PEI Lobster Industry:

Strategic Importance, Economic Relevance, and Uniqueness of PEI's Canner Product




Prepared for:

PEI Seafood Processors Association

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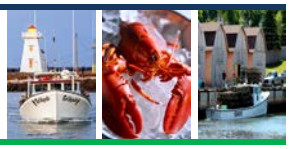
Executive Summary

The Prince Edward Island canner lobster is the cornerstone of the economic, social, and cultural fabric that defines the seafood industry in the province. It is a business model that is showing signs of success in a time of worldwide lobster market turmoil.

The future of the PEI canner lobster has brought industry players together to co-operate on this project. Representatives of the PEI Seafood Processors Association, the PEI Fisherman's Association, and the Provincial Government of PEI have realized the vast potential of this product and the future of the lobster industry on PEI depends on its success. These stakeholders believe PEI has a unique opportunity with the canner lobster product. They understand that increasing carapace size to eliminate this differentiated product will devastate the industry and result in the loss of a niche they have developed in the world market.

A sense of **urgency** and recent **industry challenges** have identified the need to retain this **sustainable**, **unique** and **economically important** canner lobster and create a **path forward** for industry stakeholders.



URGENCY

- Carapace size increase would devastate PEI industry
- Fishers are dependent on canner (65% of landings)
- Processing sector utilizes 60% canner product
- Underpinning of PEI's current market strategy
- Industry has some stability with current structure
- Economically important

INDUSTRY CHALLENGES

COST VS. PRICE

- Canadian dollar strong
- Increased fisher costs (fuel, bait, storage)
- Increased processor costs (shipping, selling)

SUPPLY VS. DEMAND

- Increased landings (resource management, climate change)
- Economic downturn – less market demand in traditional market of US

PRESSURE TO INCREASE CARAPACE SIZE

- NB market lobster fishery pressing for carapace size increase

ECONOMIC IMPORTANCE

- Impacts GDP by $78.7 million annually
- Supports 1,074 person years of employment
- Creates $20 million in tax revenue

UNIQUE

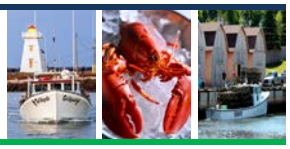
- 80% of canners in world landed in PEI
- A 72 mm canner lobster is a niche product
- Unique niche markets developed
- 65% of PEI lobsters are canner
- Unique processing model- 60% is canner product

SUSTAINABLE

- Carapace size at 72 mm provides for sustainable reproduction
- Lobster Resource Monitoring Program
- Government investment

THE PATH FORWARD

- Unified voice
- Retain carapace size
- Product diversification and innovation
- Continue to improve market image
- Continued investment



The canner lobster is a unique product in the world and PEI lands 80% of the product. Over the past ten years canner lobster accounted for 65% of PEI's total landings. Over the past five years, 60% of lobster processed on PEI was canner product, and 99% of it has been sourced from PEI fishers.

PEI lobster processors have a different business model than processors elsewhere, as they have built their model around the canner product. They have identified a market that is demanding diversity in product size and PEI has the niche product their customers desire. This move out of the lower value commodity market for larger lobster will provides an opportunity for fishers and processors to achieve the best value for their products.

One main goal of the Canadian lobster industry is to keep expanding its markets outside of the United States which typically commands up to 85% of exported product. PEI processors are leading the way as they have been consistently adding market share outside of North America. In 2012, one large processor in PEI had 60% of all exports shipped to Europe and Asia. This is significant and positive change.

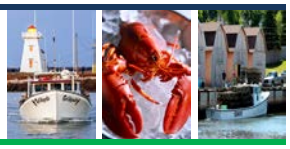
Consumers are demanding a high quality lobster experience for a lower per piece price. The canner lobster provides a product to match this demand. Chefs and consumers consistently comment on the sweet and tender quality of canner lobster meat. The cruise ships, casinos, and buffets markets are purchasing large amounts of canner lobster for these reasons. These customers are also adamant that if they are not able to source this smaller sized lobster, they will switch to another seafood protein as the price point of larger market lobsters is prohibitive.

The economic impact of the canner lobster sector has a significant impact on PEI's economy. On an annual basis it impacts GDP by $78.7 million, supports an estimated 1,074 person years of employment, and creates $20 million in tax revenues. The canner lobster is also an important part of PEI's heritage and tradition, strengthening both rural and urban PEI, and supporting many other indirect business operations.

PEI's lobster industry strongly believes in sustainability and would never jeopardize their rich resources for short term gain. Its fishery is strong because of the aggressive and sustainable management strategies implemented throughout its history including: increased minimum carapace sizes, a lobster license buyback program, lobster trap limit reductions, buffer zones to protect habitat, increased trap escape panel sizes, biodegradable panels for lost traps, a six day fishing week, and a provincial Lobster Resource Monitoring program.

Minimum carapace size has risen steadily to 72 mm which is where the science community believes the population is sustainable, as 50% of female lobsters in PEI's Lobster Fishing Areas will have reproduced at least once by the time they reach this size.

The PEI Provincial Government and Federal Government are committed to the success of the industry and have previously announced multi-year plans that will help stabilize the industry into the future.



PEI and the world marketplace need the 72 mm minimum carapace size canner lobster. PEI seafood processors are looking at product innovation to continue expansion in these new markets. The Asian and European markets are clearly an emerging opportunity for canner sized lobster as distribution channels improve and the marketplace evolves with new trade policies.

Leading industry experts believe that greater distinction is needed in lobster size and that the industry requires more product diversity not less. One market that all of the provinces and states compete in will not be good for the industry. Diversifying with a range of sizes and products and niche markets is key.

The path forward for PEI's lobster industry needs to focus on retaining PEI's unique, strategic, and economically important canner product.

1. URGENCY

- Carapace size increase would devastate PEI industry
- Fishers are dependent on canner (65% of landings)
- Processing sector utilizes 60% canner product
- Underpinning of PEI's current market strategy
- Industry has some stability with current structure
- Economically important

URGENCY

Prince Edward Island's (PEI's) processing sector is built on a model that consists of 60% of processed lobster products being created from canners. The canner size lobster has accounted for 65% of total landings in PEI over the past ten years.

The uniqueness of the product to PEI has led to PEI processors being able to develop unique markets decreasing reliance on the North American market and market size lobsters.

The canner product is the underpinning of PEI's current market strategy which has a focus on developing new markets in Europe and Asia for customers in the cruise, casino and hotel industries. The ability to develop these niche markets for a unique product has been important in bringing stability to the lobster industry in PEI. **Any increase to the carapace size beyond 72 mm would be devastating to the future sustainability of PEI's lobster industry.**

PEI has taken a strategic approach to dealing with many of the challenges that have been faced by the industry in recent years and has long recognized the strategic and economic importance of a sustainable

and unique canner product.

The PEI Lobster industry is at a crossroads. Success in new markets is dependent on seafood processors having the canner lobster product.

MRSB Consulting Services, partnering with EcoTec Consultants and Llink Consulting Corporation, researched and analysed canner lobsters as a key component of the PEI lobster fishery. The work was completed in consultation and collaboration with a Steering Committee comprised of representatives of the Seafood Processors Asscociation of PEI, the PEI Fisherman's Association, seafood processors, fishers representing all Lobster Fishing Areas (LFA's) in PEI, and the Provincial Government of PEI.

PEI's industry is speaking with one unified voice.

2. Industry Challenges

COST VS. PRICE

- Canadian dollar strong
- Increased fisher costs (fuel, bait, storage)
- Increased processor costs (shipping, selling)

SUPPLY VS. DEMAND

- Increased landings (resource management, climate change)
- Economic downturn – less market demand in traditional market of US

PRESSURE TO INCREASE CARAPACE SIZE

- NB market lobster fishery pressing for carapace size increase

INDUSTRY CHALLENGES

PEI's fishery industry has faced many new challenges in recent years. Costs of operations for both fishers and processors have increased while the selling price of both raw products and processed products, have not increased at the same rate. Diesel fuel has increased over 200% in the past 10 years[1], and increasing costs of inputs such as bait and storage, combined with no corresponding increase in shore price to cover this increasing cost has resulted in reduced profits to fishers. Reduced demand for product in traditional markets has put downward pressure on the selling price of processed products. Increased shipping and selling costs (more buyers, less volume vs. less buyers, more volume) with increased efforts and costs of establishing new markets have put cost pressures on the processing industry. The high exchange rate put pressure on profit margins of processors as contracts were

[1] *"Energy Statistics Handbook, Table 9.3-2",* Statistics Canada. Retrieved from: http://www.statcan.gc.ca/pub/57-601-x/2010004/t182-eng.htm

often priced in United States (US) dollars so when the Canadian dollar improved this resulted in lower Canadian dollar values when converted from US currency.

Landings have increased not only in PEI, but also in New Brunswick (NB), Nova Scotia (NS) and Maine, ranging from 24% to 56% since 2006. Climate change has also had an impact on the lobster fishery with warmer waters resulting in larger volumes being trapped and earlier molting creating a larger percentage of soft shell lobsters which have lower meat content and are more difficult to transport. While this increase in supply has occurred the global economic downturn and specifically the economic situation in the US, typically PEI's largest market, have resulted in fluctuating demand for lobster product. These factors have resulted in a downward pressure on shore price.

Current pressure on the federal government and the Maritime Fishers Union from NB to increase the carapace size of lobster runs the huge risk of reducing the ability of PEI to fish and process canner lobsters, a significant and niche product category for PEI.

3. Sustainable

SUSTAINABLE

- Carapace size at 72 mm provides for sustainable reproduction
- Lobster Resource Monitoring Program
- Government investment

3.1 Fishery Conservation Measures

A carapace size of 72 mm represents the size at which 50% of female lobsters in PEI waters will have reproduced at least once.[2] LFA's 24, 25, and 26A agreed to increase the minimum carapace size in the Lobster Sustainability Plan with Fisheries and Oceans Canada (DFO) to 72 mm (Effective in 2013) as **this carapace size allows PEI to retain its canner industry and at the same time provides for a sustainable lobster population**.

PEI has entered into a multi-year Integrated Lobster Resource Management Plan with DFO and participated in the funding for the Atlantic Lobster Sustainability Measures which included; increased minimum carapace size, a lobster license buyback program, lobster trap limit reductions in LFA's 25 and 26A, buffer zones to protect habitat, increased trap escape panel size, biodegradable panels for lost traps, and fishing only six days per week.

[2] "*Science Advisory Report Gulf Region"*, Fisheries and Ocean's Canada. Revised May 2008.

3.2 Lobster Resource Monitoring Program

PEI has had a **unique Lobster Resource Monitoring Program in place since 1998**. The PEI Fisherman's Association in collaboration with the Department of Fisheries, Aquaculture and Rural Development and Fisheries and Oceans Canada collect data on the status of the lobster resource. This program has several components.

The first component is sea sampling during which a biologist and technicians go on board commercial lobster fishing vessels during the fishery. Information is collected on as many lobsters from as many lobster traps as possible. A typical year has about 60 to 70 days at sea sampling from 24 ports. Information is collected on approximately 40,000 to 50,000 lobsters from 15,000 to 20,000 traps. Information collected includes location, trap type, depth, carapace size, sex, presence of eggs and staging of eggs and missing appendages.

The second component is the volunteer index fishers. Each year approximately 100 fishers participate from ports all around the Island. Each fisher collects daily information about their catch and measure all of the lobsters caught in six traps. Three of these traps have no escape mechanism and thus retain pre recruit lobsters. Information is recorded in a logbook and includes catch for the day, the number of traps hauled, type of bait used, depths, bottom water temperatures, window or maximum size lobsters returned to the water, weather information and the size and sex of all lobsters caught in their six traps. A typical year sees information recorded from about 100,000 lobsters caught in 25,000 traps. This information is entered in a database that is shared with Fisheries and Oceans Canada and is utilized to understand the commercial fishery and develop indicators of stock status.[3]

The final component is the use of lobster larval collectors at six locations around PEI. This project has been running for four years. It collects data on the settlement rates of young lobsters in the hopes of developing an index of settlement that may help predict trends in larval settlement.

3.3 Government Investment

The provincial government of PEI has long supported the lobster industry and its canner product. The current marketing plan, aimed at stabilizing the lobster industry and expanding markets for lobster products, was announced in 2009 and continues to this day. The plan included[4]:

- Funding to purchase lobster to be held in live holding systems until it can be processed in an orderly manner,
- Extension of the low interest loan program,

[3] *Marine Fisheries and Seafood Services Division*, PEI Department of Fisheries, Aquaculture and Rural Development.

[4] *"Annual Report",* PEI Department of Fisheries, Aquaculture and Rural Development

- Agreement with federal government partners on a $4 million product development and marketing fund,
- Agreement on industry rationalization in Lobster Fishing Area 25 and 26A, and
- Promoting flexibility in the Employment Insurance Program to respond to the crisis in the industry.

The provincial government has also continued with two other initiatives. (1) The Prince Edward Island Lobster Industry Roundtable, consisting of representatives of the Prince Edward Island Fishermen's Association, Prince Edward Island Seafood Processors Association, Fisheries and Oceans Canada, Mi'Kmaq Confederacy of PEI and several independent lobster fishermen and processors to ensure that the views and concerns of the Prince Edward Island lobster industry remain the focus of policy discussions and decision making of the provincial government. (2) The Future Fisher Program, which provides a combination of financial assistance and formal training to help establish young fishers, with renewal to 2016.

These goals align well with the provincial government's recent priority of "Establishing a seafood marketing and development agency for product development, showcasing Island products and promoting the industry in growing markets." [5]

The federal government has also shown a strong willingness to work with the lobster industry to improve marketing, assist in innovation, and develop products and technologies for the lobster industry in Atlantic Canada and Quebec. In 2009 Fisheries and Oceans Canana (DFO) announced that the federal government would make a five year, $65 million investment to assist lobster fishers throughout Atlantic Canada and Quebec to adjust to the collapse in lobster prices caused by the global recession, while building a more sustainable lobster fishery for future seasons. These measures included the following:

- Up to $35 million over five years for Atlantic Lobster Sustainability Measures to help the industry improve its sustainability by enhancing conservation, implementing self-adjustment measures, and meeting eco-certification requirements.
- Up to $15 million over five years for Atlantic Lobster Sustainability Measures for low income areas targeted at lobster-dependent fishers and their associations who have experienced low landings and a corresponding drop in income from lobster.
- Up to $15 million this year in Short-Term Transitional Contributions for Lobster-Harvesters who have experienced a significant drop in income from lobster harvesting in 2009.

[5] Retrieved from: http://www.dfo-mpo.gc.ca/media/back-fiche/2009/hq-ac30-eng.htm

4. Uniquely PEI

UNIQUE

- 80% of canners in world landed in PEI
- A 72 mm canner lobster is a niche product
- Unique niche markets developed
- 65% of PEI lobsters are canner
- Unique processing model- 60% is canner product

4.1 Unique Product

In PEI a "canner" is defined by the processing industry, as a lobster with a carapace size of 72 mm - 81 mm. The canner lobster has undergone various increases in minimum size over the years as seen in Table 1 and will be at 72 mm for the 2013 fishing seasons. Lobster above 81mm in PEI are defined as "market" sized.

Minimum carapace size varies in other Canadian LFAs as seen in Appendix A, however this niche sized canner lobster is unique and valuable not only in PEI's region, but the entire world. **There is no comparable or alternative product available in the marketplace. PEI's canner landings represent approximately 80% of the world supply**, with the other 20% coming from other areas in the Gulf Region, most notably NB.

Table 1: Minimum Carapace Size Change - Gulf Region (LFA's 24, 25, 26A)

Year(s) of change in Size	LFA 24 Size (mm)	LFA 25 Size (mm)	LFA 26A Size (mm)
2013	72.0	72.0	72.0
2011	71.0	71.0	71.0
2005	70.0	70.0	70.0
2004	69.5	70.0	69.5
2003	68.5	68.5	68.5
1999	65.9	67.5	65.9
1998	65.1	67.5	65.9
1997	63.5	66.7	65.1
1990	63.5	65.1	63.5

Source: *"A Bioeconomic Model for the Lobster Fishery in Canada",* Comeau and LeBreton. 2010.

Processed lobster products are varied. See Appendix B for a more detailed description of products. They may consist of[6]:

- Frozen whole cooked lobster in brine sometimes referred to as a "popsicle pack",
- Frozen whole cooked lobster known as "baby boils",
- Frozen whole blanched lobster,
- Frozen whole lobster, blanched or cooked in vacuum skin pack,
- Frozen raw lobster tails,
- Frozen lobster meat; whole pieces, chopped and salad meat; tails, claws, tails/claw and claw/knuckle.
- Minced lobster loaf,
- Cocktail claws,
- Tomalley and roe, and
- Lobster base.

Whole cooked lobster in brine and lobster tails have typically represented the largest portion of PEI's exports, however processors have been working hard to create new and differentiated products with canner lobster to meet marketplace demand.

One of the most popular canner products for markets in Asia and Europe are small whole cooked lobsters for buffets in high end hotel and casinos. Cruise ships, buffet and casino businesses prefer 0.75 pound - 1 pound (lb) whole cooks because a 20 lb package of lobster contains 25 pieces compared to a package of 1 lb lobsters that would contain only 20 pieces. Purchasers of whole cooked frozen lobsters also prefer the smaller sized lobster as they are priced per kilogram and therefore more affordable.

[6] *"Fish and Seafood",* Agriculture and Agri-Food Canada. Retrieved from: http://www.ats-sea.agr.gc.ca/sea-mer/4803-eng.htm

Companies in markets that sell by the piece (lobster) depend on canner sized lobsters as it provides a high quality lobster experience for a lower per piece price. Another popular product, whole raw frozen lobsters, is finding markets in European countries like Spain and Italy as a substitute for live lobsters.

If fishers and processors are to achieve the best value for their products, there is a need to move out of the commodity market. The larger live market already functions too much like a low value commodity market. **Simply put, the 72 mm canner lobster is a niche product.**

There is a demand from consumers who want a high quality lobster experience for a lower per piece price.

4.2 Unique Market

Canner lobster product processed on PEI is being exported beyond the traditional markets of the US and Canada to Asia and Europe. For the past few years the Canadian lobster industry as a whole has been working hard to break into markets outside of North America. In fact one aspect of the Lobster Council of Canada's mandate is to focus on branding and marketing, and increasing lobster exports into Asian markets to reduce dependency on the US market.[7] This is exactly what the PEI canner product is doing. It is opening up new markets in Asia and Europe and the benefits will be seen for both the business models of canner and market processing.

Local PEI processors have been making concerted efforts to diversify their markets and some PEI processors have been very successful with market entry to Asia and Europe. **For example, one local processor has diversified their markets such that Asia and Europe represented 60% of their market in 2012, reducing the dependency on the US market from 85% to approximately 30%**. Also of note, one PEI processing facility has established a customer in Japan with approximately $2 million in sales, **98% of which were niche canner lobster products**. These are real examples of how PEI processors are expanding the market for PEI canner lobster.

As distribution channels improve and the marketplace evolves with new trade opportunities and policies, the Asian market is clearly an emerging opportunity for canner sized lobster. As the Canada - Europe free trade talks continue, the prospects of even greater co-operation and value in canner lobster purchasing exists.

The market is demanding diversity with lobster size. A marketplace that has the choice of only one uniform minimum carapace size with all of the provinces and the US competing will not be good for the industry. **Diversifying with a range of sizes and products is key**.

[7] *"Our Mandate",* Lobster Council of Canada. Retrieved from: http://lobstercouncilcanada.ca/about/

Seafood processors in PEI agree that it is a mistake to assume that market lobster would replace canner lobster in the marketplace if canners no longer existed. In fact, many customers of the global company Whitecap International Seafood Exporters, have indicated that **if the smaller sized lobster market disappears, it will not be replaced with larger lobster**, rather customers will replace it with other more affordable seafood products.

The President and CEO of Whitecap International Seafood Exporters, Randy Bishop, (See Appendix C) has been in contact with his key clientele around the world. Whitecap's customers purchase hundreds of thousands of pounds per year and believe that because of the smaller size and intrinsic quality of the canners, the market is able to reach the proper price point to promote and market canner lobsters. He is quoted as saying, "These customers are emphatic that they will not promote lobster in the same fashion if they are not able to source smaller lobsters. The price point per lobster of the larger sizes is simply prohibitive to these customers and, as we have witnessed for many years, they will simply switch to another seafood protein source to meet their menu and merchandising needs."

"These customers are emphatic that they will not promote lobster in the same fashion if they are not able to source smaller lobsters. The price point per lobster of the larger sizes is simply prohibitive to these customers and, as we have witnessed for many years, they will simply switch to another seafood protein source to meet their menu and merchandising needs."

-Whitecap International Seafood Exporters

"Whether research and development, education or restaurant use, the culinary industry would be dramatically affected if canners were not available. Should there be a market for any commodity in these challenging economic times the option to sell should be available."

- Canada's Smartest Kitchen

Chefs also see the value of the canner lobster to the culinary industry. Ted Grant, the Senior Research and Development Chef of "Canada's Smartest Kitchen" at Holland College refers to the benefits of the canner lobster in the culinary industry. "Whether research and development, education or restaurant use, the culinary industry would be dramatically affected if canners were not available. Should there be a market for any commodity in these challenging economic times the option to sell should be available." See Appendix D.

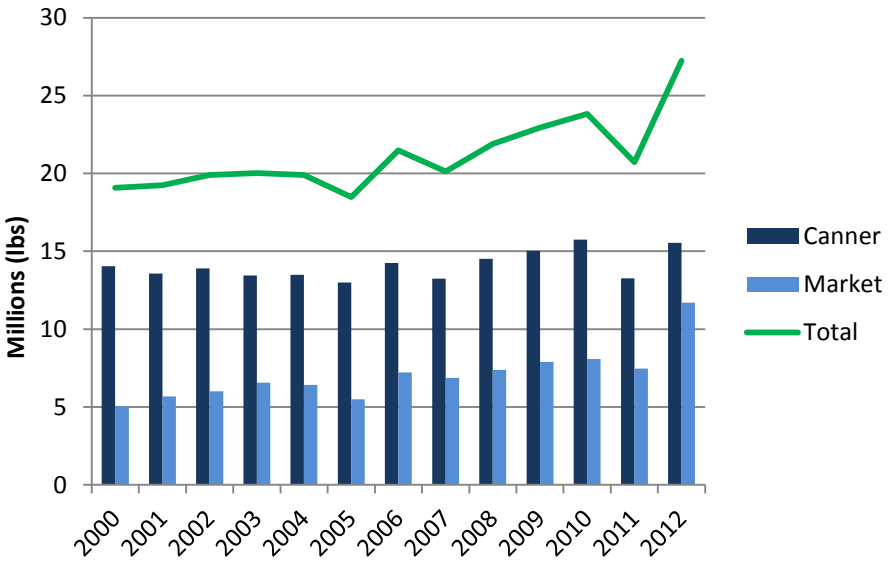
4.3 Unique Supply

4.3.1 Lobster Landings

PEI had 1,269 lobster fishing licenses in 2012, landing a record 27.2 million lbs of lobster (increase of 31% from previous year). This total consisted of 15.5 million lbs of canners (a 17% increase from 2011), and 11.7 million lbs of markets (a 57% increase from 2011).[8] Lobster landings in PEI have now seen record levels in five of the past seven years. It should be noted that extremely poor weather conditions affected 2011 landings.

PEI's canner lobster measured by a percentage of total landings does vary from LFA to LFA but has been 65% over the past ten years in PEI. Canner and market sized lobster landings are seen in Figure 1.

Figure 1 PEI Landings by Canner, Market, and Total Pounds



Source: *"PEI Fishery Statistics",* Marine Fisheries and Seafood Services Division, PEI Department of Fisheries, Aquaculture and Rural Development.

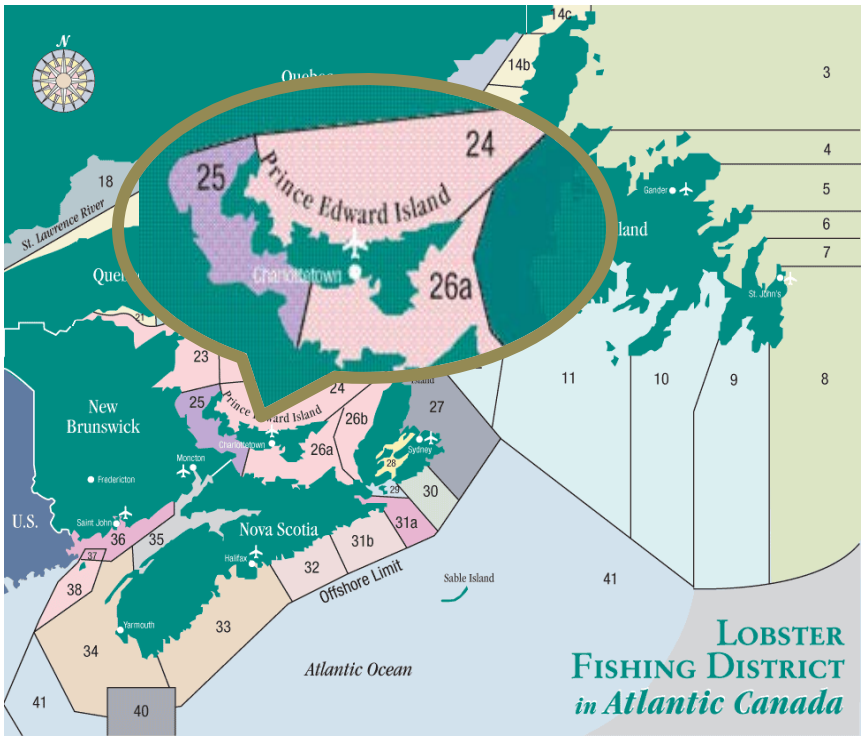
Lobster is harvested in the other Atlantic Provinces, Quebec and on the eastern seaboard of the US. The state of Maine is the largest contributor to the US total landings and plays a significant role in NB's

[8] *"PEI Fishery Statistics",* Marine Fisheries and Seafood Services Division, PEI Department of Fisheries, Aquaculture and Rural Development.

lobster processing industry. There are 10,000 lobster fishing licenses in Canada and approximately 7,500 licenses in the US, with the majority of those in Maine.[9]

Canada's lobster fishery is broken down into 41 Lobster Fishing Areas (Figure 2) some with their own subsections. PEI fishes in LFAs 24, 25, and 26A.

Figure 2: Lobster Fishing Areas in Atlantic Canada

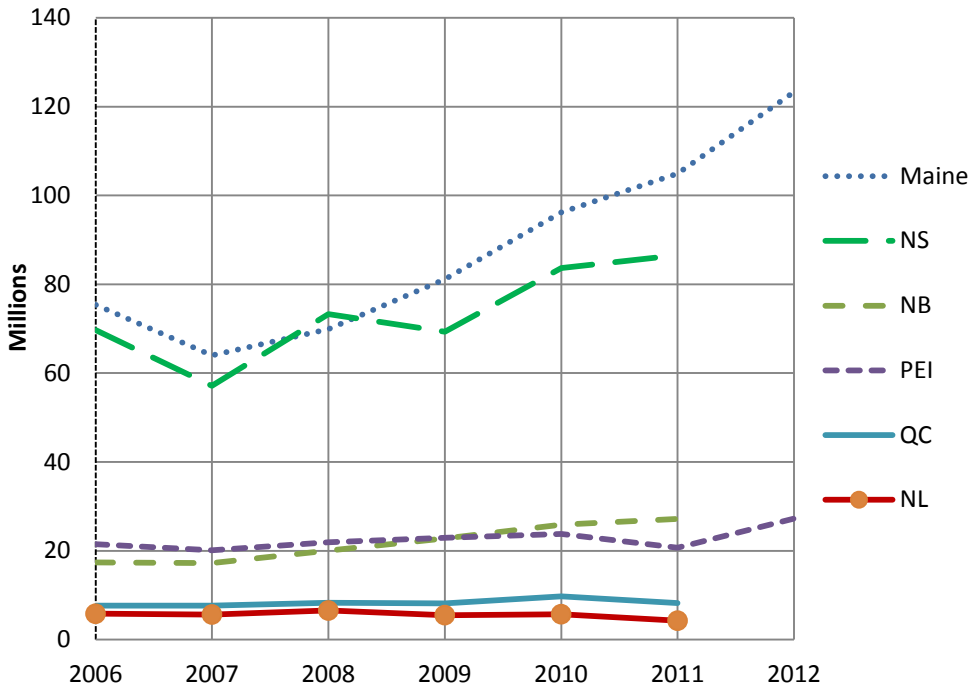


Source*: www.tastelobster.ca*

Total lobster landings in Canada and in Maine have increased over the past five years as shown in Figure 3. Maine, NS, NB and PEI have seen significant increases in lobster landings since 2006 with increases ranging from 24% to 56%.

[9] *"Benchmarking Study on Canadian Lobster"*, Gardiner Pinfold. 2006. Retrieved from: http://www.lobsterinstitute.org/media/BenchmarkstudyonCdnLob.pdf

Figure 3 Lobster Landings (lbs) by Location

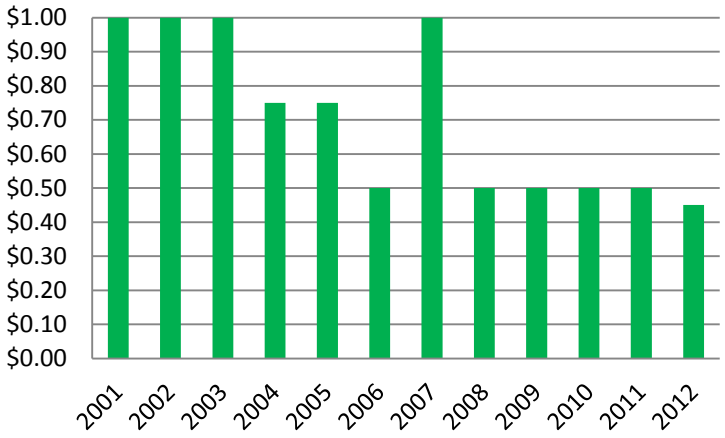


Source: "*Commercial Fisheries Landings",* Fisheries and Oceans Canada. Retrieved from: http://www.dfo-mpo.gc.ca/stats/commercial/sea-maritimes-eng.htm

Total lobster landings in 2011 were over 250 million lbs in North America and it is assumed this will be an even larger number in 2012 when calculated, with both Maine and PEI showing significantly increased landings (18% and 31% respectively) and reports from NS that landings were up 25% to 30%. On a North American basis, Maine landings in 2011 represented over 40% of the total landings, followed by NS at 34%, and NB at 11%. PEI landings were approximately 8% of the total.

The gap in pricing differential between canner and market sized lobsters has been closing over the past decade. This may be attributed to having a unique product with an increasing value. See Figure 4 for the trend. Ten years ago, a canner sized lobster was averaging one dollar per pound less than that of a market sized lobster. In 2012 this gap had narrowed to approximately a $0.45 difference.

Figure 4: Price Differential per Pound of PEI Canner and PEI Market Lobster



Source: *"Annual Fish Price Reports",* Marine Fisheries and Seafood Services Division, PEI Department of Fisheries, Aquaculture and Rural Development.

4.3.2 Processing

The lobster-processing industry is concentrated in NB and PEI [10]. The majority of the lobsters caught in the waters of NS, NL and QC go to the live market.

Prince Edward Island

In 2012 there were eight facilities processing lobster in PEI. Industry experts and government representatives indicated that approximately 90% of lobster caught by PEI fishers is processed and 10% is sold live. Over the past five years, on average 60% of lobster processed on PEI has been canner product with almost all landed on PEI. For example 99.4% of the canner product processed in PEI in 2012 was sourced from PEI fishers.[11] **It is the major component of PEI's fishing and processing industries.** The majority of canner product is processed on PEI with only 27% of canners landed on PEI bring processed off-island. In comparison, the market lobster that is processed on PEI is almost equally sourced on and off PEI. Sixty-eight percent (68%) of markets landed on PEI are processed off-island.

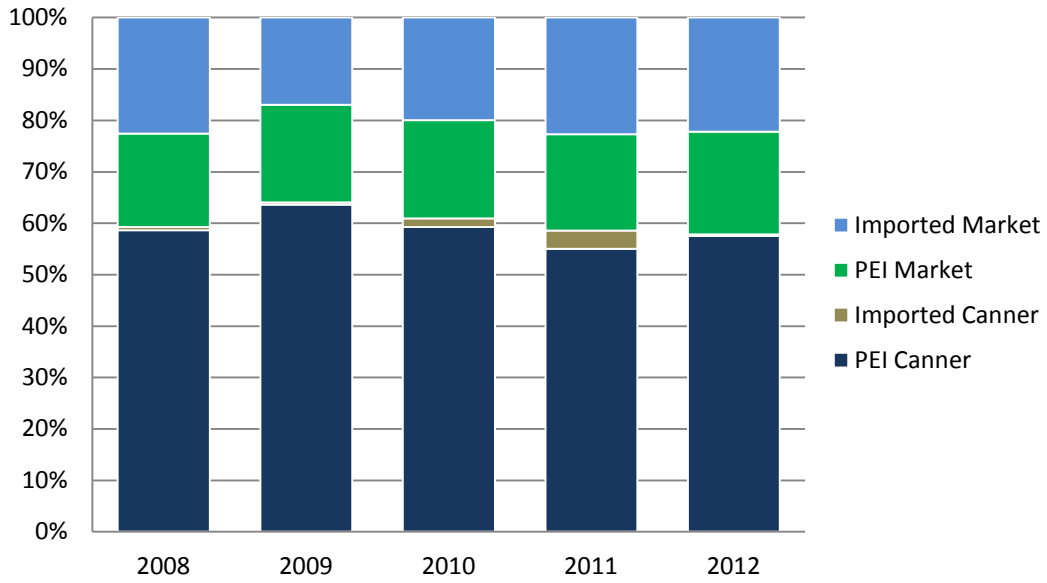
99.4% of the canner product processed in PEI in 2012 was sourced from PEI fishers.

[10] *"Fish and Seafood",* Agriculture and Agri-Food Canada. Retrieved from: http://www.ats-sea.agr.gc.ca/sea-mer/4803-eng.htm

[11] *"Lobster Landings Imported and Exported Report"*, Marine Fisheries and Seafood Services Division, PEI Department of Fisheries, Aquaculture and Rural Development. 2012

This model is currently working for PEI processors and as demonstrated earlier in this report, they are expanding their markets outside of North America. **To continue expansion in these markets and provide the types of products being demanded, a 72 mm minimum carapace size is required.** A breakdown of the sources for PEI processed lobster is seen in Figure 5.

Figure 5: Processed Lobster on PEI by Source (2008-2012)



Source: Lobster Landings Imported and Exported Report, PEI Department of Fisheries, Aquaculture, and Rural Development, Seafood Services Division.

New Brunswick

In NB, there are approximately 16 major companies processing lobster. As is common in the processing industry, this number may fluctuate as some companies suffer financial problems in this economic climate or companies are bought by other processors. Lobster processing in NB has mainly focused on the processing of market size lobster. A significant amount of product (estimated to be 60%) is purchased from Maine and other locations for processing in NB plants. Approximately 88% of NB processed product is exported to the US[12].

Nova Scotia

In NS, lobster is exported mainly as a live product, however NS does support limited processing. There are approximately five companies processing lobster. Shippers have invested heavily in holding facilities over the past decade in an effort to balance supply and demand of live lobster. The proportion of lobster

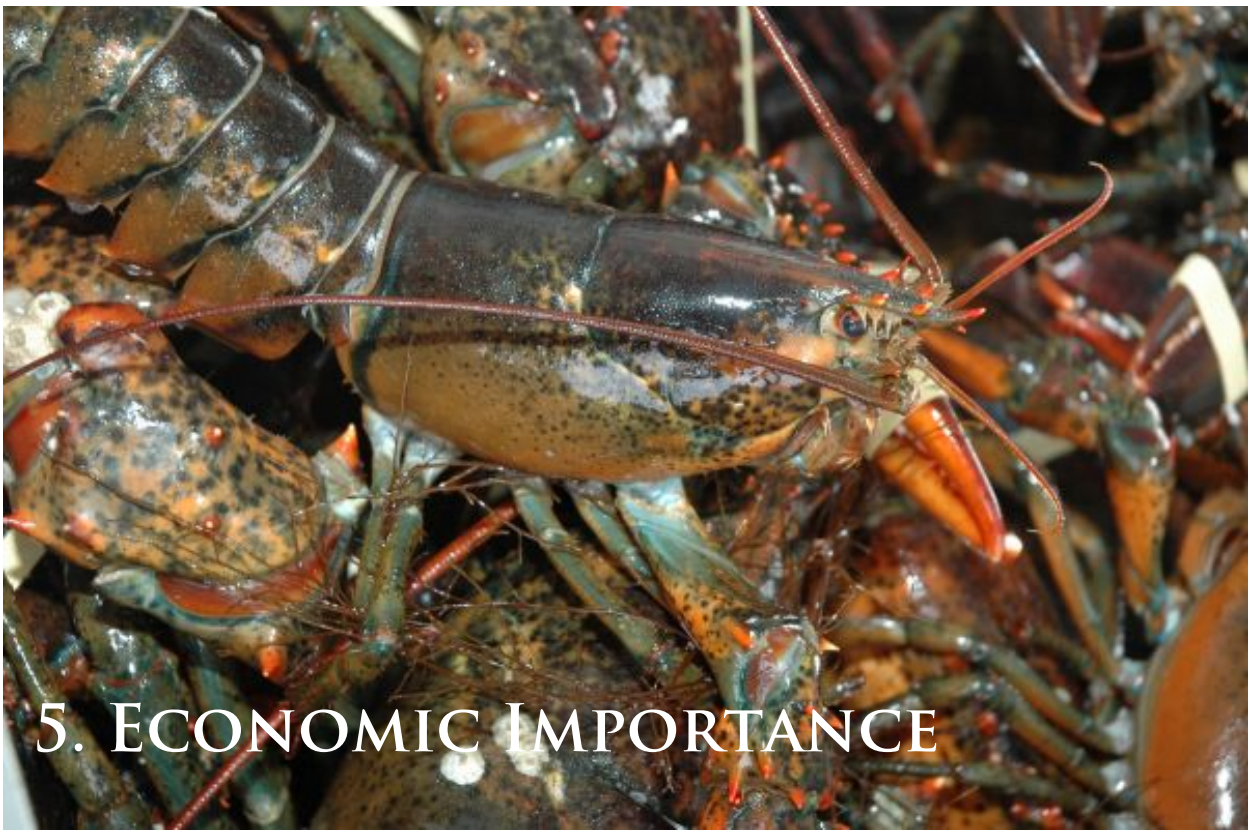
[12] *"The Standing Senate Committee on Fisheries and Oceans"*, Parliament of Canada. Retrieved from: http://www.parl.gc.ca/content/sen/committee/411/POFO/49869-E.HTM

shipped in live form has declined (from over 95% to under 85% between 2000 and 2006), as an increasing number of plants turn to various forms of processing including meat extraction and frozen tail and claws.[13]

Maine

Maine can process only a fraction of the lobster that Canadian processing facilities can process. Some years up to 70% of Maine lobster can be shipped to and processed in Canada, with the majority going to NB. Maine has however indicated publically that they want to reduce their dependence on Canadian processors. In Maine the Lobster Advisory Council is trying to raise investment dollars toward marketing and building demand for Maine lobster and is looking at a license surcharge (1% of lobster landed value) being committed to improving marketing and promotion strategies.

[13] *"Nova Scotia Seafood Processing Sector - State of the Industry and Competitive* Assessment", Gardner Pinfold with Rogers Consulting, 2007



5. Economic Importance

ECONOMIC IMPORTANCE

- Impacts GDP by $78.7 million annually
- Supports 1,074 person years of employment
- Creates $20 million in tax revenue

The canner lobster industry makes a very significant contribution to the PEI economy. The canner lobster sector **impacts GDP by $78.7 million annually**, **supports an estimated 1,074 person years of employment, and creates $20 million in tax revenues.** Approximately 54% of the impacts of the lobster fisheries in PEI result from the canner product. See Appendix C for an explanation of economic impact theory. Figure 6 (*following page*) provides a schematic of the input-output process. These impacts are based on the canner lobster sector alone. **Most PEI processors agree, that losing the canner lobster would in effect force them out of business as their business model would not support a move to 100% processing and sales of market sized lobster where you are essentially competing with the rest of North America.**

5.1 Direct, Indirect, and Induced Impacts

The lobster industry provides over 4,500 part year jobs (10 to 22 weeks) and it has been stated by industry that many of these jobs would cease to exist without the canner lobster product. As shown in Table 2, the canner lobster industry is directly responsible for providing 612 direct person years of

employment and has a direct impact on GDP of $41.3 million. The canner lobster industry also supports an estimated 462 indirect and induced person years of employment and an indirect and induced impact of $37.3 million on GDP.

Table 2: Impact of Canner Lobster Industry

	Employment (person years)	Gross Domestic Product (millions)
Type of Impact	Canner	Canner
Direct	612	$41.3
Indirect	210	13.6
Induced	252	23.7
Total	***1,074***	***$78.6***

The total direct tax revenues generated by the canner lobster industry approximated $11 million in provincial and municipal tax revenues and $9 million in federal tax revenues for a total of $20 million on an annual basis. See Table 3 for a breakdown of government tax revenues.

Figure 6: Economic Impact Input-Output Process

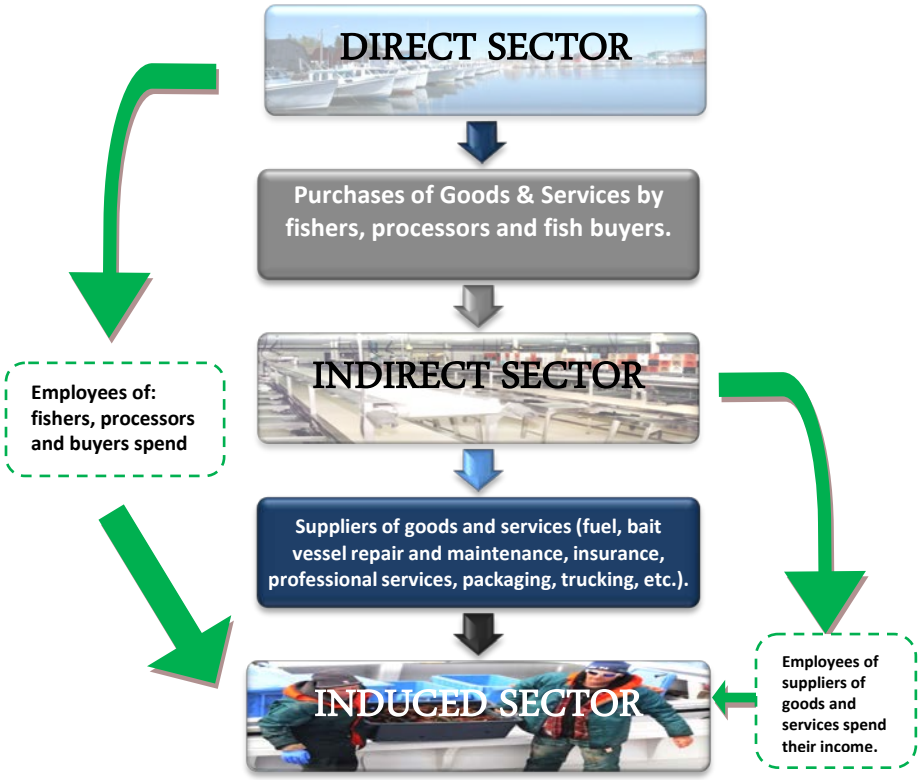


Table 3: Direct Government Tax Revenues

Type of Tax Revenue (000,000's)	Canner
Provincial Income Tax	$ 3.4
PST & other indirect taxes	7.2
Provincial tax on Profits	.4
Total Provincial	*11.0*
Federal Income Tax	4.4
GST & other indirect taxes	3.7
Federal Tax on Profits	.9
Total Federal	*9.0*
Total	***$20.0***

5.2 Major Assumptions

Data to support the economic impact calculation was compiled using data collected from the review of various reports obtained from the PEI Department of Fisheries, Aquaculture, and Rural Development, Seafood Services Division, the Department of Fisheries and Oceans Canada, and various other industry studies and analysis (see Bibliography – Appendix D) and discussions with representatives of provincial and federal government, PEI Seafood Processors Association, and PEI Fishermen's Association.

Information utilized relates to the 2012 calendar year. Following is a list of the major assumptions used to support the economic impact analysis:

- Canner lobster landings were 15.5 million lbs with a value of $61.9 million based on average shore price.
- The canner lobster landings represent 57% of weight and 54% of value of the total industry.
- Ninety percent (90%) of market and canner is processed with 75% of PEI canners and 34% of PEI markets being processed on PEI.
- Sixty percent (60%) of the lobster processed on PEI is canner. One percent (1%) of lobster product processed on PEI is imported canners while 21% is imported market lobster.
- There were 1,269 active lobster fishing licenses with approximately 3,173 captains and crew members. Average number of paid work weeks in lobster fishing is 10 weeks.
- There were eight plants processing lobster with an estimated 1,180 employees. Average number of paid work weeks in lobster processing is 22 weeks.

- There were 44 licensed lobster buyers with an estimated 200 employees working for buyers. Average number of paid work weeks is 10 weeks.

- Average annual expenditures for a lobster fishing enterprise were estimated to be $63,000 with a distribution of expenditure as follows:
  - Fuel, bait, goods, etc. (24%),
  - Vessel repair and maintenance (8%),
  - Fishing gear expenditures (8%),
  - Insurance, vehicle, union, accounting, licensing and registration (17%),
  - Interest and capital (22%), and
  - Labour costs (21%).

- Average annual expenditures for a lobster processing plant were estimated to be $16 million with a distribution of expenditure as follows:
  - Lobster purchases (61%),
  - Direct and indirect salaries (14%),
  - Selling and administration (10%),
  - Trucking (3%),
  - Packaging (3%), and
  - Overhead (9%).
- Average annual expenditures for a lobster buyer were estimated to be $26,000 with a distribution of expenditure as follows:
  - Salaries (75%),
  - Trucking related (23%), and
  - Other (i.e. license, administrative) (2%).

5.3 Qualitative Impacts of the Sector

5.3.1 Maintains Heritage and Tradition

Globally, PEI's identity is strongly associated with its rural nature. Rural communities contribute greatly to the wealth of PEI, its culture and heritage. The fishing industry is one of the three main industries in PEI and is a significant provider of PEI's image. PEI's heritage and tradition is a strong draw for one of our other main industries of tourism and the fishing industry is an important element in strengthening and growing this sector.

The canner lobster in particular is **part of the social and cultural fabric that defines PEI**.

5.3.2 Improves Rural PEI

Over the past 50 years the population profile for PEI has changed from 69% rural to 55% rural. In the early 20th century more than 85% of the population lived outside the larger urban areas of the province. Today employment opportunities are declining in the rural areas and many rural dwellers commute to work in towns or the city and fishers make up an ever-shrinking percentage of the population. One of the primary goals of the provincial government's Rural Action Plan is "To enable the growth of innovative, competitive and sustainable primary sectors, in order to ensure that they remain pillars of the rural economy and community for generations to come". The lobster fishing industry is an important provider of livelihoods in coastal communities all around PEI. It provides opportunities for employment in fishing, processing and buying and in other operations servicing the industry that are often located in rural areas. Processing plants are vital employers in many rural communities as was demonstrated by the recent closure of processing plants in rural PEI.

5.3.3 Supports Other Business Operations in PEI

The canner lobster industry impacts many other supporting businesses such as:

- Fishing gear suppliers
- Repair and maintenance operations
- Bait suppliers
- Cold storage facilities
- Equipment manufacturers
- Automobile dealers
- Fuel suppliers
- Insurance agents
- Professional service firms
- Packaging suppliers
- Grocery, clothing and hardware stores
- Restaurants
- Entertainment venues

6. The Path Forward

- Unified voice
- Retain carapace size
- Product diversification and innovation
- Continue to improve market image
- Continued investment

THE PATH FORWARD

6.1 Unified Voice

While several options to address the noted challenges are being discussed both formally and informally by various parties in the industry such as boat quotas, changes to fishing season, carapace size increases, and new markets, a key success factor is the **ability of the PEI industry to speak with one unified voice**. The future of the PEI canner lobster has brought industry players together to cooperate in sustaining the industry. Representatives of the PEI Seafood Processors Association, the PEI Fisherman's Association, and the Provincial Government of PEI may debate many issues, however all parties understand the importance of the canner lobster to PEI's seafood industry and the provincial economy, and realize the vast potential this product has for success in the future. The PEI Lobster industry is at a crossroads. For the lobster industry in PEI to move forward given the new challenges it has faced in recent years, industry cooperation and one voice will be essential.

6.2 Necessity of Retaining PEI's Unique Product

Increasing the minimum carapace size above 72 mm will significantly impact the PEI lobster harvesting and processing industry. Representing 57% of PEI landings and 60% of processed lobster products, elimination of this unique product from PEI's fishery sector could remove $78.7 million annually from PEI's GDP, reduce person years of employment in rural PEI by 1,074 and remove $20 million in tax revenues. It can be argued that if the canner product is eliminated or reduced it will be replaced with landings of market size lobsters, however it is already well known that there is over supply of market lobster resulting in a commodity priced product. Rather than the current approach of focusing on the development of new markets for a unique canner product, PEI processors will be forced to try to compete with the other 250 million pounds of market size lobster harvested in North America.

Other sources have also supported this necessity of retaining the canner lobster. Examples include:

- "Long Term Value Strategy for the Canadian Lobster Industry " commissioned by the Lobster Council of Canada in 2010, and prepared by Gardner Pinfold recommends **"Increasing the distinction between canners and markets to create two clear products and price points, and to leverage the fact that canners are uniquely Canadian- smaller, good quality and taste"**.[14]
- A presentation to the PEI Fisherman's Association in 2010, where industry expert and Seafood.com editor John Sackton was quoted saying, "**Any further increase in size beyond 72 millimetres would be a disaster for PEI"** and that **"Going beyond 72 mm (minimum carapace size) would undermine the canner market and lead to less not more, lobster product diversity."**[15]
- A recent media report (January 30, 2013) where DFO scientist, Marc Lanteigne was quoted as saying he believes there is **no need to increase the minimum size of lobster** that can be legally trapped in order to conserve the stocks. "**At this moment there is no threat to the lobster population. In the last 10, 15 years the overall stock of lobster has been quite healthy. Right now, lobster landings are the highest in the last almost century. And this is not new to the southern Gulf. It's for the entire range of lobster from Newfoundland to Cape Cod."**

6.3 Improving Market Image

There have been discussions in the industry about eliminating the name "canner". Although processors have indicated that the market place is more apt to refer to a specific size rather than use the term

[14] *"Long Term Value Strategy for the Canadian Lobster Industry*", Gardiner Pinfold. October 2010

[15] *"John Sackton Presentation",* PEI Fisherman's Association Annual General Meeting, 2010.

"canner" when ordering product the term is used by some and does give a negative connotation of being a lower quality product with limited or no use except for canning. Deciding on a new name is certainly not a local issue. Careful research into the markets the industry is trying to penetrate is needed.

Renaming the product alone will not improve its image. **It will be necessary to create an image in the market place of a product that is in demand.** This image needs to be built around product taste, quality, safety, and the harvesting and production of the product in a sustainable fashion. Marketing should also consider that the product is almost uniquely PEI.

The Lobster Council of Canada is also investigating the benefits of a pyramid approach with Gold, Silver and Bronze levels to define differences in all of the marketing strategy components for Canadian Lobster. PEI's industry needs to be fully aware of the national marketing campaign so as to take advantage of and lobby for the best scenario for canner lobster.

6.4 Product Innovation and Diversity

The consumer rules the marketplace. Today's busy lifestyles, desire for healthy living, smaller families, and fewer home-cooked meals drive the need for smaller packaging, enhanced freshness, and longer shelf-life. Consumers are willing to pay for convenience. Advertisers know this and have developed a whole new 'language of ease'. Retailers know the value of terms such as pre-cut, pre-washed, ready-to-serve, heat-and-eat, and grab-and-go. When consumers demand change, distributors seek supply, and processors more quickly to deliver.

Restaurants seek the convenience of smaller food packaging in order to provide consistent portions during food preparation and to reduce spoilage. Smaller packaging is sold at higher prices, therefore, this trend is advantageous to the processing industry, provided that production and efficiencies are achieved and margins are strong. The cost of production of retail packs is high and thus, many processors do not venture into this market. P.E.I., canner lobster industry has a real opportunity to capitalize on this because of limited competition in a growing market, but only by implementing new technologies.

Based on knowledge of what is occurring elsewhere in the world in the food processing sector with other products with a similar appeal to lobster suggested innovative products for the canner lobster include the following. It is also suggested that patents be explored by PEI processing facilities for all of these ideas to prevent other competitors from replicating the ideas:

- Creation of an *easy preparation accompaniment product* for families in an appealing form. Products in forms other than canned or frozen and that can be prepared in 20 minutes or less have a stronger appeal in the marketplace. The lobster needs to be cooked, de-shelled (preferably in one piece, like the claw or body) placed in a dish on its own or preferably with a

sauce and a see through lid ready to be opened and finished in a wok/pan with other vegetables or starches. Product packaging is now trending towards providing consumers with suggestions for accompaniment products such as the inclusion of a seasalt spice package to be added for enhanced taste. PEI has the benefit of having close at hand Canada's Smartest Kitchen to assist in the product development stage and this opportunity should be taken advantage of. Developed in conjunction with Canada's Smartest Kitchen could also potentially become a marketing edge.

- Creation of an *easy preparation meal containing lobster product* for families in an appealing form. Providing the entire meal with spices or other product already mixed in the dish provides more added value and offers the consumer even more convenience by decreasing time and complexity.

- Utilization of *Modified Atmosphere Packaging (MAP)* to increase the shelf life of a fresh cooked lobster product. MAP is a packaging process where fresh food has an extended shelf life, in many cases by more than three times typical fresh packaging methods. This allows producers of various food products to package a fresh product then have it shipped and consumed in locations which in the past were too far to reach economically. This process basically involves packaging a food product in a container, removing the air and replacing it with nitrogen. This slows down the growth of aerobic organisms and inhibits the growth of bacteria. The mussel industry in Europe has seen great success with this new form of packaging over the last few years.

- Creation of *gift type packages* which include not only the whole cooked lobster in shell but are accompanied with tools such as lobster crackers and bibs. The package could also include product information such as where and how the lobster was caught and other interesting lobster facts. Although this would probably be a smaller market, it could potentially have a high margin of profit.

- Microwave pasteurization technology, a new technology developed in Germany features steam pressure cooking with microwaves as the energy source. Designed to put less thermal stress on the food, throughput time is reduced to 8 to 12 minutes from the 2 to 3 hours required for pasteurization in a steam oven or autoclave retort. This significant decrease in pasteurization time leads to an increase in nutritional value, better coloration, and improved taste and texture of the packaged food. Currently being used in the shellfish and meat market, the microwave pasteurization process is very precise and a checkweigher ensures the process is carried out properly. Following this, trays are heated by microwave energy and passed through a cooling bath. MAP equipment removes steam from inside the tray and a special label is applied that maintains pack sterility. This label also acts as a one-way valve for steam release when the trays are heated in the microwave at home. The end result is a fresh product that can be marketed for its ease of preparation.

In order for PEI's industry to remain competitive in a market place where consumer demands change rapidly it will be **necessary to have product diversity and innovation at the forefront** at all times.

6.5 Continued Investment

Lobster is the most important seafood species in PEI. The importance of this product to PEI's future is obvious and now is the time to continue building the support system around it.

The provincial government of PEI has long supported the lobster industry and its canner product. It is **essential that the Government of PEI continue its support of fishers and processors in stabilizing the industry and expanding markets**.

The federal government has also shown a strong willingness to work with the lobster industry through the direction of funds to improve marketing, assist in innovation, and develop products and technologies for the lobster industries in Atlantic Canada and Quebec. It is **important that the federal government through DFO does not make changes in fisheries management programs such as carapace size that will negatively impact PEI's lobster fisheries sector.**

APPENDIX A

Integrated Fisheries Management Plan Including Minimum Carapace Size

Lobster – Integrated Fisheries Management Plan Summary Table (2013)

Region	Lobster Fishing Area	Harvesting Season	Number of Licenses	Number of Traps	Minimum Carapace Size	Maximum Carapace Size	Additional Conservation Methods
NL	3	May 15 – July 10	57	200	82.5	127mm	Voluntary V-notching Mandatory logbooks Use closed areas No fishing on Sundays
	4A	May 15 – July 10	211	200	82.5		
	4B	May 8 – July 3	398	200	82.5		
	5	May 8 – July 10	245	200	82.5		
	6	April 26 – July 6	204	100	82.5		
	7	May 1 – July 4	145	150	82.5		
	8	May 5 – July 8	78	100	82.5		
	9	May 8 – July 3	35	200	82.5		
	10	April 17 – June 26	331	200	82.5		
	11	April 17 - June 19	298	150	82.5		
	12	April 18 - June 27	44	200	82.5		
	13A	April 18 - June 29	131	250	82.5		
	13B	April 18 - June 30	150	250	82.5		
	14A	May 1 - June 28	188	300	82.5		
	14B	May 3 - June 30	226	425	82.5		
	14C	May 13 - July 10	5	300	82.5		
Quebec	15	May 22 – August 13	66	250 conventional or 175 large	82 mm		
	16	May 18 – August 9	10				
	17A	May 2 – July 17	1	300 conventional or 210 large	83 mm		Mandatory hail-In to a local dockside monitoring company
	17B	May 2 – July 17	15				
	18B	May 2 – July 17	1	250 conventional or 175 large	83 mm		
	18C	May 16 – July 31	1				
	18D	May 16 – July 31	1				
	18G	May 16 – July 31	1				
	18H	May 16 – July 31	4				
	18I		LFA 16 licensees				
	19A2	May 12 - July 21	8	250	83 mm		Electronic logbook mandatory; Hauling and baiting of traps permitted only once per day
	19A3	May 5 - July 14					
	19B	April 21 - June 30					
	19C1	May 12 - July 21					
	19C2	April 28 - July 7					
	20A	April 28 - July 5	91	235	82 mm	145 mm	
	20B	April 21 - June 28	69				
	21A	April 28 - July 5	12	235	82 mm		
	21B	May 5 - July 12					
	22	May 5 – July 7	325	279	83 mm		

Lobster – Integrated Fisheries Management Plan Summary Table

Gulf	23A	April 30 – July 1	674	300	75 mm		Window/Maximum females 115-129mm; Maximum hoop 152mm
	23B				75 mm		
	23C				72 mm		
	23D				72 mm		
	24	April 30 – July 1	637	300	72 mm		Window/Maximum females 115-129mm
	25	August 9 – October 10	714	NB 250 NS 250 PEI 240	72 mm		Window/Maximum females 114; Max hoop 152mm
	26A1	April 30 – July 1	714	280	72 mm		Window/Maximum females 115-129mm
	26A2			275	73 mm		
	26A3			250	76 mm		
	26Bsouth		227	250	79 mm		
	26Bnorth			250	81 mm		Max hoop 152mm
Maritimes	27	May 15 - July 15	524	275[1]	81 mm		
	28	April 30 - June 30	16	250[1]	84 mm		Max hoop 153mm
	29	April 30 - June 30	67	250[1]	82.5 mm		Max hoop 153mm
	30	May 20 - July 20	20	250[1]	82.5 mm		Max CL-135mm (female)
	31A	April 29 - June 30	73	250[1]	82.5 mm		Closed window (female), 114-124 mm
	31B	April 19 - June 20	71	250[1]	82.5 mm		V-notching[2]
	32	April 19 - June 20	161	250[1]	82.5 mm		V-notching[2]
	33	Last Mon. Nov - May 31	707	250[1]	82.5 mm		
	34	Last Mon. Nov - May 31	985	375/400[1]	82.5 mm		
	35	Oct 15 - Dec 31; March 1-July 31	95	300[1]	82.5 mm		
	36	2nd Tues Nov - Jan 14; March 31-June 30	177	300[1]	82.5 mm		
	37	Shared between LFA 36 and 38					
	38	2nd Tues Nov - Jun 30	136	375[1]	82.5 mm		
	38B	June 30 - Nov 6	‘ ‘	375[1]	82.5 mm		
	40	CLOSED					
	41	January 1 - December 31			82.5		Observer coverage (Quota fishery)

(1) [1]Trap limit is for “A” licence holder. Part-time or “B” licences are allowed 30% and Partnerships 150% the limit of a single full-time licence.

(2) [2]V-notching means there is an active program to V-notch female lobsters. There is a possession restriction of V-notched lobsters in all LFAs except in LFA 27 and LFA 31A.

APPENDIX B

Lobster Product Definitions

Lobster Product Definitions

Frozen whole cooked lobster in brine: Lobsters are cooked, graded and packed in laminated pouches with brine, sealed and blast frozen (10 per case). This product is sometimes referred to as a "popsicle pack."

Frozen whole cooked lobster: Lobsters are cooked and vacuum-packed in light brine or wrapped in waxed paper. Smaller weights (200-250 g), known as "baby boils," are cooked in a liner, frozen and packed in 5 kg cartons.

Frozen whole blanched lobster: Lobster is cooked for two minutes, then vacuum packed and frozen immediately. Cooking is completed by end user for a fresh-boiled taste.

Frozen whole lobster, blanched or cooked in vacuum skin pack: This specialized technology allows for an extended shelf life of 24 months.

Frozen raw lobster tails: Tails individually quick frozen, individually wrapped in cellophane pouch, layer packed in 4.5 kg box (4 boxes per master). Weight: 85-225 g or 3-8 oz.

Frozen lobster meat: Available canned and blast frozen, canned and retorted, or vacuum-packed and blast frozen. Vacuum packs are available in different meat combinations: whole pieces, chopped and salad meat; tails, claws, tails/claw and claw/knuckle. Package sizes vary according to customer specifications.

Minced lobster loaf: Deboned lobster body meat, packed in poly bags or vacuum packed and frozen.

Cocktail claws: These are pre-scored and steam-cooked in foodservice and consumer packs.

Tomalley and roe: Tomalley (liver, the light-green creamy substance found in the lobster's body) and roe (the female eggs, sometimes called "coral") are available in several specialty packs.

Lobster base: A concentrate used in the preparation of soups, bisques, sauces and fillings.

APPENDIX C

Letter from Randy Bishop, President and CEO,
Whitecap Internation Seafood Exporters

WHITECAP
INTERNATIONAL SEAFOOD EXPORTERS

To whom it may concern

Further to discussions in the industry about significant increases in the minimum carapace size, we have spoken to our key clientele around the world that purchase the smaller sizes and we have summarized the points from each of our markets in the following paragraphs.

Throughout Asia our clients are major users of 300-350 gram whole cooked and whole raw lobster for buffets in hotels and casinos. These customers purchase hundreds of thousands of pounds per year and because of the smaller size and intrinsic quality of the canners, the market is able to reach the proper price point to promote and market Canadian lobsters. These customers have been emphatic that they will not promote lobster in the same fashion if they are not able to source the smaller lobsters. The price point per lobster of the larger sizes is simply prohibitive to these customers and, as we have witnessed for many years, they will simply switch to another seafood protein source to meet their menu and merchandising needs.

In Japan, there is also specific demand for canner size lobsters for white table cloth establishments. This product is used as well for gift giving and banquet occasions. This business will not be replaced with market sized lobster. Asia now consumes a very significant volume and to lose this volume will do significant harm to the overall inventory situation that the industry can ill afford.

In addition, European retail customers – especially in France – have been promoting 275 and 300 gram popsicle lobsters for many years. They promote the smaller lobsters so they can reach the price point per piece to do meaningful sales volumes. They have been adamant that the prices for the larger sizes will have to drop significantly in order to reach competitive price points in their stores. Furthermore, several would consider switching to another species to reach the price points if canners are not available.

Finally, we have been in contact with cruise line distributors who have also warned us that our inability to supply the smaller lobsters will mean that they will switch off of Canadian lobsters to another species.

The global market requires and demands smaller lobsters and any significant change to carapace size will do irreparable damage to key consuming markets and result in more problems for the industry. The lobster market is far more diversified than just meat and tails. It is our belief that DFO advice and regulation with respect to biological, scientific, and sustainability issues are the absolutely crucial to our business. However, and with all due respect, issues related to marketing and markets are better left to the participants in the sales and marketing channels from boat to plate rather than involving DFO to make regulatory decisions based on "market" factors.

There are other competitive issues that are simply not controllable by Canada, for example, 2012 saw record landings in Maine and this has had a far greater impact on the lobster situation than the minimum carapace regulation in the PEI fishery.

Sincerely,

Randy Bishop
President & CEO
Whitecap International Seafood Exporters

84 AIRPORT RD., ST. JOHN'S, NL, CANADA A1A 4Y3 T. 709-739-6668 F. 709 739-6620 INFO@WHITECAPSEAFOODS.COM

APPENDIX D

Letter from Ted Grant, Senior Research and Development Chef, “Canada’s Smartest Kitchen”

Ted Grant
Canada's Smartest Kitchen
Charlottetown, PE C1A 3L2
February 5, 2013

PEI Fisherman's Association
Ian MacPherson
420 University Avenue, Suite 102
Charlottetown, PE C1A 7Z5

Dear Mr. MacPherson:

I am writing today to express my concerns with the elimination of the canner lobster. Canners are a tremendous benefit to the chef in all aspects of the culinary industry. Whether research and development, education or restaurant use….the culinary industry would be dramatically affected if canners were not available. We consider canners to be a very good addition to the lobster market which we are very fond of using in the preparation of many dishes. If the market does not allow for canners to be readily available it would be very disappointing to the hospitality industry. Should there be a market for any commodity in these challenging economic times the option to sell should be available. Over the past decade we have worked very hard to strengthen our relationships with farmers and fisherman stressing the importance of buying local and supporting your community. We teach our students this and hope that others are teaching their children as well. It is our mandate that we do our absolute best as chefs on this island to support local industry. If canner lobsters are part of that industry then we should be able to access them and teach young chefs about working with them and why we have an abundance of canners in PEI. Thank you for taking the time to resolve this matter. I look forward to working with canner lobsters in the future.

Sincerely,

Ted Grant
Senior Research and Development Chef
Canada's Smartest Kitchen

APPENDIX E

Economic Impact Theory

Economic Impact Theory

There are various means for measuring the economic impact of an activity. The fundamental theory behind economic impact analysis is that expenditures are multiplied through the economy; an increase in spending on goods and services generates a need for additional goods and services. Using **input-output** analysis, we are able to estimate this cascading effect through the economy. The input-output table is a financial model of an economy's production system. It shows the interconnections that exist between the various sectors of the economy when goods and services are produced. The revenues and expenditures of a particular sector are used to drive an input-output model to derive economic impact. The model generates impact estimates for employment, tax revenues and gross domestic product (GDP) at the direct, indirect, and induced levels.

Direct Impacts arise from the expenditures made in carrying out the identified activities: e.g., the sales, income and employment created by fishers, processors and fish buyers, related purchases in the province.

Indirect Impacts arise from the linkages into the broader economy. For example, the chain of suppliers to the lobster industry would have to increase their output to meet the demand. An increase in raw materials and human resources required leads to a further increase in activity in industries supplying the goods and services needed to produce these items.

Induced Impacts also arise from linkages into the broader economy. They result from the spending and re-spending of incomes earned in the sectors that meet direct and indirect demand. For example, the employees of fishers, processors, fish buyers and the suppliers of goods and services to the industry spend their income on clothing, food, and entertainment. These expenditures help to support retail businesses that in turn pay wages that are spent and re-spent.

Gross Domestic Product (GDP) is one of the primary indicators used to gauge the health of the economy. It is essentially the size of the economy and represents the total dollar value of all goods and services produced within the borders of a province in a year.

Total Economic Impact is the sum of direct, indirect and induced economic impacts.

An input-output model also allows us to estimate **taxes levied** on economic activity. Data from Provincial and Federal tax legislation are used to obtain an estimate of these taxes. This calculation is in the form of an average tax rate multiplied by the salaries, in the case of individual income tax. Indirect taxes are estimated for the various transactions that take place in the economy between industries. Taken together, these calculations provide an estimate of total income taxes associated with the sector, and of the taxes collected by the various levels of government.

The input-output model is also used to calculate the **effect on employment** within the Province. For purposes of this model, a person-year is defined as someone who works about 2,000 hours per year (equivalent to 40 hours over a 50 week period).

APPENDIX F

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