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**The Economics of the  
Canadian Sealing Industry**

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## **1. INTRODUCTION**

The Canadian Institute for Business and the Environment (CIBE) is a Montreal based think tank on economics and the environment. A member of the Canadian Environment Industry Association (CEIA), the Institute has published a number of papers and reports on sustainable development and the economics of environmental protection. Its principle, Gary Gallon, has 30 years experience working on environmental issues in Canada, ranging from the protection of the B.C. fisheries habitat, to designing and implementing environmental law for the Government of Ontario. Most recently, the Institute assisted in reviewing and critiquing the sustainable development plans for Industry Canada and Natural Resources Canada.

This report is an analysis of the subsidies, expenditures and incomes associated with Atlantic Canada's sealing industry. Conducted with the financial support of the International Fund for Animal Welfare, it provides one of the most complete overviews of the economics of the seal hunt and seal product processing in Newfoundland and Labrador, and the Magdalen Islands and Gaspé regions of Quebec.

In compiling this report, the Canadian Institute for Business and the Environment (CIBE) used public information provided by governments and their agencies, along with information accessed through federal Access to Information and provincial Freedom of Information requests made by the International Fund for Animal Welfare (IFAW), in Ottawa. The agencies include:

- Department of Fisheries and Oceans Canada (DFO)
- Department of Fisheries and Aquaculture Newfoundland (DFA)
- Ministry of Finance, Newfoundland
- Human Resources Development Canada (HRDC)
- Industry Canada (IC)
- Atlantic Canada Opportunities Agency (ACOA)
- Canada Economic Development Quebec (CED)
- Canadian Coast Guard

While comprehensive, this study it is not complete. Much of the information sought was not made available by the federal and provincial governments, or their agencies. Documents that were provided through the Freedom of Information requests were, in many cases, heavily blocked out. Lines, even paragraphs and pages, were deleted.

The information we did acquire and analyze provided a good preliminary look at the sealing industry in Atlantic Canada. This report is presented in order to contribute an accurate economic review, designed to stimulate further study and discussion on the actual costs and benefits of this industry.

## **2. HISTORY OF THE SEALING INDUSTRY**

Seal hunting has a long history in Atlantic Canada. When European explorers first arrived in Canada, sealing was a well-established practice among native peoples. The roots of the annual commercial hunt for harp and hooded seals can be traced back to the 16<sup>th</sup> century when Spanish Basque whalers first hunted walruses and seals in the Gulf of St. Lawrence and off the coast of Labrador. By the mid 17<sup>th</sup> century, French settlers were hunting the harp seals that gathered to feed in the St. Lawrence River in the winter months prior to the breeding season. By the mid 18<sup>th</sup> century, New France (as Quebec and the surrounding area was known) was exporting 500 tons of seal oil annually to Europe, equivalent to an annual kill of at least 6,000 adult seals. Based on the available figures for oil exports, annual catches of seals by the British in Newfoundland ranged from about 7,000 to 128,000 seals between 1723 and 1795. During the mid-1800's, the seal industry was one of the larger industry sectors in Newfoundland & Labrador, and this time period is often referred to as the "Golden Age of Sealing". The seal industry would continue to be an important employer in Newfoundland and Labrador for decades, until the 1970's, when economies began to shift and the demand for seal products diminished.

In more modern times, since the 1970's, the sealing industry worldwide has been largely government subsidized. The Government of Greenland supports its sealing industry through a direct subsidy on sealskins, and by operating and subsidizing a tannery and production facility that produces high fashion furs. Total annual subsidies in Greenland for the period 1985 to 1994 amounted to \$14 million; approximately \$6 million a year in operating subsidies and \$8 million a year in capital subsidies. Over this period, Norway provided a minimum of \$2 million a year in government subsidies. The Norwegian government continues to pay vessel owners to go out to the ice and pays an additional subsidy for each seal harvested.

### **3. SEAL POPULATION**

Of the various types of seals hunted, the harp seal is the most targeted. In 1999, a count of existing harp seal stocks was undertaken by Canada's Department of Fisheries and Oceans. Canadian and international experts joined DFO scientists in a process to examine the current status of the harp seal population, population models and information such as the Greenland hunt. They also reviewed information regarding the additional problems of those seals that have been struck and lost at sea and those killed by sealers but not reported.<sup>1</sup>

The survey estimated that there were approximately 5.2 million harp seals in 1999. However, the impact of the hunting that has occurred in the past few years has yet to be felt. More than 80% of seals killed in the past four years have been under one year of age. In the 2000 hunt, ninety-three per cent of the seals killed were under one year. Had they not been killed, these seals would have matured to become breeding adults in the coming years. Seals reach sexual maturity at five to six years of age. Thus, we will only fully realize the impact of the current kill levels when the next population survey is conducted.

#### **4. GOVERNMENT SUBSIDIES PROVIDED TO THE CANADIAN SEALING INDUSTRY**

The Canadian sealing industry has received numerous, and often large, grants and soft loans from both the federal and provincial governments. This financial assistance has been provided through several programs related to economic development, job creation, and economic assistance designed to soften the collapse of the Atlantic cod fishery.

Federally, the majority of the federal assistance has been provided through the Atlantic Canada Opportunities Agency (ACOA), Human Resources Development Canada (HRDC), and the Department of Fisheries and Oceans (DFO). ACOA is the Atlantic region's main economic development contact for the other federal government programs, and for services and policies affecting the Atlantic Provinces. Much of this federal funding has been matched by the provincial governments of Quebec and Newfoundland & Labrador.

In the years between 1985 and 1993, the federal government provided a total of between \$8 million and \$10 million for various sealing initiatives in Newfoundland & Labrador. Included in this was \$2.7 million for seal leather products development, and \$503,000 in subsidies for meat, most of which was converted to animal feed. In addition, \$2 million was provided to the Northeast Coast Sealers Cooperative Society Ltd.<sup>2</sup>

More recently, over the seven years from 1995 to 2001 inclusive, we have been able to document 38 subsidies provided to the sealing industry, totaling \$20,504,962, from the federal and provincial governments (Appendix 1). These subsidies include direct costs incurred by the fisheries ministries to assist the annual seal hunt. The \$20,504,962 number is incomplete, because not all information regarding subsidies and grants has been made available by the governments. Thus, the actual total of subsidies received by the industry is certainly larger.

One of the first attempts at defining the subsidies and costs of the sealing industry was conducted in 1997 by Dr. Clive Southey, an economist in Guelph University's Department of Economics. Using 1996 statistics, Dr. Southey calculated that for one year, the "estimated output of the entire (sealing) industry was \$8.96 million." Of that, he found:

- \$1.72 million was provided in "government subsidies for meat transport and processing"
- \$1.67 million was incurred as government costs "on inspection, rescue, support of industry etc."
- \$2.65 million were expenses spent by sealers to "cover purchased inputs (ammunition, fuel, insurance etc.)"

Dr. Southey concluded that, "Canadian taxpayers spent about \$3.39 million in 1996 to subsidize the landing of seals". Deducted from the \$8.96 million income, that left the net income for the sealing industry at \$5.57 million for 1996. After another estimated \$2.65 million in operations expenditures were deducted from revenues, the remaining net earned income for the sealing industry was a mere \$2.92 million in 1996.<sup>3</sup>

Payments to Canadian sealers totaled \$7.5 million in 1996. When one adds processed and retail values to the seal products, the value of the seal hunt increases to \$11.9 million in 1997 (Table 7).

##### **4(1) Atlantic Canada Opportunities Agency (ACOA)**

The Atlantic Canada Opportunities Agency (ACOA) has been one of the federal government's primary vehicles for delivering subsidies to the seal industry. ACOA was created in Atlantic Canada by the Government of Canada in June of 1987 to assist with economic development and job relocation, and is analogous to the federal government's Canadian Economic Development (CED) fund for Quebec, and the Western Economic Diversification (WED) fund for Western Canada.

For example, in June 1998, the federal government announced \$100 million for an economic development initiative, \$65 million of which was directed towards Newfoundland and Labrador through the Atlantic Canada Opportunities Agency (ACOA). The Newfoundland government confirmed its commitment to provide \$16.25 million to the agreement, bringing the total to \$81.25 million specifically for Newfoundland & Labrador.<sup>4</sup>

The Fisheries Diversification Program (FDP) was one component of the \$81.25 million Canada-

Newfoundland Agreement. The main thrust of the Fisheries Diversification Program is to support industry-wide research and development and demonstration initiatives that reflected the strategic economic development priorities and plans of many Regional Economic Development Boards throughout the province. The sealing industry was supported under the fisheries banner, even though seals are not fish.<sup>5</sup>

Four key components in the program included: Emerging Fisheries Development, Productivity and Product Enhancement, Market Intelligence and Trade Development, and Environmental Awareness and Conservation Technology.<sup>6</sup>

ACOA has two goals: one of ensuring that a wide variety of business development tools and resources serve the diverse needs of the region's emerging and existing entrepreneurs; and, two, ensuring that all economic development programs and activities in Atlantic Canada are coordinated and designed to improve the climate for business growth generally. ACOA also functions as the coordinating link for all federal government programs, services and policies affecting the Atlantic Provinces.

ACOA provided most of the funding for the Sealing Industry Development Council (SIDC) in its efforts to promote seal fur and leather products in domestic and international markets. In addition, ACOA provided a contribution of \$250,000 towards a promotional campaign for a producer of seal oil-based omega-3 nutritional supplements.

The federal Department of Fisheries and Oceans (DFO) reported that, "In Newfoundland, the focal point for future sealing industry initiatives would be through the new Fisheries Diversification Program (FDP) under the Economic Development Component of ACOA's contribution to the Canadian Fisheries Adjustment and Restructuring initiative (CFAR). ACOA worked in partnership with the Province of Newfoundland's Department of Fisheries and Aquaculture and DFO to advance sealing industry initiatives in the areas of new product development, new market identification, full utilization of species and discards, innovative harvesting and processing technology.

#### **4(2) Quebec's Canadian Economic Development (CED) Fund**

The focal point for similar assistance in Quebec is the Canadian Economic Development (CED) Coastal Quebec Fund, a program also funded under the Canadian Fisheries Adjustment and Restructuring initiative.

In Quebec, the Canada Economic Development (CED) fund has provided financial assistance for sealing industry projects under its Coastal Quebec Fund and small business assistance program, IDEA-SME (Small-to-Medium Enterprises). DFO reported that ACOA and CED would continue to support commercially viable projects based on development and marketing of seal products. Support will be considered for projects that require funding and demonstrate the ability to provide economic benefits to the region.

#### **4(3) Sealing Associations**

Substantial subsidies have been provided to associations representing and assisting the sealing industry. The three main sealing support associations are:

- the Canadian Sealers' Association (and its spin-off Sealing Industry Development Council) – SIDC
- the Magdalen Islands Association
- the Quebec North Shore Group.

Until recently, they have been subsidized at an annual rate of \$130,000 each. In addition to the sustaining subsidies, each organization received a number of federal and provincial contracts to undertake seal products promotion.

#### **4(4) Private Sector Recipients of Subsidies**

A number of companies in Newfoundland and Quebec became involved in the sealing industry and participated in receiving government subsidies. The following are those recorded companies that have worked in the sealing industry:

- AGILM Association Gaspesienne des Industries du Loup Marin, Quebec
- Atlantic Marine Products Ltd., Catalina, NF (Barry Group)
- Atlantis Marine
- Caboto Seafoods Ltd., Baie Verte
- Carino Co. Ltd., South Dildo, NF
- Crimson Tide Fisheries, Dover Bonavista Bay, NF
- Fogo Island Coop Society, NF
- Harbour Seafoods, Rocky Harbour, NF
- J.W. Hiscock Sons (Gateway Maritime Inc. & Canomega Industries), Brigus, NF
- Les Lavages Industriels, Vigneau Inc., Quebec
- Northeast Coast Sealers Coop Society Ltd.
- Petley Fisheries Inc.
- Terra Nova Fishery Co. Ltd., Clarenville, NF (Barry Group)
- Waye's Fine Foods (Winston Waye the Sausage Man)

Primary seal purchasing and processing has taken place in four plants, Terra Nova Fishery Co. Ltd. (Clarenville, Newfoundland), Carino Company Ltd. (South Dildo, Newfoundland), Atlantic Marine Products Ltd. - previously Seafreez Foods Inc. - (Catalina, Newfoundland), and the Northeast Coast Sealers Coop (Fleur de Lys, Newfoundland). Approximately 90 percent of Atlantic Marine Products Co. Inc. and 50 per cent of Terra Nova Fishery Co. Ltd. are owned by the Barry Group of Companies, based in Newfoundland.

In 1998, the sealing industry had the capacity to process about 292,000 seals per year. By September of 1999, Carino had completed a \$360,000 expansion, increasing their seal pelt processing capacity from 8,000 to 20,000 per day <sup>8</sup>

### **The Barry Group of Sealing Companies**

The largest Canadian seal processing group is the Barry Group, based in Corner Brook, Newfoundland. Rapidly expanded in the last six years, the Barry Group of sealing companies is run by brothers Bill and Jim Barry, and was joined by David Middleton (who holds a minority ownership position) as well as Karl Sullivan (a company director).

In 1996, the Barry Group took over the Terra Nova Fishery Co. Ltd., and succeeded in making it one of the largest seal processing companies in Canada. It also took over Seafreez Foods Inc., which in turn had taken over the S.W. Mifflin Co. facilities in Catalina, and turned it into Atlantic Marine Products (AMP Co.).<sup>9</sup>

The Barry Group of companies, including Atlantic Marine Products and Terra Nova Fishery, received by far the most in federal subsidies of all the sealing companies operating in Canada. The companies it controls received seven federal subsidies - contracts worth \$2,228,511. It is estimated that these Barry Group companies also received almost half of the \$4,543,000 in meat subsidies provided by the federal and Newfoundland governments. If we conservatively assume that the amount of meat subsidies provided to the Barry Group companies is \$2,200,000, the total provided from governments to the Barry Group of companies between 1994 and 2000 was \$4,428,511.

### **Subsidies Repayment Defaults**

There have been a number of significant defaults and failures to repay soft loans provided by the governments to the sealing industry.

For example, the Terra Nova Fishery Co. Ltd. seal processing plant in Clarenville, NF received two federal government soft loans for a total of \$1,088,700. The first loan was issued under the Fisheries Adjustment Program (FAP) for \$434,400.<sup>10</sup> The second loan was provided by the Atlantic Canada Opportunities Agency (ACOA). It was an unsecured short-term action loan to assist with working capital requirements: total second loan - \$654,300. The federal government provided \$1,088,700 of Terra Nova's proposed total investment of \$1,646,000. This basically left the company having to provide only \$458,000 of the total new investment in the sealing operation.<sup>11</sup>

The original federal subsidy loans were for one-year, due to be repaid in full on December 31, 1994. However, the Terra Nova Fishery Co. Ltd., seal plant lost money due to a number of problems and miscalculations and ACOA deferred repayment to May 31, 1995, after the new sealing season.<sup>12</sup> Since Terra Nova Fishery Co. Ltd., was still unable to pay anything on the loan, repayment was again deferred. Eventually a new agreement was signed with Terra Nova's new owners to provide for repayment of the \$654,300 in five equal installments of \$130,860 starting on March 31, 1997. We have yet to receive documentation that the repayment schedule was met.<sup>13</sup>

But on March 31, 1997, Terra Nova was still unable to pay. The loan was again extended in April, this time with interest due at 8% per annum. By May 6, 1997, however, ACOA officials concluded that, "The company is insolvent and is going to make an informal settlement offer ...."<sup>14</sup> In December 1997, ACOA accepted a settlement offer of \$240,000 from Terra Nova Fishery Co. Ltd., and released the company from the remainder of the debt. When the Terra Nova Fishery Co. Ltd., plant in Catalina failed, its facilities were taken over by Seafreez Foods Inc., also a part of Atlantic Marine Products, controlled by the Barry Group.

Once Atlantic Marine had taken over a virtually bankrupt Terra Nova Fishery (at a very low subsidized price), it applied for additional subsidies from the federal and provincial governments to keep the money-losing facility alive. ACOA provided another loan subsidy of \$401,240 to Atlantic Marine Products on January 21, 1998.<sup>15</sup>

This was followed by another federal subsidy to the Barry Group. On June 9, 2000, the Hon. George Baker, federal Minister of Veterans Affairs and Secretary of State for the Atlantic Canada Opportunities Agency (ACOA), and R. John Efford, Newfoundland's Minister of Fisheries and Aquaculture, announced another \$81,771 for Atlantic Marine Products Incorporated of Catalina, to expand into non-traditional markets for seal skin products. The marketing program included participation in various fur exhibitions, development of promotional material and advertising in selected publications.

The Northwest Sealers Co-op was another sealing operation that failed in its business following the receipt of federal and provincial subsidies. The Co-op was set up in a former federal government shed in Fleur de Lys, Newfoundland, and was financed primarily with provincial guaranteed loans. The Co-op harvested, skinned and sent the seal skins to Ontario, where they built up huge inventory of tanned seal leathers. However, the Northwest Sealers Co-op was unable to break even on the venture. It could not pay back its loans to the Government of Newfoundland. As far back as December 1992, the Co-op had 60,000 unsold and unsaleable seal leather pelts stored in Ontario. Since the Co-op was unable to pay its loans, the guarantees were absorbed by the provincial government.

#### **4(5) Problems with Gateway Maritime Inc.**

ACOA, Human Resources Development Canada, and the Government of Newfoundland offered Gateway Maritime Inc. of Brigus, Newfoundland, up to \$466,000 in government subsidies. These subsidies were to take the form of low- or no-interest soft loans (no heavy penalties in the event of any default on repayment). The funds were provided for research, development and marketing of high-end Omega-3 supplement oil, body creams and other cosmetics made from seal oil and meat (project # 4034948-1). Initially, in July 1998, ACOA offered \$250,000 to Gateway Maritime Inc. and Fundacao Essprit-Icarus under the direction of Dr. Manuel Pinta Ribeiro, in Portugal (project # 4034778-1). Then, ACOA committed \$144,800 to Gateway's \$284,000 skin cream project

(project # 4034948-1) on March 18, 1999. A federal scientific research and development tax credit was also provided, according to government documents that were heavily censored. Under the \$250,000 provisional repayment subsidy, ACOA advanced \$156,000. But in July 2000, ACOA discovered that Gateway's paid bills did not support the advance and demanded an immediate repayment of \$91,800. This is quite an unusual move by a government agency. The repaying request reflected the possibility that the project might not be viable. As well, the burden of having to repay such a large amount, could place the recipients in financial difficulty.<sup>16</sup>

**4(6) Seal Meat Subsidies: \$4,728,000**

The federal and provincial governments agreed in 1996 to provide subsidies to purchase seal meat. Seal meat is generally strong in taste and undesirable to humans. There has never been a strong market for seal meat. The only large market was grinding seal meat for silage as a feedstock for caged animals in fox farms that have sprung up in Atlantic Canada. The decision to provide a subsidy to purchase meat was made as a measure to provide additional monies to the pockets of fishermen that had lost their jobs when the cod fishery had collapsed. Many of these fishermen derived additional income in the winter during the seal hunt. The governments decided to provide the subsidies to the companies that agreed to purchase and process seal meat. The companies, in turn, would pay an inflated price to the sealers who sell seal meat to the companies.

The total seal meat subsidies provided by the federal and provincial governments for the three year period 1996 to 1998 inclusive is estimated at \$4,068,000:

A.	DFO Seal Meat Subsidy	\$2,585,000
B.	Newfoundland & Labrador	<u>2,143,000</u>
	<b>TOTAL</b>	<b>\$4,728,000</b>

This number should be larger, however, we were unable to obtain the Newfoundland & Labrador meat subsidies for 1999, nor were we able to obtain the meat subsidy numbers for Quebec.<sup>17</sup>

**4(7) Government Costs Associated With the Seal Hunt: \$6,666,000**

In addition to the direct subsidies, there are indirect government costs incurred in support of the seal industry. It involves the use of the Department of Fisheries and Oceans (DFO) and Coast Guard equipment, and officers to physically assist, monitor, and enforce the rules of the seal hunt. Each year the two departments have to mobilize to provide support during the short hunting season.

This study was able to obtain costs from DFO internal memos for specific years. We have multiplied the costs by six years for the period 1994 to 1999. The total estimated costs of DFO and Coast Guard services in Newfoundland and Quebec hunts, as a subsidy to the sealing industry, are \$6,666,000. This includes \$5,106,000 over six years for the Newfoundland hunt and \$1,560,000 for the Quebec seal hunt.

The cost of government involvement in the seal hunt is substantial. These costs included:<sup>18</sup>

- mobilizing officers to enforce seal hunting laws, guidelines and sundry rules
- tracking and analyzing impacts of the hunt on seal populations
- providing transportation in support of the seal hunt including helicopters and ocean vessels (including ice breakers)
- providing weather reports, seal locating spotter planes and other economic support
- providing marketing opportunities and lobbying governments outside Canada to allow import of seal products

**5. EMPLOYMENT IN THE ATLANTIC SEALING INDUSTRY**

Employment in the sealing industry is seasonal for both the hunters and the seal product processors. The

usual length of employment ranges from one to three months for most workers. The seasonal employment in the sealing industry does not provide sustained work, but rather an incremental income to those that have seasonal work in other areas.

Today, employment in the sealing industry is generally much lower than what is reported. There are two causes for this. The first is that many more licenses for seal hunting are issued than are actually used by those who go out on the ice to hunt. Those who report on just the licenses issued, as opposed to licenses used, overstate the employment. For example, the Atlantic Premiers reported in 1998 that sealing in Atlantic Canada, primarily Newfoundland and Labrador, employed 4,200 people (3,900 hunters and 300 plant workers).<sup>19</sup> However, the majority of those hunters had taken out licenses, but were not a part of the hunt.

A study completed in 1997 by Dr. Clive Southey, an economist at Guelph University, found that while 8,403 commercial and 1,031 personal seal hunting licenses were issued in 1996, only about 600 people actually participated in the hunt. Secondly, many of those 600 who actually hunted did so for several days or for just a week. This does not constitute full annual or even seasonal employment for 3,900 seal hunters. As it is, Dr. Southey found that the average duration of employment on sealing ships was estimated at 4 weeks. Aggregated into full yearly employment, the sealing industry only results in a total employment of about 50 person years.<sup>20</sup> The actual employment impacts of the seal hunt are minimal compared to the other resource based industries and the new emerging sectors of information technology and high-tech operations.

## **6. EXISTING MARKETS FOR SEAL PRODUCTS**

Existing markets for seal products include fur, leather, meat, oil (industrial and human consumption), and penises.

### **6(1) Seal pelts**

The primary seal product, producing the greatest income, is the pelt, which is used for its fur and skin. However, the market for seal pelts remains extremely volatile. The value of Canadian seal pelt exports dropped from \$4.6 million in 1997 to \$2.6 million in 1998 and \$2.2 million in 1999. The DFO 1999 Management Plan reported that the markets for pelts were good in 1996 and 1997, but the movement of pelts slowed in 1998 and some remained in inventory at the end of 1998.<sup>21</sup> Seal pelt prices in 1998 were about the same as in 1997 at which time:

- bedlamer pelts ranged from \$11.80 to \$18.00, but frequently sold at \$15.00
- beater prices ranged from \$17.25 to \$25.30, with \$22.00 per pelt most common
- ragged jackets ranged from \$12.00 to \$16.75
- old harps pelts ranged from \$7.37 to \$12.00 (Tables 3, 4, and 5)

However, in 1999, plants stopped buying pelts halfway through the season, and in the year 2000, pelt prices dropped to about half that of 1998.

The largest market for seal fur is the G.C. Rieber Co. plant in Norway, where seal furs are processed for sale in Russia and the rest of Europe. In 1996, more than 100,000 sealskins were exported to Norway, for a total value of \$1,385,000. 24,000 pelts were shipped to China, and achieved a total value of \$626,000 (Table 6). The pelts are processed each year in March, April and May, and are then shipped to Norway and China by the following February.

### **6(2) Seal Meat**

Seal meat generally has a very low market value. The meat has a strong unfamiliar taste, and while it is consumed in small amounts locally, large national and international markets have not matured. Historically, most seal meat has been discarded at sea. The most successful use of the meat to date has been to grind it and prepare it as animal feed, primarily to mink and fox farms. For some years, the federal and provincial governments have been paying for research into disguising the taste of seal meat and processing it into other products such as sausages, salami, pepperoni, etc. Currently, the sealing industry is exploring the potential of using the meat as a nutritional supplement for humans as well as animals. Protein powder is one such possibility.

The government subsidies for meat artificially propped up the prices for the three years the subsidies were paid to companies to take the products. However, this situation changed once the subsidies had dried up. The federal government noted that, "in 1999, there was virtually no market for seal meat. Sealers in many areas did not land carcasses in 1998 because of low prices for meat" (Source: Atlantic Seal Hunt - 2000 Management Plan, DFO). In the 2001 Seal Management Plan, the DFO states that, "Seal meat continues to present a major challenge for the sealing industry. The amount of seal meat landings for 2000 was extremely low... The foreign market has been particularly affected by Asian currency difficulties."

### **6(3) Seal Oil**

There are at least two primary commercial uses for seal oil. The first use is as an industrial grade oil, used for production of cosmetics, paints, soaps, and for use in canned herrings and the manufacturing of low-grade margarine. The second use is as a potential food additive/ pharmaceutical health food. Heavily refined seal oil has been promoted by industry advocates in capsule form as a prime source of Omega 3 fatty acids.<sup>22</sup> However, the

Omega 3 seal oil enters a market already crowded with Omega 3 oils from fish and plants, such as flax seed and grape seed oils.

DFO reported that there is a market for seal oil in Europe as marine or industrial oil, but that these products have relatively low prices. Seal oil's market potential as a food additive or in pharmaceuticals has yet to be developed. The 2001 DFO Seal Management Plan states that, "The industry...is aware that more R&D is required to expand the range of products derived from seal oil."

#### **6(4) Seal Penises**

A strong market for seal penises developed in the early 1990's to provide a supposed aphrodisiac for men in Asia. For example, in 1996, the total processed value of the seal harvest was approximately \$9 million, of which seal penis sales accounted for about \$940,000.<sup>23</sup> Prices during this period ranged from \$70 to \$100 per large penis. A gray market for penises developed which bypassed official government inspection and numeration, and many more seal penises were being taken and sold than was being reported.

However, by 1998, the price of penises began to drop \$15 to \$20 per unit, according to the 2001 DFO Seal Management Plan., which added that, "There has been virtually no market for seal organs in the past two years." A reported 20,000 organs were taken in the 1998 seal hunt.<sup>24</sup>

There continues to be speculation that the market for seal penises as aphrodisiacs has been limited by the introduction of Viagra.<sup>25</sup>

## **7. ECONOMIC VALUE OF THE COMMERCIAL SEAL HUNT**

The commercial sealing industry in Canada continues to shrink in value to the economy in Atlantic Canada and Quebec, compared to other industry sectors. It represents less than a fraction of one percent of the Gross National Product (GNP) of Newfoundland & Labrador. Its contribution to full-time employment and educational growth opportunities remains marginal. Without government subsidies, it is not clear that the industry could survive, other than as a locate cottage industry on a seasonal basis.

To place the sealing industry into perspective as a part of the total economy of Newfoundland and Labrador, we should consider that the estimated \$11.9 million in processed seal industry income in 1997 represented less than 0.03 per cent of Newfoundland's Gross Domestic Product (GDP). That is less than one half of one tenth of one per cent of the entire provincial economy. The Government of Newfoundland & Labrador estimated that the "corresponding production value was approximately \$20 million" for the seal industry in 1997<sup>26</sup>, however, they do not provide substantiating facts to support this figure. The 1997 seal landings were \$7,480,000. The added value of processing and retailing added nearly another \$4.5 million, bringing the total revenue generated by the sealing industry in 1997 to \$11,940,000. Where the provincial government economists found an additional \$8 million in revenues remains unclear.

Notwithstanding, if we use the Government of Newfoundland and Labrador's own statistic of \$20 million, the value of the seal hunt still represented less than 0.06 per cent of the province's total GDP for 1997 (Figure 1).

## **8. LIMITED POTENTIAL FOR MARKET DEVELOPMENT**

The potential for market growth in the sealing industry is limited. Demand for products such as furs, leather, meat, oils, flippers, and penises is small and has not grown much over the past twenty years. Niche markets have developed for Omega 3 oil, along with some furs and leathers. However, the major markets in Europe and the United States remain virtually closed because of laws and consumer preferences that exclude the use of seal products. Expected markets in Russia, China, Korea and Hong Kong did not develop as rapidly as expected.

The seal hunt was maintained artificially by the three-year federal and provincial government seal meat subsidies. As the subsidies tailed off in 1999, there was a substantial drop in the number of seals killed. During the 1999 spring seal hunt, many seals were caught and brought to the processors. However, in the midst of the short sealing season, the processors either stopped buying, or lowered their prices substantially. A report prepared by DFO for its seal market outlook reported that:

“Recent Asian currency crisis has forced processors to stockpile pelts while trying to establish trade or bartering arrangements with Asian buyers...Less than half of seal carcasses were landed for processing in 1998. The market for meat is not favourable and about 70 percent of the meat has been stockpiled...the market remains good for oil, although most is still used for marine or industrial uses as opposed to the more lucrative pharmaceutical used.”<sup>27</sup>

The same lack of demand and low prices for seals and seal products occurred in the 2000 hunt. Sealers either chose not to go out, or went out for a shorter period of time. Seal processors reduced the number of seals they purchased, as well as their purchase prices. There is some evidence that the processors had carried unsold seal furs, skins, and other products over from the previous year’s hunt.

### **8(1) Asia**

Asian countries like China, Korea, Hong Kong, and Taiwan were seen by the Canadian sealing industry as potential large markets for seal products. However, imports of seals by China, according to its official government records, fell dramatically from 1997 to 1999. Canadian exports of seals to China fell from 234,785 kilograms in 1997 to 25,072 for the first nine months of 1999, a decline of a factor of ten.

For example, the annual imports of raw seal pelts by Zhong Yang Ocean Bio-Engineering Corporation and Zhong Yang Garments Corporation in China have dropped from 100,000 pelts in 1996 to 50,000 pelts in 1999. The wholesale price quoted by Zhong Yang Garments Corporation in China has dropped 40 percent from five years ago. Zhong Yang Ocean Bio-Engineering Corporation originally had a plan to market seal penis products but is now reluctant to do so because of the uncertainty of market demand.

The Northeast Coast Sealer’s Coop was not able to maintain its market for seals in China in 1999, and as a result was not able to buy the expected number of seals hunted by the sealers. It stopped buying altogether in the middle of the hunt season.<sup>28</sup>

A new company formed by Inuit from the Baffin, Keewatin and Nunavik regions, the Natsiq Investment Corporation, proposed an annual harvest of up to 24,000 seals. The Natsiq Investment Corporation said it planned to concentrate its sales efforts in markets in China. However, the Chinese company withdrew from the deal for unknown reasons.<sup>29</sup>

### **8(2) Europe**

In 1983, the European Economic Community enacted a ban of all whitecoat seal products, eliminating a major market for the sealing industry. Public sentiment about the killing of baby seals has not changed in Europe over

the past two decades, and there are no indications that this ban will ever be lifted.

Markets for seal oil in Europe are largely industrial, and this grade of oil fetches very low prices. Human grade seal oil sold in supplement form has not been marketed successfully in Europe to date. European markets for seal pelts are few: since 1993, only Norway has consistently imported pelts from Canada, although Denmark has been importing small numbers of pelts since 1997.

### **8(3) Canada**

Although market statistics are difficult to obtain within Canada, we do know that traditional seal market sectors have not developed in this country. Demand for seal fur and leather products remains low. Despite the heavy subsidies, human grade seal oil is sold in few stores across Canada, and has not achieved widespread public acceptance. Seal meat has never sold well outside of Newfoundland. Even in that province, recent media reports show that younger generations in Newfoundland are rejecting seal meat because of the taste, and because of the cruelty associated with the hunt.

### **8(4) United States**

A strong consumer resistance to seal harvest methods and products from culled seals has resulted in a stunted market in the United States. Citizens' concerns for marine mammal conservation resulted in the U.S. Government enacting the Marine Mammal Protection Act (MMPA) that has had a significant impact on the Canadian seal hunt. It has reduced the demand for seal products in the U.S. to virtually nothing. Under the Act, the U.S. has banned virtually all importation of seal products.

A number of requests have been made by the sealing industry to have the U.S. law repealed. In response, Canada's House of Commons' Standing Committee on Fisheries and Oceans issued a report in June 1999, with a number of recommendations, one of which was to call for Canada to challenge the United States' ban on seal products imports under the MMPA. The Committee reported that, "the MMPA may contravene the General Agreement on Tariffs and Trade (GATT)" under the World Trade Organization (WTO).<sup>30</sup>

A review of current U.S. political conditions reveals that there are much more important issues Canada needs to pursue with the U.S., and it may not waste its "political capital" on seals. Secondly, U.S. President George W. Bush is under tremendous pressure regarding backing off numerous environmental issues related to energy and government lands. Given the broad based support for the MMPA within the United States, it is doubtful that the Bush administration would weaken or repeal the MMPA.

## **9. CHANGING ECONOMIC LANDSCAPE IN NEWFOUNDLAND & LABRADOR**

As the economics of the sealing industry declines, Newfoundland & Labrador's economy is booming, boasting its best performance in a decade. Newfoundland's GDP grew by an estimated 4.4% to \$10.9 billion in 1998, the strongest growth rate of any province in Canada that year.<sup>31</sup> The total value of Newfoundland's annual exports in 1998 reached \$5 billion for the first time.

The Government of Newfoundland and Labrador, ACOA, and the federal government are focusing on emerging growth sectors of the economy, including tourism, information technology, biotechnology, and the environment industry. Under the new Canada-Newfoundland and Labrador Comprehensive Economic Development Agreement, \$15 million will be dedicated to export trade, strategic sector development, entrepreneurship, community economic development and technology. An additional \$7 million will be allocated under the Province's own Strategic Enterprise Development Fund to support business opportunities in strategic growth sectors.

In 1999, a study was conducted by KPMG, an international financial consulting/accounting firm, on which cities in the world are the best and most cost effective to establish businesses in. The study showed that St. John's came in second, out of 64 cities in eight different countries. These standings pertain to overall performance across seven manufacturing industries and two software industries.<sup>32</sup> This will add substantially to the ability of Newfoundland & Labrador to attract businesses in the new economy sectors. The following is a review of the potential growth in these sectors.

The Newfoundland and Labrador economy is coming out of years of stagnation and downsizing. It is recovering from severe collapses of its fishing industry that had resulted from over-fishing and renewable resource mismanagement by both the provincial and federal governments. Retail sales in Newfoundland expanded 2.5 per cent faster than the national average, and manufacturing shipments rose 6.8 per cent year-to-date through May 1999. According to the Bank of Montreal, Newfoundland is poised for the fastest economic growth in the country. In the first six months of 1999, employment grew by 4.9 per cent, creating some 8,500 new jobs in the province, and pushing the unemployment rate down to 17.2 per cent.<sup>33</sup>

To ensure successful business and regional development, Newfoundland's human resources training and skills education must also receive strategic investments. Through the Canada-Newfoundland and Labrador Labour Market Development Agreement, in excess of \$100 million will be invested in 1999. This should ensure that human resource and employment development efforts will be linked with strategic development opportunities in all areas of the Province.<sup>34</sup>

As the sealing industry becomes a small part of the economy, many new job employment and economic growth sectors continue to emerge in other growth sectors within Newfoundland & Labrador and Quebec. The new growth areas include information technology, the tourism industry, and the environment industry.

### **9(1) Information Technology**

Information technology has been the second-fastest growing sector of the Newfoundland and Labrador economy since 1994. Increases in both employment (+122.2%) and annual revenue (+86.4%) stand in stark contrast to figures found in the other sectors. Information technology has seen an employment growth of 53% in the last two years, a rate that, if sustained, should see employment double in less than four years.<sup>35</sup>

Much of the recent growth has occurred in the two core areas of computer and related services and telecommunications, which averaged growth of 10.4% and 6.1% per year between 1992 and 1997, respectively.<sup>36</sup> These core activities were complemented by growth in areas like distance education, telemedicine, new media and marine information services (in which software development for marine navigation systems, digital nautical charts, environmental monitoring, satellite communications and maritime surveillance is a particular expertise).

The construction and production phases of the Hibernia, Terra Nova, Whiterose, Voisey's Bay projects and the promise of future hydro-electric projects in Labrador are strong client bases for advanced technology applications.<sup>37</sup> Investment in local infrastructure (e.g., high-speed networking, advanced fibre optic systems) by major IT companies, such as New Tel Communications and Cable Atlantic<sup>38</sup>, has been strong in recent years, providing consumers and businesses with access to reliable, high quality services and products.

### **9(2) Tourism**

In Newfoundland and Labrador, tourism has grown to become a significant component of the provincial economy over the past two decades. The Province has a diversity of rich cultural and natural resources that are in demand by world markets. The tourism sector generated about 5% of the province's GDP and supported 2,400 businesses in 1998. While non-residents accounted for 47% of total tourism expenditures in 1998, they made only one out of every seven tourist trips that year. Travel and tourism expenditures, resident and non-resident combined, amount to more than \$500 million in 1998. This spending supports an estimated 2,400 businesses in the Province.<sup>39</sup>

Tourism represents a non-consumptive use of the forests, lands and oceans of the province. As other regions of the world such as Europe, the United States, China, Japan, etc., continue to deplete their wilderness and wild lands, Newfoundland and other regions of Canada will continue to be increasingly sought for their remaining wilderness and heritage beauty. New jobs in tourism will help accommodate those who may have lost their jobs in other sectors.

Newfoundland also maintains some 93 provincial parks, recreation areas, and campgrounds. The number of licensed tourist accommodation properties jumped to 533 in 1997, up 30 percent from 409 in 1996. An estimated 69,000 additional tourists arrived in the Province in 1998, representing a 22 percent increase from the previous year and an incremental contribution of nearly \$37 million to the economy. Tourists from Ontario, Western Canada, the United States, Great Britain and Germany accounted for virtually all of the gain in non-resident visitors.

The province planned to double its tourism and eco tourism advertising and promotions in 1999-2000 to \$3.6 million.<sup>40</sup> The Canadian Tourism Research Institute reported that the demand for Newfoundland hotel occupancy in early 1999 was up 13.1 per cent over the same period last year, higher than any other place in Canada. Newfoundland has increased the number of high quality accommodations from two in 1992 to ten in 1998, according to the Accommodation Rating Program. The St. John's International Airport Authority is currently planning a \$36 million improvement to the terminal and supporting services--work is slated to begin this spring".<sup>41</sup>

Often, the same people that come to Canada as tourists to enjoy the natural settings are also sensitive to the killing of animals for their fur and other body parts. This is not an emotional statement related to this report. Rather, it is a fact. There are many Europeans and Americans who feel negatively about the trapping and hunting of wild fur-bearing animals for commercial purposes. This presents the potential for negative impacts on one of the fastest growing industry sectors in the Atlantic Provinces - tourism.

The economic question must be asked, how much tourism has been lost already due to foreign tourists' concerns about the commercial seal hunt? How much tourism in the future will be affected? To understand the economic phenomena better, professional surveys would have to be conducted.

### **9(3) Environment**

There is a growing environment industry sector in Newfoundland, led by the Newfoundland Environmental Industry Association (NEIA). In Newfoundland and Labrador, the environmental sector employs over 1600 people, contributes \$100 million annually to the provincial economy, and is experiencing an 8% growth rate. The

environmental sector enables other industries to conduct their businesses on a more competitive basis and in an environmentally sustainable manner.<sup>42</sup>

Using Newfoundland and Labrador as a base, environmental companies export their skills and products to such diverse regions as South East Asia, China, Vietnam, South America, Iceland, Europe and other areas. Local companies, both small and large, have developed high skills standards and products and are competing in the \$450 billion annual global market. The environment industry sector will be able to grow to meet the demands for pollution prevention and the development of new technologies that will capture lost product being discharged as pollution, and use it instead for additional production. The companies will also be able to meet the challenge for energy efficiencies and renewable energy sources that will be used to help Canada and other nations meet the greenhouse gas reduction targets set in Kyoto.

For example, Newfoundland & Labrador are venturing into wind energy production. Newfoundland has a Class 1 wind resource and is among the best places in the world. It has many suitable wind generation locations and could easily provide a tremendous amount of electricity for domestic and export purposes. Tacke Windpower Inc. of Ontario (wholly owned subsidiary of a German company) had proposed to build a 15 MW facility consisting of 25 turbines at Cape Bonavista. The proposal was submitted to Newfoundland and Labrador Hydro in response to its call for proposals to supply 200 MW of power by the Year 2000. The power would have been needed to operate the new nickel smelter in Argentia and meet growing demands on the Island.<sup>43</sup>

Labrador Hydro launched a 5 to 25 megawatt (MW) Wind Energy Demonstration Project with the NeWind Group. NeWind is a consortium of firms including CHI Hydroelectric Company Inc., fga Consulting Engineers Limited and Quadratec Inc. The latter two are locally established Newfoundland companies. CHI is a subsidiary of ERGA which is a renewable energy company fully owned by the ENEL Group of Italy.<sup>44</sup>

## **10. SUMMARY AND RECOMMENDATIONS**

The sealing industry in Atlantic Canada has been substantially diminished. It had been a major economic force and employer in the 1800s and early 1900s, seasonally employing some 10,000 people. However, affected by changing conditions in free market supply and demand, the sealing industry today is much smaller and less economically viable. It has been affected by requirements for maintaining the integrity of harp seal herds, resulting in reduced availability. It has been changed by the reduction of consumer demand in the United States and Europe for fur, skins, and other seal products. Even emerging markets in China, Russia, and Southeast Asia have not materialized as expected.

Today, commercial sealing represents less than 0.06 per cent of Newfoundland & Labrador's Gross National Product (GNP) and employs less than 1,000 people for no more than a one-month average per year. Prices paid for seal pelts and carcasses have declined substantially in the last two years, making it hard for sealers to justify their economic participation.

The economies of Newfoundland & Labrador and Atlantic Quebec are changing. New job opportunities are developing in the new economies of information technology, high-tech industries, environment industries, and tourism. Understanding that the primary constant in a healthy economy is change, we begin to see that a transition from sectors such as seal hunting to an information and high-tech economy is natural for Atlantic Canada. Rather than resisting the change, embracing it will provide substantial economic benefits.

A review of the subsidies provided to the sealing industry shows clearly that expected industry growth has not been achieved. Government subsidies in the form of grants and low interest, forgivable loans have failed to kick start independent, economically viable businesses. Once the subsidies are ended, the businesses either fail or downsize. The meat and carcass subsidies provided by the federal and provincial governments to sealers supported, at best, a temporary bubble of income, but when ended have left the volatility and instability of the industry unchanged.

We note that the extent of subsidies to the sealing industry has been substantially reduced in the past two years, and that the emphasis for economic development assistance has been shifted to emerging industry sectors.

It is normal for governments to assist and support the growth of new industry sectors. Chosen well, such government support can result in kick starting major new economic initiatives such as in the aerospace industry, the environment industry and the biotech industry. Chosen poorly, government subsidies for failing, outdated industries that are being left in the wake of the changing economy can be detrimental to the economy, and can provide false hope to the workers in those sectors.

Consideration must be given to the possible negative impacts that the image of sealing may have on the growth of the tourist industry in Newfoundland & Labrador. Without providing a value judgment on the pros and cons of the seal hunt, it is clear to us that the public perception in the United States and Europe could result in reduced tourism. This will have to be taken into account when projecting future growth in the tourist sector. It is quite possible, for example, that the annual income generated by the sealing industry could be more than offset by the loss in tourist growth by those who would have otherwise come to Newfoundland & Labrador for vacation.

Based on our observations of the sealing industry sector, from an economic point of view, we make the following recommendations. These recommendations are designed to assist Newfoundland and Labrador and Atlantic Quebec strengthen their economy and expand employment.

1. The provincial and federal governments should continue the process of reducing and eliminating subsidies to the sealing industry sector.
2. The governments and the sealing industry sector should provide full and accurate information regarding the seal hunt economy, including government subsidies and costs related to the monitoring the seal hunt.

3. The governments and industry sectors should support training and re-education programs for those who wish to diversify their job opportunities in a growing economy.
4. The federal and provincial governments and their agencies should continue to support diversification of the Newfoundland economy into new growth areas including information technology, high tech, tourism and crafts, environment industries. Furthermore, St. John's should be internationally promoted as one of the best cities in the world to establish new businesses, as found by the KPMG study. There are opportunities here to further promote the establishment of high-tech and information technology facilities in the region.
5. The federal and provincial governments should work to expand local community development and the involvement and training of men and women to step into the new jobs that are developing at the regional and community level within Atlantic Canada.
6. The tourism-based economy in Newfoundland & Labrador and coastal Quebec should be expanded, paying particular attention to the attractions of nature's rugged coastline, unique topography, and natural beauty. Many regions within Canada, and particularly in Newfoundland, have been left in a natural state compared to other regions of the world. As a result, the tourism demand from urbanized and wildlands-challenged regions of the world such as Europe, the Northeastern United States and Japan, will be increased in regions that have their natural beauty and wildlife intact.
8. Governments and their agencies should support the expansion of environmental technologies and the development of renewable energy such as wind in order to help Canada meet its commitment to the Kyoto Protocol requiring reduction of greenhouse gas emissions. Canada and Newfoundland could generate a competitive advantage in the \$400 billion a year international environmental market.

**Table 1**

**Meat Subsidies from the Federal and Newfoundland Governments**

<b>Year</b>	<b>Federal Subsidy</b>	<b>Provincial Subsidy</b>
1996	\$1.4 million	\$968,000
1997	750000	575000
1998	500000	?
1999	250000	?

**Table 2**

**Types and Prices of Harp Seals Harvested in 1997**

<b>Types</b>	<b>Pelt</b>	<b>Carcass</b>	<b>Penis</b>	<b>Flippers</b>	<b>Total</b>
<b>Beaters</b>	\$22.00	3	0	0.5	\$25.50
<b>Bedlamers</b>	\$15.00	5	0	0.5	\$20.50
<b>Old Harps (male)</b>	\$9.00	5	17.50*	0.5	\$32.00
<b>Old Harps (fem)</b>	\$9.00	5	0	0.5	\$14.50
<b>Ragged jackets</b>	\$12.00	0**	0	0.5	\$12.50

\* The \$17.50 is an average of varying prices for penises depending upon the size. In 1997 they sold for about \$2.00 per inch, making the older and larger harp seals the prime harvest for larger penises.

\*\* Ragged jackets do not receive a government meat subsidy.

**Table 3**

**Newfoundland Seal Pelt Landings and Landed Value in 1997**

Type	DFO #	No. of Seals	Total \$/s	\$'s Per Seal	% of \$'s
<b>Ragged Jacket</b>	931	31,949	\$398,631	\$ 12.48	6.62%
<b>Beater</b>	932	176,259	\$3,916,193	22.22	65.01
<b>Bedlamer</b>	933	25,062	257026	10.26	4.27
<b>Old Harp</b>	934	14,007	129896	9.27	2.16
<b>Bluejack Hoods</b>	935	72	1219	16.93	0.02
<b>Old Hooded</b>	936	6,993	147439	21.08	2.45
<b>Ring Seal</b>	940	88	248	2.81	0
<b>Harbour Seal</b>	964	10	35	3.45	0
<b>TOTAL</b>		<b>254,629</b>	<b>\$4,851,567</b>	<b>\$19.05*</b>	<b>80.53%**</b>

\* Weighted average price paid to sealers for each seal.

\*\* This represents Newfoundland's landing of 80.53% of the total Canadian seal landing.

**Table 4**

**Canadian Seal Pelts Exports from 1997 – 1999 (Statistics Canada)**

<b>Date</b>	<b>No. of Pelts</b>	<b>Value</b>	<b>Avg. Price Per Pelt</b>
<b>1997</b>	184,000	\$4,604,000	\$25.05
<b>1998</b>	116,000	\$2,603,000	22.48
<b>1999</b>	182,000	\$2,232,000	12.29

**Table 5**

**1996 Exports of Canadian Seal Pelts (Statistics Canada)**

<b>Country</b>	<b>No. of Pelts</b>	<b>Price Per Pelt</b>	<b>Total Income</b>
<b>Norway</b>	104,000	\$13.34	\$1,385,000
<b>China</b>	24,000	\$26.52	\$626,000
<b>Hong Kong</b>	8,000	\$29.47	\$250,000
<b>United States</b>	800	\$46.46	\$37,000
<b>TOTAL</b>	137,000	\$16.8	\$2,298,000

**Table 6**

**Seal Landings\* and Landed Values\*\* for Harp Seal Harvesting 1996 - 1997 (000's)**

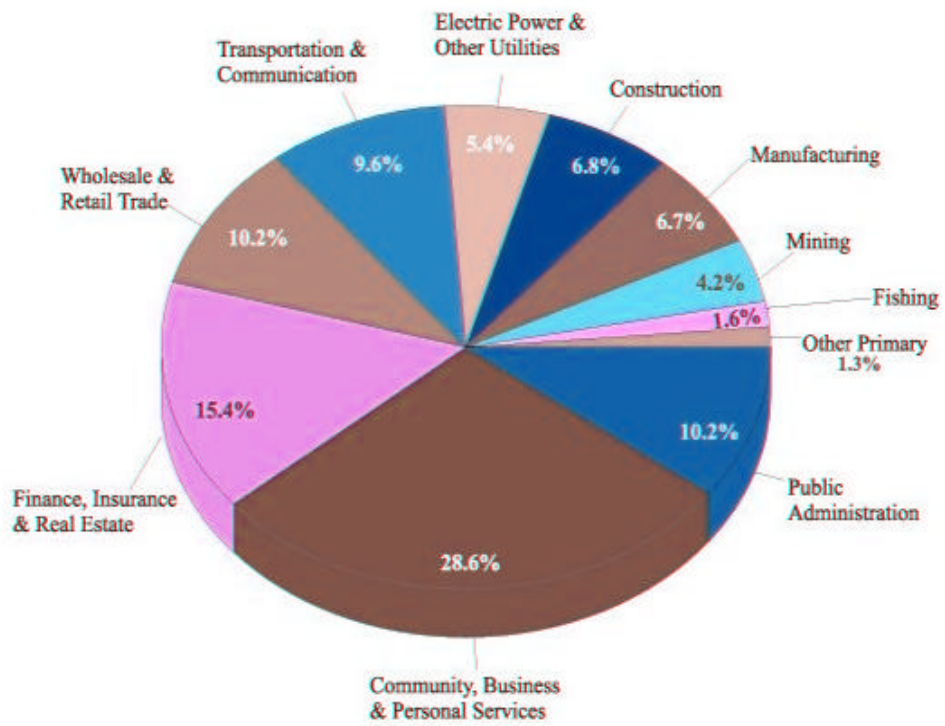
<b>Products \$'s (000)</b>	<b>1996 Landed</b>	<b>1996 processed</b>	<b>1997 Landed</b>	<b>1997 Processed</b>
<b>Pelts</b>	\$2,900	\$5,770	\$5,700	\$9,500
<b>Meat</b>	\$1,700	\$700	\$880	\$860
<b>Organs</b>	\$470	\$940	\$300	\$360
<b>Blubber</b>	\$370	\$1,540	\$580	\$1,200
<b>Flippers</b>	\$190	\$190	\$20	\$20
<b>TOTAL</b>	<b>\$5,630</b>	<b>\$9,140</b>	<b>\$7,480</b>	<b>\$11,940</b>

\* Landings are monies paid to the sealers

\*\* Processed values include the value added gained by the Canadian processing plants, transportation, etc.

Figure 1

### Distribution of GDP by Industry 1997





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- <sup>3</sup> Southey PhD., Clive, “The Newfoundland Commercial Seal Hunt: An Economic Analysis of Costs and Benefits”, Department of Economics, University of Guelph, Ontario, October, 1997.
- <sup>4</sup> Atlantic Canada Opportunities Agency (ACOA) press release, Framework for Canada-Newfoundland Agreement on Economic Development and Fisheries Adjustment Outlined, St. John's, Newfoundland and Labrador, January 15, 1999.
- <sup>5</sup> Atlantic Canada Opportunities Agency (ACOA) press release, First Round of Projects Announced Under the Fisheries Diversification Program, St. John's, Newfoundland and Labrador, 12 November, 1999.
- <sup>6</sup> Atlantic Canada Opportunities Agency (ACOA) press release, \$10-Million Announced for Fisheries Diversification, New Harbour, Newfoundland and Labrador, 30 August, 1999.
- <sup>7</sup> Standing Committee on Fisheries and Oceans, “The Seal Report”, House of Commons, Ottawa, June 1999.
- <sup>8</sup> ACOA Project Summary aa223-5, New Brunswick, April 8, 1997.
- <sup>9</sup> Access to Information document, memo from Mr. Collins (Department of Fisheries and Oceans) to Ken Martin (Atlantic Canada Opportunities Agency), January 8, 1998.
- <sup>10</sup> Access to Information document provided by the Atlantic Canada Opportunities Agency (ACOA), cc p. 1012, Ottawa, May 5, 1997.
- <sup>11</sup> Access to Information document provided by the Atlantic Canada Opportunities Agency (ACOA), cc p. 241, Ottawa, April 12, 1994.
- <sup>12</sup> Access to Information material provided by the Atlantic Canada Opportunities Agency (ACOA), dated June 2, 1995
- <sup>13</sup> Access to Information document provided by the Atlantic Canada Opportunities Agency, Ottawa, March 21, 1996.
- <sup>14</sup> Access to Information material provided by the Atlantic Canada Opportunities Agency, August 1, 1997.
- <sup>15</sup> Access to Information documents provided by the Atlantic Canada Opportunities Agency
- <sup>16</sup> Access to Information document, dated March 18, 1999  
Access to Information document, dated October 21, 1998
- <sup>17</sup> Access to Information document, dated January 29, 1997  
Access to Information document, dated January 1997  
Access to Information document, Memo from Andrews to Jones, dated August 25, 1997
- <sup>18</sup> Access to Information document provided by the Department of Fisheries and Oceans, dated April 15, 1998
- <sup>19</sup> “The Sealing Industry”, news release by the Executive Council of the Conference of Atlantic Premiers, Fredericton, New Brunswick, June 9, 1998.  
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- <sup>20</sup> Southey PhD., Clive, “The Newfoundland Commercial Seal Hunt: An Economic Analysis of Costs and Benefits”, Department of Economics, University of Guelph, Ontario, October, 1997.
- <sup>21</sup> “Atlantic Seal Hunt 1999 Management Plan”, Department of Fisheries and Oceans (DFO), Ottawa  
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- <sup>22</sup> Canadian Sealers Association. <http://www.sealers.nf.ca>
- <sup>23</sup> “1997 Backgrounder” on the Canadian Seal Hunt, Department of Fisheries and Oceans Canada, website  
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- <sup>26</sup> “The 1997 Newfoundland & Labrador Seafood Industry -Year in Review” Newfoundland Department of Fisheries and Aquaculture
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- <sup>28</sup> “Info Morning”, Radio Station CBY-AM, interview with Tina Fagan and Jim Brown, Cornerbrook, April 22, 1999.
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<sup>39</sup> “1998 Budget - Government of Newfoundland and Labrador”, St. John’s  
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[info@neia.org](mailto:info@neia.org)

<sup>43</sup> [http://www.nfld.com/~sdelaney/dh\\_wind.htm](http://www.nfld.com/~sdelaney/dh_wind.htm)

<sup>44</sup> Hon. Lloyd Matthews, Newfoundland Minister of Mines and Energy, House of Assembly, St. John's, NF, April 11, 2001.  
<http://www.gov.nf.ca/releases/2001/mines&en/0411n06.htm>