strengthen the role of the fishing industry as a key pillar of sustainable economic growth within the province.

Strategic Issue 1:

Commitment for 2013-14

Objective 3:

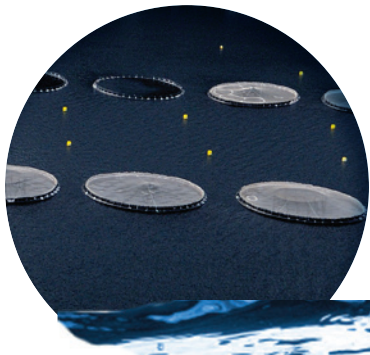
By March 31, 2014, the Department of Fisheries and Aquaculture will have continued to further initiatives to support the sustainability and international competitiveness of the fishing industry.

Measure:

Continued to further initiatives to support industry sustainability and international competitiveness.

Indicators:

- Continued to promote sustainable fisheries management.
- Continued work to expand market access and address seafood tariffs in key markets.
- Continued to work with industry to expand market opportunities.
- Supported quality improvement initiatives.



STRATEGIC ISSUE 2:

AQUACULTURE

EXPANSION AND SUSTAINABILITY

Goal:

By March 31, 2014, the Department of Fisheries and Aquaculture will have facilitated the expansion and sustainability of the aquaculture industry.

Objective 2:

By March 31, 2013, the Department of Fisheries and Aquaculture will have furthered initiatives to promote expansion and sustainability of the aquaculture industry.

Measure:

Furthered initiatives to promote expansion and sustainability of the aquaculture industry.

Opening Discussion

The aquaculture industry in Newfoundland and Labrador has experienced significant growth over the past seven years. In 2012, production volumes continued to rise to 21,228 tonnes, an increase of 23 per cent over the previous year. Expansion was driven by both the salmonid and mussel sectors, with blue mussel production reaching record levels. Market value was six per cent lower than the previous year, with a total value of \$112.8 million in 2012. Lower values were attributable to an increased global supply and weak prices for salmon in major export markets. In 2013, the salmonid sector is anticipated to see continued growth in production. This, combined with stronger market prices for Atlantic salmon in 2013, indicates that the outlook for the salmonid sector is positive. The mussel sector is anticipated to remain stable at historically high levels over the next year.

The aquaculture industry in Newfoundland and Labrador employs almost 1,000 people through hatchery, grow-out, and processing activities, with the vast majority of that employment located in rural areas of the province. The government has supported the sustainable development of this industry, which has become an increasingly important economic driver in areas where aquaculture is occurring. During the 2012-13 fiscal year, the department focused on improving biosecurity, infrastructure, and the governance structure of the industry to support the department's strategic direction to enhance sustainability of the provincial aquaculture industry.

Indicator 2.1: Continued Baseline Socio-economic Assessment.

A socio-economic assessment is a valuable tool to quantify the impacts of the aquaculture industry at provincial and regional levels for both reporting and planning purposes. In 2012-13, the department collaborated with other government departments to further initiatives on the baseline socio-economic assessment.

- DFA worked closely with the Department of Finance (Finance) to finalize the scope and structure of the socio-economic assessment. A revised project proposal was submitted to Finance in early May 2012. DFA staff met with representatives from Finance again in June to address outstanding challenges with the proposed assessment. Following that meeting, the project proposal was finalized, and a project agreement on the aquaculture industry socio-economic assessment was signed by both parties.
- Assessment activities commenced in fall 2012. Finance began mining a variety of available data sets to develop a series of regional indicators for the south coast of the province. The aim of the assessment was to develop a comprehensive and meaningful regional profile that incorporated economic and social variables. Much of the raw data required further analysis to determine metrics at a regional level. DFA received a draft profile from Finance on February 11, 2013, and provided comments for Finance to incorporate into the profile.
- DFA and Finance also began work on a provincial economic analysis. Preliminary assessments were completed and several data gaps were identified. Given that accurate data is critical to ensure the socio-economic assessment provides a realistic analysis, the department has been working with Finance, Statistics Canada, and industry partners to collect the required inputs for the Aquaculture Input-Output Model. The Aquaculture Input-Output Model estimates basic economic indicators, including Gross Domestic Product, employment, and labour income.
- Improved data collection will provide more detailed and accurate information which, in turn, will enhance industry analysis. To this end, a preliminary review of data collection forms was conducted in 2012-13. A full review will be completed in 2013-14. Implementation of the proposed changes will commence when the department's new data management system, currently in development, becomes operational.
- In addition, DFA identified the need for two additional data collection tools that would provide information on direct industry employment and the supply and service sector in the aquaculture industry. This information will highlight economic opportunities, assist in industry assessment, and promote resource planning for sustainable industry expansion.

Indicator 2.2: Began Implementation of Production-Based Regions.

This indicator was not met in the 2012-13 fiscal year; however, substantial work was completed to address this strategic indicator. The implementation of Production-Based

Regions (PBRs) is typically determined by environmental data and production regions; Bay Management Areas (BMAs) are analogous to the PBR approach, but are based on a wider set of quantitative and qualitative variables, including detailed oceanographic data. BMAs are recognized as an effective approach to disease management and will enhance biosecurity by establishing discreet regions. In 2012-13, DFA worked closely with industry to develop and finalize a plan for the implementation of BMAs.

- In June 2012, the department held a workshop with industry to discuss the results of field data collection for 2011. A field data collection work plan was also developed for 2012 to continue the preliminary work required to inform the development of BMAs.
- The field data collection for 2012, which was planned to begin in June, was postponed due to the unexpected detection of Infectious Salmon Anaemia virus (ISAv) in the Coast of Bays region. Marine travel was restricted in the zone to minimize the spread of pathogens. This prevented the department from fully completing data collection, which is essential to inform BMA development. It is anticipated that data collection will proceed in the 2013 season.
- The Bay Management Committee, which consists of representatives from the Provincial Government, the Federal Government, and industry, met in April 2012 to discuss and develop the biosecurity protocols for the implementation of BMAs. Further discussions planned for July 2012 were put on hold due to the identification of ISAv.
- DFA met with industry executives in February 2013, in Saint John, NB, to discuss BMA implementation. At this meeting, DFA presented an overview of the work completed to date and outlined potential scenarios for BMA implementation. A follow-up meeting occurred in March 2013 between departmental executives and industry executives to further discuss implementation strategies.
- Following the meeting with industry executives in March 2013, DFA received individual feedback on BMA implementation strategies from major industry stakeholders. The department evaluated industry feedback to determine the best approach for implementation of BMAs.

Indicator 2.3: Continued Assessment of New Growing Areas for Aquaculture.

Work towards assessment of new growing regions to ensure the sustainable expansion of the aquaculture industry continued in 2012-13. The work completed in this fiscal year contributed to a multi-year process typical of an environmental assessment.

In 2012-13, the construction of three remote sensing stations in Hare Bay, Devil's Bay, and Rencontre West for data collection was completed. Data collection started in October 2012 on a multi-year basis. The stations collect and provide data on several biological variables including wind speed, air temperature, wave height, water temperature, salinity, and dissolved oxygen, which is critical to assessing new growing areas for aquaculture in the region. The stations have been serviced three times since their deployment, in November and December 2012 and March 2013, to ensure they were in working order.

Discussion of Results

As aquaculture continues to grow in Newfoundland and Labrador, the need to ensure that industry expands in a manner that is sustainable and adheres to effective management practices becomes increasingly important. Over the 2012-13 fiscal year, the department worked on initiatives to ensure that industry planning and expansion is based on scientifically validated data and quantitative analysis. A project agreement on the industry's socio-economic assessment was signed by DFA and Finance and assessment activities have commenced at both provincial and regional levels. DFA has been working with Finance, Statistics Canada, and industry to collect required data for the assessment. A regional profile of the Connaigre Bay region was drafted by Finance with DFA's input. DFA is also developing a new data management system to assist industry assessment and resource planning.

DFA worked towards the implementation of BMAs to enhance the biosecurity of the aquaculture industry. In 2012-13, DFA developed the biosecurity protocols for the BMA implementation at the Bay Management Committee meeting, and engaged industry stakeholders to develop BMA implementation strategies. Work towards the assessment of new growing regions also continued in 2012-13, with three remote sensing stations built to collect data for the assessment of new growing areas for sustainable industry expansion. Through all these activities, DFA furthered initiatives to promote expansion and sustainability of the provincial aquaculture industry.

Strategic Issue 2:

Commitment for 2013-14

Objective 3:

By March 31, 2014, the Department of Fisheries and Aquaculture will have commenced implementation of initiatives to support the expansion and sustainability of the aquaculture industry.

Measure:

Commenced implementation of initiatives to promote expansion and sustainability of the aquaculture industry.

Indicators:

- Began expansion into new growing areas.
- Commenced implementation of initiatives to demonstrate increase in production.
- Expanded Fisheries Technology and New Opportunities Program to include aquaculture operations.
- Commenced implementation of strategies and plans to support sustainability.
- Implemented Aquaculture Sustainable Management Framework .



STRATEGIC ISSUE 3: **COASTAL AND OCEAN** MANAGEMENT

Goal:

By March 31, 2014, the Department of Fisheries and Aquaculture will have advanced a coordinated approach to coastal and ocean management in the province.

Objective 2:

By March 31, 2013, the Department of Fisheries and Aquaculture will have commenced the implementation of action items and continued policy development to further advance the coastal and ocean management strategy.

Measure:

Commenced the implementation of action items and continued policy development to further advance the coastal and ocean management strategy.

Opening Discussion

The Government of Newfoundland and Labrador developed and released the Coastal and Ocean Management Strategy and Policy Framework in 2011. The Strategy provides a long-term vision for 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: "a coordinated approach," "information and research," and "education and awareness."

In collaboration with other stakeholders, DFA has commenced the implementation of action items identified in the Strategy. Activities focused on promoting educational programs, dissemination of coastal and ocean information, enhancing relationships between governments and departments on coastal and ocean management, and promoting awareness and engagement of stakeholders. DFA also worked with its partners, including DFO and other provincial departments, to develop new action items for continued policy development. These endeavours demonstrated government's commitment to integrated coastal and ocean management in the province.

Indicator 3.1: Worked with other departments and stakeholders to implement action items.

In the Coastal and Ocean Management Strategy and Policy Framework, 14 action items have been outlined under three over-arching strategic directions, namely, “education and awareness,” “information and research,” and “a coordinated approach.” For a full list of action items and detailed information for the strategic directions and objectives, please see the following link to the Coastal and Ocean Management Strategy and Policy Framework: http://www.fishaq.gov.nl.ca/publications/CoastalStrategy_2011.pdf.

In 2012-13, DFA collaborated with various stakeholders and committed \$150,000 in grants towards projects which contributed to the implementation of action items under the three strategic directions as highlighted in the Strategy.

- Under the strategic direction, “education and awareness”: In partnership with other departments and stakeholders, DFA supported a number of initiatives to enhance education and awareness of coastal and ocean management, including the Ocean Learning Partnership’s Ocean Education Initiative, MI Ocean Net’s Youth and the Oceans Conference Series, Friends of Beaches Network, ACAP Humber Arm’s Books for Boats, Coastal Matters Lecture Series, Students on Ice Youth Arctic Expedition student sponsorship, and World Oceans Day activities. In this way, DFA implemented the action item of “promoting initiatives and educational programs aimed at enhancing marine education and increasing youth involvement in coastal and ocean stewardship activities across the province.”
- Under the strategic direction, “information and research”: Funding was provided to NAIA to research the impacts of green crab on the ecosystem and for an assessment of recreational boating as it relates to aquatic invasive species (AIS). In this way, DFA implemented the action item of “supporting collaborative initiatives to promote coastal and ocean data and information gathering to help ensure informed decision-making regarding management of the coastal and ocean environment.”
- Under the strategic direction, “a coordinated approach”: DFA enhanced relationships between the Provincial Government, Federal Government, and industry stakeholders to facilitate coastal and ocean management in the province.
 - In 2011-12, DFA finalized the Terms of Reference for PCON to implement the Strategy. In 2012-13, DFA chaired the PCON Committee meetings where departments provided updates on programs and initiatives related to coastal and ocean management. By doing so, DFA implemented the action item of “ensuring consistencies between coastal and ocean management initiatives particularly where issues are cross-cutting and involve multiple government departments or agencies.”
 - DFA implemented the action item of “building on current relationships with federal departments and agencies that have responsibilities in coastal and ocean areas” by re-establishing and co-chairing the Regional Oversight Committee on Oceans

Management. This committee brought together senior level provincial and federal department officials to discuss areas of collaboration and direction of coastal management in the province. DFA also co-chairs the Canada-Newfoundland and Labrador Committee on Oceans Management (CNLCOM), which will implement priorities and actions directed by ROCOM. Additional details are outlined under Indicator 3.2.

- As noted previously in Indicator 2.2 under Strategic Issue 2, DFA engaged industry stakeholders to develop BMA implementation strategies through meetings and one-on-one consultations. DFA also attended CMA Committee meetings and held public engagement sessions in partnership with DFO to engage local stakeholders in coastal activities and to promote regionally based integrated coastal and ocean management. Additional details are outlined under Indicator 3.3. Through all these activities, DFA implemented three action items, including “encouraging and facilitating local stakeholder participation and input into decision-making and policy development,” “exploring options for development of regionally based committees and building upon the mandates of existing structures,” and “supporting community-driven coastal and ocean initiatives.”

Indicator 3.2: Continued to develop new action items.

In 2012-13, DFA collaborated with other government departments and partners in the development of new action items to address coastal and ocean issues.

- DFA staff attended the CNLCOM meeting on January 9, 2013, and the ROCOM meeting on January 22, 2013. Priority action items identified at the meetings included: identifying activities and strategies for mitigation of aquatic invasive species, marine protected areas’ bioregional planning and engagement, and addressing competing needs and interests through geospatial information sharing and support for coastal management area planning. Initiatives highlighted at these meetings are identified in both the federal-led Placentia Bay Grand Banks Large Ocean Management Area Integrated Management Plan and the provincial-led Coastal and Ocean Management Strategy and Policy Framework.
- Projects have also been identified with stakeholders to address AIS mitigation as it relates to youth outreach and recreational boater awareness. AIS projects proposed in 2012-13 included:
 - Collaboration with DFO on an educational and awareness program on AIS for recreational boaters in the province;
 - Continuation of funding to green crab impact study on eelgrass/juvenile cod on the west coast;
 - Working with DFO and industry partners to control and mitigate the spread of the vase tunicates where it could potentially impact the aquaculture industry;
 - Partnering with a school in the Placentia Bay area to conduct a population study of green crab, in partnership with DFO, industry, and the Department of Education; and
 - Working with CNLCOM to produce a provincial/federal gap analysis on AIS, define issues, and identify strategies.

Indicator 3.3: Promoted awareness and engagement of stakeholders of coastal and ocean management.

Understanding the benefits of the coastal and ocean environment will encourage people to appreciate and help conserve the province's coastal and ocean areas. During this fiscal year, the department has undertaken initiatives to promote public education, communication, and engagement to increase understanding and awareness of the coastal and ocean environment and impacts.

- DFA staff attended the Coastal Zone Canada 2012 Conference in Rimouski, Quebec, and gave an overview of the provincial coastal strategy and coastal management activities in the province. This conference provided a forum for hundreds of coastal and ocean managers, government officials, academics, researchers, students, and citizens from across Canada and internationally to discuss and identify solutions to issues facing the nation's coasts and oceans.
- DFA attended CMA Committee meetings in Placentia Bay in September 2012 and the Coast of Bays region in October 2012 to discuss the future of coastal management planning with regional stakeholders. In attendance were representatives from the Provincial Government, Federal Government, regional associations, industry groups, non-government organizations, and academia. An action item from these meetings was to conduct public engagement sessions on integrated coastal and ocean management to further engage stakeholders in coastal activities conducted by CMA committees.
- With the assistance of the Office of Public Engagement, DFA and DFO held public engagement sessions in Marystown in November 2012, Bay d'Espoir in November 2012, and Placentia in January 2013. Approximately 80 people attended these public engagement sessions. Outcomes from these sessions included: an agreement by the majority of stakeholders that CMA committees should continue to operate in the regions; identification of priority coastal issues; and development of action items for the CMA committees. DFA and DFO produced summary documents for the sessions and distributed them to the members of CMA committees.
- DFA attended the Atlantic Coastal Zone Information Steering Committee meeting in Halifax in January 2013, to discuss access to coastal and ocean digital information through the Coastal and Ocean Information Network Atlantic Project and to exchange information between provinces on coastal management activities.
- DFA produced and distributed a children's book, Jake the Puffin's Amazing Adventure, to educate young children about coastal and ocean topics in the province which were addressed in the provincial coastal strategy.
- In partnership with other stakeholders, DFA held World Oceans Day activities for youth across the province, including an art contest and a free family fun day in St. John's. The family fun day saw over 850 people in attendance and included interactive and educational exhibits on ocean topics.

Discussion of Results

Throughout the 2012-13 fiscal year, DFA advanced the Coastal and Ocean Management Strategy and Policy Framework through the implementation of seven action items. In 2012-13, a total of \$150,000 was granted towards coastal and ocean projects to promote educational programs and youth involvement, and to support information gathering and sharing. As the chair of PCON and the co-chair of CNLCOM and ROCOM, DFA met and collaborated with the Federal Government, other provincial departments, and stakeholders to address coastal and ocean management issues. DFA met twice with regional stakeholders at meetings held by CMA committees to discuss coastal management planning, and subsequently conducted three public engagement sessions with DFO where priority coastal issues and action items for the CMA committees were identified. Furthermore, DFA enhanced marine education by producing a children's book and holding World Oceans Day activities in collaboration with other partners.

In 2012-13, DFA continued to develop new action items with other stakeholders at the CNLCOM meeting and the ROCOM meeting. As noted previously, five projects were proposed in 2012-13. Through all these activities, the department supported government's strategic direction to enhance the province's position on fishery and oceans matters falling under federal jurisdiction, in particular ocean policy and the sustainable management of the fishing and aquaculture industries.

Strategic Issue 3:

Commitment for 2013-14

Objective 3:

By March 31, 2014, the Department of Fisheries and Aquaculture will have continued the implementation of action items and policy development to further advance the coastal and ocean management strategy.

Measure:

Continued the implementation of action items and policy development to further advance the coastal and ocean management strategy.

Indicators:

- Continued to work with other departments and stakeholders to implement action items.
- Continued to develop new action items.
- Continued to promote awareness and engagement of stakeholders of coastal and ocean management.

FISHING INDUSTRY

OPPORTUNITIES AND CHALLENGES



The Department of Fisheries and Aquaculture is ready and well-positioned to examine and exploit opportunities for the harvesting, processing, and marketing of seafood products and diversification of the province's fishing industry. DFA works closely with industry stakeholders to capitalize on opportunities and address challenges facing the industry.

Opportunities

In the harvesting sector, increased science and research capabilities assist the department with sustainable resource management and ensure the department is engaged in the Federal Government's fisheries resource management process. The enhanced Fisheries Loan Guarantee Program announced in 2012 addressed capital requirements for fish harvesters seeking to combine their licenses and enterprises, and thus will facilitate self-rationalization in the harvesting sector. In addition, projects funded by the Fisheries Technology and New Opportunities Program provide opportunities to increase the overall viability of the harvesting sector.

In the fish processing sector, FTNOP provides opportunities for increased research and development as well as improved energy efficiency. Innovative approaches in seafood processing provide access to new markets. The delivery of the Compliance and Enforcement Program by DFA contributes to improved seafood product quality in the province and, as such, increases seafood producers' competitiveness in the marketplace. Also, revisions to DFA's fish processing licensing policy aim at strengthening policy capacities in the industry, and thus provide opportunities for enhanced product quality and improve total returns from processing available resources in the province.

For seafood marketing, increased global seafood consumption and diversified high-end markets have positive impacts on the province's seafood exports. The ongoing trade agreement negotiations, including the ones with the European Union and Japan, and the Trans-Pacific Partnership Free Trade Agreement negotiations, provide opportunities for the industry to eliminate trade barriers and pursue potential export growth in the markets. Additionally, eco-certification and product traceability initiatives assist the industry in gaining and maintaining market access.

FISHING INDUSTRY

OPPORTUNITIES AND CHALLENGES *(CONTINUED)*



Challenges

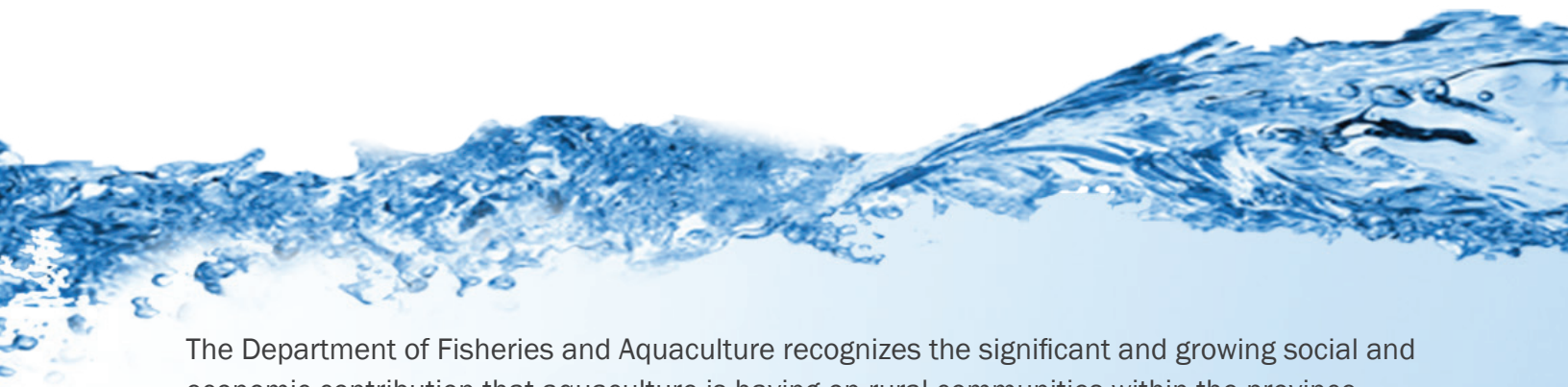
The external factors that impede competitiveness of the province's seafood industry include market volatility, international competition from low-cost producers, exchange rate fluctuations, fuel price volatility, and international tariff and trade barriers.

The internal challenges that impede competitiveness of the industry include overcapacity in both the harvesting and processing sectors, the seasonality of the industry, aging infrastructure, the need for industry modernization, resource uncertainty, uncoordinated sales and marketing efforts, and structural inefficiency.

The current and anticipated demographics also negatively impact on the industry. The workforce in both the harvesting and processing sectors is aging. Attraction and retention of new workers is difficult due to seasonal employment, meager income, and job security issues. Also, evolving technology in the work environment requires workers to receive specialized training before entering the industry. Although improved technology brings opportunities for sustainable development of the fishing industry, specialized training required for new participants may create difficulties in recruitment of workers. All these factors impede the sustainable development of the fishing industry in Newfoundland and Labrador.

AQUACULTURE INDUSTRY

OPPORTUNITIES AND CHALLENGES



The Department of Fisheries and Aquaculture recognizes the significant and growing social and economic contribution that aquaculture is having on rural communities within the province. The department continues to work closely with industry and other stakeholders to facilitate sustainable expansion. The steady growth in production seen over the last several years has created both new opportunities and challenges for the industry.

Opportunities

The development climate for the provincial aquaculture industry is favourable. Newfoundland and Labrador remains one of the last regions in Canada that has not been developed to its potential. The province has an abundance of marine space off the coast of the island portion of Newfoundland and Labrador that is well-suited for aquaculture development, particularly for the three current commercial species Atlantic salmon, steelhead trout, and blue mussels. Additionally, a skilled and experienced workforce is supported by collaborative relationships among industry, government, and academia.

In the past, the department worked with stakeholders to identify critical impediments to growth, including a complicated licensing process and inadequate access to capital. A streamlined process for licensing new aquaculture sites, along with program development that provides access to capital, have helped spur recent industry growth and continue to enable the department to foster new opportunities. Additional opportunities for growth are being supported through various departmental initiatives, including marine infrastructure development, remote aquaculture site analysis, and aquatic animal health capacity expansion.

The department is also working with stakeholders and local governments to identify opportunities to capture additional components of the aquaculture supply chain. Atlantic salmon hatchery planning and development, along with the development of industry support services such as site engineering and net cleaning, provide further economic and employment opportunities in rural Newfoundland and Labrador.

AQUACULTURE INDUSTRY

OPPORTUNITIES AND CHALLENGES *(CONTINUED)*



From a marketing perspective, there is increasing demand for high-quality, sustainable seafood. In particular, interest and demand for blue mussels in the marketplace is growing, providing market opportunities for Newfoundland and Labrador producers. The mussel sector's recent certification to the Canadian Organic Aquaculture Standard is the first mussel certification in North America. This improves Newfoundland and Labrador's competitiveness and, as the first entrant into the certified mussel market, provides local producers with a unique opportunity to establish new markets. Some major salmon producers have achieved certification for their salmon products as well.

Challenges

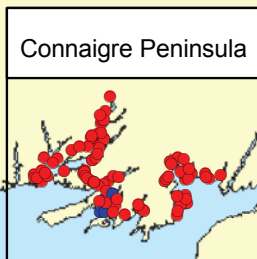
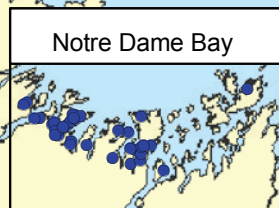
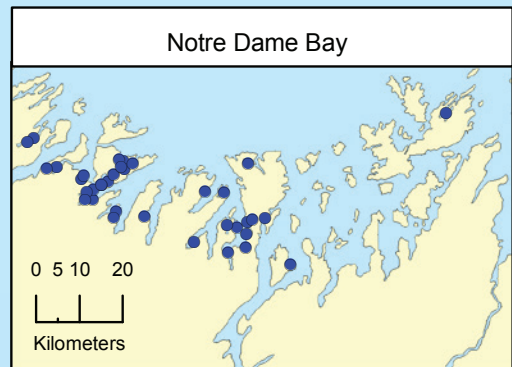
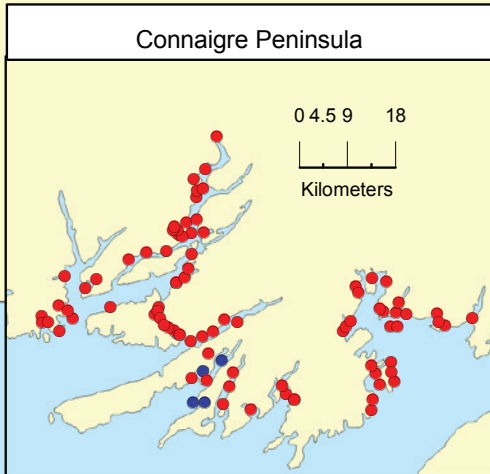
The external factors that may impede the development of the province's aquaculture industry include market price fluctuation, exchange rate volatility, access to capital, competition from producers in other provinces and countries, high fish food costs, and natural events. While increased market demand in recent years has brought opportunities for the industry, the corresponding increased production to meet that growing demand and maintain market access can be a challenge to the industry.

There are also internal factors that may impede the development of the industry if not addressed, including the need for improved marine infrastructure to support sustainable development and expansion, the development of increased biosecurity approaches, the maintenance of a flexible and efficient regulatory environment, the need for increased aquatic animal health management services, and the need to address public misinformation regarding aquaculture risks. DFA is already working on initiatives to address these identified challenges.

From a human resources perspective, the major challenges will be attracting and retaining trained employees and providing specialized training on evolving technologies in the work environment. Certain positions, such as aquaculture veterinarians and technologists, are considered the most challenging. All these factors have the potential to impede the sustainable development of the aquaculture industry in Newfoundland and Labrador.

Licensed Aquaculture Sites Newfoundland and Labrador, 2012

- Salmonid/Hatchery
- Shellfish



Licensed Fish Processing Plants

Newfoundland and Labrador, 2012

● Location of Plant



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

Source: DFA

Sustainability and Certification

The fishing industry is a key employer in the Province of Newfoundland and Labrador and a significant contributor to the provincial economy, particularly in rural areas. As such, managing the fishery in a sustainable manner is vital for the people of the province and future generations. Fisheries management falls under the jurisdiction of the Federal Government. Under the United Nations Convention on the Law of the Sea, as well as other international agreements, Canada has committed to managing the fishery in a manner that is sustainable, precautionary, and without detriment to ecosystem health. The Provincial Government, meanwhile, supports a precautionary and ecosystem-based approach to fisheries management, and is actively engaged in federal processes to ensure Canada meets its international obligations in this regard. The provincial aquaculture industry has experienced significant growth over the past few years, with almost 1,000 people currently engaged in hatchery, grow-out, and processing activities. Therefore, ensuring sustainable development and growth of the aquaculture industry is important to the provincial economy and the people, particularly in the rural communities.

Consumers are becoming increasingly concerned about the origins of seafood products and whether they were procured in a sustainable manner. In response to this, major retailers worldwide have committed to selling seafood products that have been certified as procured from a sustainable fishery. In our major seafood markets such as North America and Europe, sustainability and traceability are becoming increasingly important. Also, several major grocers in Canada, including Sobeys Inc. and Loblaw Companies Ltd., have established sustainable seafood policies and committed to source all of their seafood from sustainable sources by the end of 2013. As such, conducting the fishing and aquaculture industries in a sustainable manner and pursuing eco-certification have increasingly become conditions for market access for Newfoundland and Labrador seafood products.

As a market-based incentive for sustainable and responsible fishing and aquaculture practices, eco-certification is intended to capture consumer choice in favour of environmentally responsible stewardship. The United Nations' Food and Agriculture Organization established an international eco-labelling guideline for the capture fisheries in 2005, in which the minimum requirements and criteria were set for assessing whether a fishery can receive an eco-label. There are currently numerous eco-certification programs worldwide, but the MSC is the most



widely recognized program for wild capture fisheries. As of June 2013, 313 fisheries around the world were participating in the MSC program, either as certified fisheries or in the assessment phase.

The Government of Newfoundland and Labrador is engaged in, and supportive of, eco-certification processes for the fishing industry. The Provincial Government provides information to the certifier during consultations, and is engaged with industry and the Federal Government in supporting any changes that may be required in a fishery to meet and maintain the conditions of certification. The province also financially supports eco-certification initiatives for Newfoundland and Labrador fisheries, and to date has contributed over \$310,000 in funding to the fishing industry, primarily towards MSC certification pre-assessments and assessments.

In 2008, the northern shrimp fishery in Newfoundland and Labrador was certified to the MSC standard, and this was the first MSC certified fishery in Canada. To date, there have been six fisheries certified to the MSC standard in the province: northern shrimp, including striped shrimp and shrimp in the Esquiman Channel, yellowtail flounder, surf clam, scallop, snow crab, and halibut. The 4R herring fishery is currently in assessment. The provincial lobster fishery will likely soon enter the assessment stage and several other fisheries have recently completed pre-assessments. In total, over 82 per cent of Newfoundland and Labrador seafood, by value, has been certified to the MSC standard or is in the assessment phase for certification. By supporting the eco-certification initiatives, DFA continues to promote sustainable fisheries management in the province and assist industry with market access and development opportunities.

There is a wide variety of aquaculture standards worldwide, of which some are better known, such as the Best Aquaculture Practices (BAP) and the Aquaculture Stewardship Council. The Department of Fisheries and Aquaculture is supportive of the certification initiatives undertaken by the aquaculture industry and several operations in the industry have been certified. For example, all mussel growers in Newfoundland and Labrador were certified to the Canadian Organic Aquaculture Standard in February 2013. All major salmon producers in the province have invested in certification. In particular, Cooke Aquaculture Inc. has achieved Seafood Trust certification for many of their salmon products. Gray Aqua Group has also earned BAP certification for its salmon farming operations. In addition, Natures Sea Farms Group and Northern Harvest Sea Farms have also achieved “three star” BAP status by using BAP certified feed mills, farms sites, and processing plans. These initiatives have promoted sustainable development of the aquaculture industry in the province, as well as retained and expanded market opportunities for aquaculture products.



Energy Efficiency

Energy efficiency is becoming an increasingly important issue as we develop a viable and environmentally friendly seafood industry. The fishing industry is highly dependent on energy for operation of its boats, gear, and processing facilities. Soaring energy prices, however, have reduced the profitability of fishing enterprises and processing facilities and threatened the economic viability of the fishing industry. There is also a greater awareness of the effects of combustion engines on the climate. Decreasing energy consumption and reducing greenhouse gas emissions have become essential for improving the economic viability of the province's fishing industry, and in obtaining a competitive advantage in the global seafood market.



Energy efficient shrimp trawl

To respond to this issue, the Provincial Government has been pursuing a number of initiatives with fishing industry stakeholders, to address the high cost of fuel and reduce industry's carbon footprint. Since 2008, approximately \$800,000 has been provided to these initiatives under the Fisheries Technology and New Opportunities Program, as part of the Fishing Industry Renewal Strategy.

In the harvesting sector, energy efficiency initiatives included the delivery of a number of workshops across the province, as well as the development of a series of "Energy Fact Sheets." The department also engaged a consultant for the design of an energy audit template for various fleet sectors and fisheries. Data collected provided information for harvesters on ways to reduce energy consumption by vessels in particular sectors. Funding was also provided to develop more energy efficient fishing gear such as shrimp trawls. This work included modified twine surface and trawl doors, with a focus on reducing drag, thereby impacting fuel consumption.

Shrimp Trawl Design Project

There are over 260 fishing vessels actively engaged in the Newfoundland and Labrador shrimp fishery. Based on industry information, a typical vessel consumes approximately 50,000 litres of fuel per season. As such, it is estimated that 13 million litres of fuel is consumed annually in the province's shrimp fishery. Since 2009, DFA has partnered with two local gear manufacturers and has provided funding in the amount of \$169,439 to support the Marine Institute's Centre for Sustainable Aquatic Resources to develop an alternate shrimp trawling system. This project has also been funded by the National Research Council Canada and the Canadian Centre for Fisheries Innovation.

Traditionally, otter trawl technology is widely used in the shrimp fishery. However, this technology consumes substantial amounts of fuel when compared to fixed gear. The Shrimp Trawl Design

Project investigated alternative designs that could be applied to a typical four-seam trawling (shrimp) system that would enhance its performance through fuel savings. To date, the three phases of this project have been completed, including the completion of the new design and sea trials of the new trawl on a 65' shrimp fishing vessel. Data collected through the completion of these sea trials showed the newly designed trawl consumed approximately 21 per cent less fuel. This four seam trawl is now commercially available from a local trawl manufacturer.

In the processing sector, one initiative was the completion of energy audits of two major multi-species facilities. These audits led to the creation of an “Energy Reduction Handbook,” presented to the processing industry through a series of workshops. Funding was also provided to establish a pilot-scale, biodiesel demonstration system at the Marine Institute to investigate the use of fish oils as an alternative energy source.



MI Biodiesel Project

Biofuel Project

Currently, biofuel is not available in Newfoundland and Labrador, and the largest potential source of biodiesel feedstock is marine oils extracted from fish processing operations. The estimated amount of marine oil from provincial fish processing operations is 2.9 million litres. With the expansion in aquaculture production, the available sources of marine oils for biodiesel production can be even greater. Developing biofuel has the potential to generate considerable revenue and reduce fuel costs for the processing industry by converting waste products into a marketable by-product while promoting a more environmentally friendly industry.

In an effort to develop biofuel in this province, DFA has provided funding over several years in the amount of \$178,496 to the Centre for Aquaculture and Seafood Development (CASD) of the Marine Institute to develop an economically viable, fish oil-derived biofuel production system. As part of the biofuel research, CASD established a fish oil-derived biodiesel production system to convert waste fish oils into biodiesel. Experimental results confirmed that high quality marine oil feedstock can provide biodiesel yields up to 90 per cent. In addition, a two-day biodiesel training session was delivered to industry and academic representatives to provide an overview and demonstration of production and applications of biodiesel fuel.

The planned next phase for the biodiesel project will include the completion of the pilot processing line; test runs for oil extraction on salmon waste and seal blubber; development of detailed work, sanitation instructions, and test procedures; and analysis of waste streams produced during oil extraction.

2012-13 EVENT PARTICIPATION*

Trade Events:

- European Seafood Exposition, Brussels, Belgium – April 2012
- World Food Moscow, Moscow, Russia – September 2012
- Seafood Barcelona Trade Show, Barcelona, Spain – October 2012
- China Fisheries and Seafood Expo, Qingdao, China – November 2012
- International Boston Seafood Show, Boston, MA – March 2013

Conferences and Events:

- Atlantic Council of Fisheries and Aquaculture Ministers/Canadian Council of Fisheries and Aquaculture Ministers, Victoria, BC – September 2012
- Atlantic Fisheries and Aquaculture Committee, Ottawa, ON – April and November 2012
- Atlantic Coastal Zone Information Steering Committee, Halifax, NS – January 2013
- Newfoundland Aquaculture Industry Association Trade Show, Gander, NL – February 2013
- North Atlantic Fish and Workboat Show, St. John's, NL – November-December 2012

*Note: This list is not exhaustive.



DFA trade show booth at World Food Moscow, 2012.

Committee Participation 2012-13

Department of Fisheries and Aquaculture Representation at the National and Regional Levels.*

National Participation

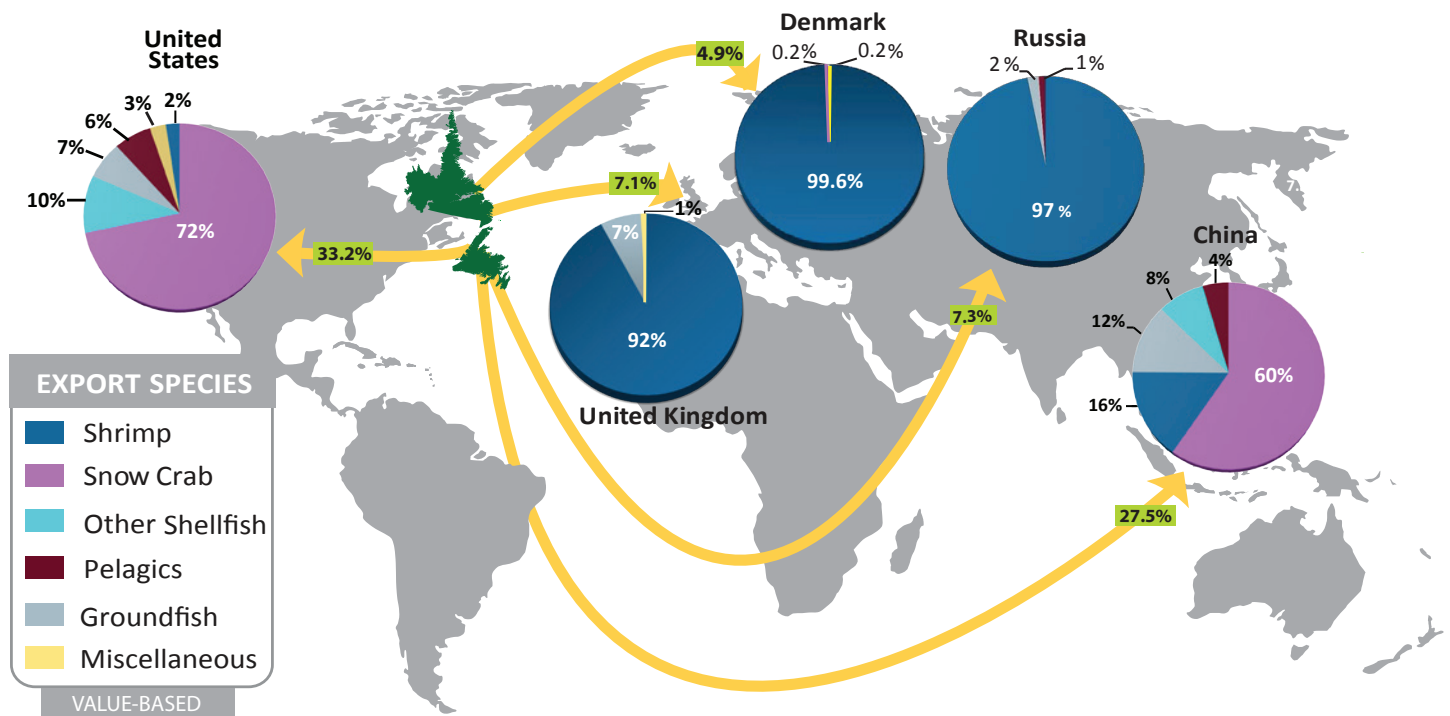
- Canada/France Fisheries Advisory Committee
- Canadian Council of Fisheries and Aquaculture Ministers, with associated task groups, working groups, and committees
- Canadian delegation to Northwest Atlantic Fisheries Organization meetings
- Canadian Shellfish Sanitation Program Working Group
- Canadian Food Inspection Agency Working Group for Disease Control
- Committee on the Status of Endangered Wildlife in Canada
- Federal and Provincial Introductions and Transfer Committee
- Federal/Provincial Export Market Development Consortium
- Federal/Provincial Market Development Council
- Fur Institute of Canada Sealing Committee
- Health Canada Expert Advisory Panel on Veterinary Drugs
- National Fish Health Management Working Group
- Seafood Value Chain Roundtable

Regional/Provincial Participation

- Atlantic Council of Fisheries and Aquaculture Ministers with associated task groups, working groups, and committees
- ACAP Humber Arm Environmental Association / Bay of Islands Coastal Management Area Committee
- Atlantic Coastal Zone Information Steering Committee
- Canada-Newfoundland and Labrador Committee on Ocean Management
- Atlantic Large Pelagic Advisory Committee
- Atlantic Seafood and Food Trade Group
- Atlantic Seal Advisory Committee
- Bay St. George and Port au Port Peninsula Marine and Coastal Resources Steering Committee
- Coast of Bays Coastal Planning Committee
- Eastern Aquaculture Veterinary Association (sub-committees)
- Gulf Groundfish Advisory Committee
- Gulf Shrimp Advisory Committee
- Gulf Capelin Advisory Committee
- Newfoundland and Labrador Aquatic Invasive Species Steering Committee
- Newfoundland and Labrador Regional Cod Recovery Working Group
- Newfoundland Lobster Sustainability Board – Executive Committee
- Placentia Bay Integrated Management Planning Committee
- Provincial Aquatic Invasive Steering Committee
- Provincial Investment Attraction Strategy Committee
- Provincial Coastal and Ocean Network
- Regional Oversight Committee on Oceans Management

*Note: This list is not exhaustive.

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



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

Market Overview

Newfoundland and Labrador continued to export significant volumes of seafood products globally in 2012. According to Statistics Canada, the province's seafood export value was \$766 million, a decrease of 11 per cent from 2011. The global economic environment, unfavourable exchange rates, and lower market prices for a number of seafood products contributed to this decline. Export volume was 136,462 tonnes versus 158,553 in 2011. Snow crab accounted for the highest value of all Newfoundland and Labrador seafood species exports at \$335 million.

The United States continued to be the largest export market for Newfoundland and Labrador seafood in 2012, accounting for 33.2 per cent of total export value. China followed, representing 27.5 per cent of export value. Other key markets, based on export value, included Russia at 7.3 per cent, the United Kingdom at 7.1 per cent, and Denmark at 4.9 per cent. These top markets represented approximately 80 per cent of the province's value of seafood exports.

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Photo References

Front cover top images left to right: fuel efficiency trawl, fish harvester, and fish inspector

Front cover feature image: Northern Broadcove

Back cover top images left to right: cod, crab, and mussels

Back cover feature image: Entrance to Saglek fjord




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