
PART IV

**Economic, Social and
Cultural Issues**

PART IV b

The Atlantic Region

The Atlantic Region

This section is based on a number of reports prepared by consultants who were asked to investigate various aspects of sealing in the Atlantic region. (See Administrative Appendix VI, Technical Reports 9, 12, 13, 14, 17, 19, 20.) As with the North, an initial requirement was to examine the extent of the hunt and related processing activities. On the basis of the analysis of the human resources and equipment employed in sealing, and of the yield in terms of pelts and other seal products, it was possible to assess the overall costs and benefits of the hunt. The more strictly defined *net economic* benefits were then calculated so as to estimate the economic yield to the region that accrues from sealing. In addition, a number of other socio-cultural benefits were identified and commented on.

The initial analysis was based on the scale of the sealing industry that prevailed prior to the collapse of markets for seal products in 1983. Now that the large-scale commercial seal hunt has all but ceased, very different realities face those involved. After describing the present circumstances, the prospects for a revival of the industry are reviewed. Finding these economic prospects to be rather bleak, a discussion follows of options for the kinds of development assistance, including compensation, that might possibly be extended to sealers and affected communities. A concluding section draws together the findings and conclusions with respect to the Atlantic region.

The term "Atlantic region" is used here to include not only the four Atlantic provinces, but also the north shore of the Gulf of St. Lawrence and the Magdalen Islands in Quebec. (See Figure 14.1.) The focus in this section, then, is sealing in this broadly defined Atlantic region and Canada's territorial waters which surround it.

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Chapter 14

The Atlantic Sealing Economy

In 1981, my net income from sealing was far over ten thousand dollars, but in 1984, my income was one hundred and fifty dollars from sealing (Small, 1985).

In this chapter the human resources and equipment committed to the seal hunt in recent years are described in some detail. Also quantified, to the extent possible, are the primary and secondary outputs of the sealing industry in the Atlantic region. Sub-regional data are presented to help pinpoint those areas where the sealing industry has particular meaning.

The Primary Sealing Industry

Human Resources and Equipment

In general terms, the active sealing labour force comprises inshore fishermen and fish-processing plant workers. The location and number of sealers, the nature and strength of their attachment to the seal "fishery", their education, skills and work experience, and the income earned from sealing are particularly relevant to this overview. Tables 14.1-14.3 indicate the resource commitment to the seal hunt in the Atlantic region in 1982, which was representative of the hunt prior to its collapse in 1983.

The Labrador seal hunt has been a landsmen's hunt, except for a small amount of longliner activity in the southern area. Vessel incomes have been in the \$5,000 range over the period 1980-1982. Landsmen activity ranged from Nain in the north down to the Strait of Belle Isle area in the south. Excluding Inuit hunters who do not require a licence for the subsistence hunt, as many as 1,000 licences have been issued annually in Labrador, but probably only about 40% of the licensees were active. In the north, some landsmen using nets had incomes in the \$5,000-\$6,000 range in good years; most, however, were in the \$100-\$500 range. Subsistence hunting for personal use was and is an important element of the Labrador hunt. Table 14.4 records the conduct of the seal hunt in Labrador and Newfoundland from 1971 to 1984.

Figure 14.1
Traditional Commercial Sealing Areas-Atlantic Canada

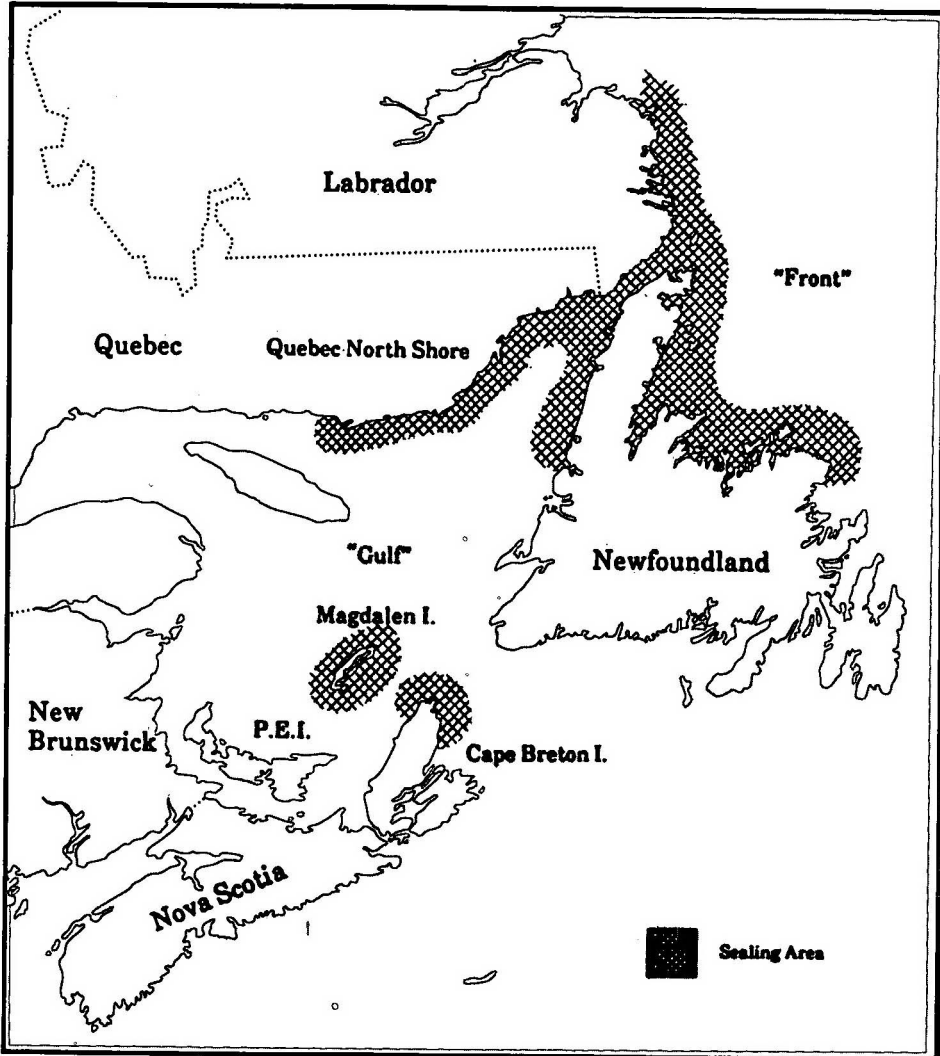


Table 14.1
The Sealing Labour Force, Atlantic Region, by Category and Province, 1982

Category	Newfoundland	Quebec	Nova Scotia	Total
Sealers Licensed	9,322 ^a	1,680	73	11,075
Active Participants:				
Landsmen	4,989	726 ^b	15	5,730
Longliner crews	550	78	—	628
Hunters on large vessels	164 ^c	35 ^d	5	204
Total Active	5,703	839	20	6,562

Source: Canada, DFO (1983) and special tabulations by DFO, Quebec.

- a. This number excludes Inuit sealers in Labrador who do not require licences for subsistence sealing.
- b. This is an estimate based on King (1981). It is assumed that numbers of licensed sealers in 1982 were the same as in 1980, and that the proportion of licensed sealers on the north shore taking part in the hunt was the same as the corresponding proportion for the Madgalen Islands.
- c. This includes one man sealing on a Nova Scotian vessel.
- d. Including 15 men on a Nova Scotian vessel.

On the Island of Newfoundland, the active sealing labour force ranged from 3,000 to 6,500 persons annually, or up to 75% of licensed sealers. Of this number, some 2,200–2,750 reported cash earnings from the hunt. The half-dozen or so large sealing ships recruited 125–150 seal hunters each season, and these men earned the highest incomes from sealing, ranging from \$3,000 to \$5,000 annually. No particular place stood out as a home base for these sealers, although most appeared to come from small communities along the northeast coast from Trinity Bay to Notre Dame Bay and New World Island. (See Figure 14.2). Sealers on longliners earned the next-highest incomes. The number of participating vessels of this type fluctuated from a high of 184 in 1976 to a low of 41 in 1984 and, in total, carried as many as 500–700 crew members in good years. Longliner-sealer income typically ranged from \$1,500 to \$1,800 per year, but could run as high as \$2,600 to \$3,200 on the "highliner" vessels. Longliners were concentrated in

Table 14.2
The Sealing Fleet, Atlantic Region, by Class of Vessel and Province,^a
1982

Vessel Class ^b	Newfoundland	Quebec	Nova Scotia	Total
Longliners:				
licensed	235	18	—	253
active	124 ^c	10	—	134
Large Vessels:				
licensed/active	6	1 ^d	1	8

Source: Canada, DFO (1983), and special tabulations by DFO, Quebec.

- a. The vessels are listed according to the province in which they are based.
- b. Longliners are fishing craft from 10–20 metres in overall length. Smaller craft, e.g., "speedboats" or dories, over 2,500 of which were used by landsmen in Newfoundland alone, are excluded here.
- c. An additional three non-licensed vessels reported by-catches of seals (seals taken incidentally in fishing operations) in 1982. (See Table 15.4, Chapter 15).
- d. This vessel landed its catch in Newfoundland.

the Twillingate area, around Fleur de Lys and La Scie on the Baie Verte Peninsula, in the St. Anthony area and, to a lesser extent, at Port aux Choix in the St. Barbe district (Figure 14.2). These fishing communities depend on a successful longliner fleet for their livelihood, and sealing made an important contribution to the financial viability of the longliner enterprises. Landsmen, ranging in number from some 2,500 in the early 1970s to double that number in 1982, composed the third group of sealers in Newfoundland. Incomes per season for an estimated 2,000–2,500 of this group averaged some \$500 over 1981–1982, but higher incomes, averaging almost \$1,000, were gained by landsmen in the St. Anthony area.

The seal hunt on the north shore of Quebec was carried out by landsmen, most of whom used nets. The main hunting concentration was around the Harrington–La Tabatière area, although some hunting took place farther east along the shore, and one family was active in sealing at

Table 14.3
Summary of the Sealing Labour-Force Activity by Area, 1982

Area	Gear Type and Number	Estimated Active Participants	Estimated Income Levels	Community Dependence
Labrador	Landsmen (mainly Inuit or settlers, using nets, rifles and harpoons)	<ul style="list-style-type: none"> • up to 1,000 licences held; 400–500 active hunters, but licensees do not include Inuit 	<ul style="list-style-type: none"> • mainly subsistence hunt now • incomes of up to \$5,000–\$6,000 for good hunters prior to 1982, but most earned \$100–\$500 	<ul style="list-style-type: none"> • Nain, Hopedale, Postville, Makkovik, Rigolet in the north • places like L'Anse au Loup, Battle Harbour, Black Tickle in the south
Newfoundland	Landsmen (powered boats or on foot)	<ul style="list-style-type: none"> • a range of 1,500–5,000 active hunters • up to 2,000–2,500 reporting income from sealing 	<ul style="list-style-type: none"> • average income of \$500–\$600 range; higher in the St. Anthony-Northern Peninsula area 	<ul style="list-style-type: none"> • along northeast coast and northern peninsula
	Longliners (125–150)	<ul style="list-style-type: none"> • varies from year to year with number of vessels • average crew of 4.5 per vessel • total crew members approximately 600 	<ul style="list-style-type: none"> • average crew earning about \$1,500–\$1,800; in the \$2,000–\$3,200 range per year on highliner vessels 	<ul style="list-style-type: none"> • concentrated along north-east coast and northern peninsula in Twillingate, Baie Verte and St. Anthony areas and, to a much smaller extent, around Port aux Choix on the west coast
	Large vessels (5–6)	<ul style="list-style-type: none"> • 120–150 sealers • approximately 25% turnover per year 	<ul style="list-style-type: none"> • \$3,000–\$5,000 • 1/3 to 1/2 of annual income 	<ul style="list-style-type: none"> • spread along east coast from Trinity Bay to New World Island

Table 14.3
Summary of the Sealing Labour-Force Activity by Area, 1982 (cont'd)

Area	Gear Type and Number	Estimated Active Participants	Estimated Income Levels	Community Dependence
North Shore Quebec	Landsmen (using nets or rifles)	<ul style="list-style-type: none"> as many as 1,000 licences but probably 100-200 active in recent years 	<ul style="list-style-type: none"> \$500-\$1,000 historically important for subsistence; no longer economically important 	<ul style="list-style-type: none"> mainly Harrington, La Tabatière and Mutton Bay; one family at Tadoussac
Magdalen Islands	Landsmen (powered boats, snowmobiles, or on foot)	<ul style="list-style-type: none"> 200-250 committed 600-700 occasional, depending on ice conditions 	<ul style="list-style-type: none"> up to \$1,500; \$500-\$1,000 common, less than \$500 likely 	<ul style="list-style-type: none"> distributed across the whole area
	Longliners (approximately 18 vessels)	<ul style="list-style-type: none"> up to 150 sealers/fishermen catch usually concentrated in 10 vessels or fewer 	<ul style="list-style-type: none"> same as in Newfoundland 	<ul style="list-style-type: none"> distributed across the whole area
	Large Vessels (1-2)	<ul style="list-style-type: none"> approximately 35-40 sealers 	<ul style="list-style-type: none"> \$3,000 + 1/3 or more of annual income 	<ul style="list-style-type: none"> sealers drawn from across the Islands
Cape Breton Island	Landsmen (using rifles)	<ul style="list-style-type: none"> prior to 1983, number of licences varied with seal availability (from 15-240) perhaps as few as 10 active hunters in recent years 	<ul style="list-style-type: none"> no dollar figure, but estimated up to 10% of total income in good year 	<ul style="list-style-type: none"> northern tip of the island in the Aspy Bay area

Source: Gardner Pinfold Consulting Economists Limited (1986).

Table 14.4
Engagement in Sealing, Newfoundland/Labrador, 1971–1984

Year	Landsmen		Longliners		Large Vessels	
	Craft (no.)	Men (no.)	Craft (no.)	Men (no.)	Craft (no.)	Men (no.)
1971	–	2,302	52	231	10	446
1972	–	3,640	42	169	4	132
1973	2,094	4,204	49	206	2	58
1974	1,955	3,911	73	273	2	54
1975	1,817	3,762	130	554	5	124
1976	2,058	4,047	184	771	4	100
1977	1,777	3,726	104	402	3	83
1978	1,307	4,244	132	515	5	126
1979	2,955	5,987	126	487	5	136
1980	2,553	4,998	146	589	4	111
1981	1,890	3,728	137	550	6	148
1982	2,529	4,989	124	550	6	163
1983	2,782	5,470	85	371	1	22
1984 ^a	3,181	6,240	41	152	–	–

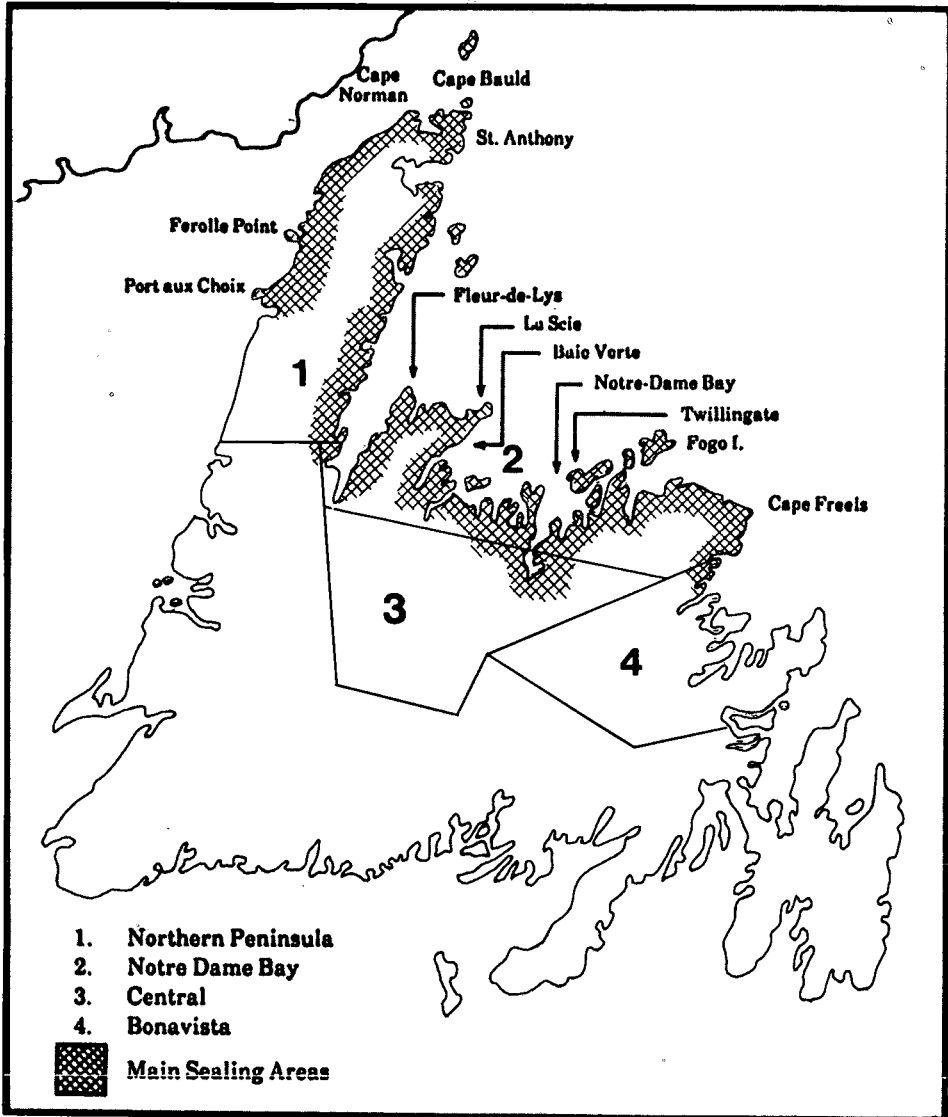
Source: ICNAF (1971–1982) and special tabulations by DFO.

a. There was no commercial hunt by large vessels in 1984.

Tadoussac, near the mouth of the Saguenay River. Licensing data show that 1,000 licences were held in the area in some years. Over the past 10 years, however, the number of active sealers declined as did the commercial importance of the hunt. Annual sealing incomes were reported to be in the \$500–\$1,000 range. Historically, the hunt was important for subsistence, but this aspect also has diminished.

The seal hunt in the Magdalen Islands was similar in character to the Newfoundland hunt, but was conducted on a much smaller scale. The large-vessel component normally consisted of two ships carrying about 40 Madelinot sealers. Up to 1982, these vessels generally took their quota of

Figure 14.2
Main Sealing Areas in Newfoundland



10,000 seals, which brought the sealers incomes of \$3,000 or more annually. Most of the sealers came from Entry Island and the Bassin area in the southern part of the main island. A small fleet of longliners (approximately 18 vessels) also hunted. Between 100 and 150 sealers operated from the latter vessels. The available data suggest that the longliner catch was usually concentrated in fewer than 10 vessels, and sometimes only four or five vessels. Incomes could reach the \$3,000 level for sealers on the high-catch vessels. As many as 1,000 licences were held by landsmen in the Magdalens, but only one-quarter of these men were committed hunters. More were active if ice conditions were favourable. Landsmen's incomes varied from year to year. Most earned less than \$500, but a few managed to reach the \$1,000-\$1,500 range. Many landsmen appeared to limit their hunting to meeting their personal consumption needs.

In Nova Scotia, the hunt was concentrated near the northern tip of Cape Breton Island, around Aspy Bay. Hunting was a matter of chance from year to year, depending on ice conditions. The number of licences ranged from a low of 15 to a high of 240. In recent years, the number of active hunters may have fallen to 10. Sealing income varied but is not likely to have been much more than 10% of total income except in 1981, which was a particularly good year.

Northern Labrador¹

The past 30 years have seen many changes in northern Labrador which have, in turn, affected seal harvesting activity. The important changes and their effects are as follows:

- The abandonment of the northern Inuit communities of Hebron and Nutak have left unoccupied much of the richest seal-hunting areas.
- Resettlement has put heavy pressure on resident seal populations near the southern villages where people are now concentrated.
- Many outposts, homesteads or camps have been abandoned in favour of year-long residence in the communities.

1. The material in this section is based on Williamson (1986).

The Atlantic Sealing Economy

- Increased availability of cash and of store produce has reduced total reliance on country foods. Nevertheless, the quality of much of the food and fresh produce in the stores is poor, and country foods still provide a major source of protein.
- Dogs were replaced by snowmobiles in the 1960s and 1970s, thus eliminating the need for seal meat as dog food.
- The cash value of sealskins dramatically increased in the 1960s and 1970s, but at the same time the need for cash also increased greatly.
- The sealskin market collapsed following the 1982 harvest. A subsistence need for seals remains, however, and the cost of procuring the seals rises as fuel and capital costs of equipment continue to increase.

While all of the above circumstances have hindered sealing, they have not stopped it. Sealing continues to be a central social, cultural and economic activity in northern Labrador.² Table 14.5 shows the number of people involved in sealing in northern and southern Labrador, and in key communities therein, in relation to the provincial sealing labour force as a whole. (See Figure 14.3.)

At least 80% of the adult male sealers and many of their adolescent sons hunt seals sporadically for food and for local use of skins. In 1979, based on the consumption rate shown in Table 15.8, Chapter 15, the value of seal meat consumed for the whole region came to nearly half a million dollars. There is no evidence to indicate that this figure has decreased in subsequent years. Most of the seals taken for subsistence are shot, either in the water during the open-water season or on the spring ice during April and May.

The sealers who are most successful as commercial seal harvesters are landmen who use nets. The economics of the net fishery and its worth to individuals can best be understood by an examination of individual netting operations in several communities. The following, therefore, were surveyed.

-
2. This fact has been recognized by the Department of Fisheries and Oceans (DFO), which has exempted residents of Labrador from seal-hunting licences for subsistence purposes. It has done so because it recognizes that the seal hunt in northern Labrador is apart and separate from that associated with the "Front" or the Gulf. The Labrador Inuit Association (LIA) also argued successfully for its constituents that seal hunting was not only a tradition of many centuries in northern Labrador, but also a right. The LIA has been negotiating with DFO for the past several years to establish its own seal-management regime for northern Labrador and for redefinition of the zone.

Figure 14.3
Seal Hunting Areas of Labrador

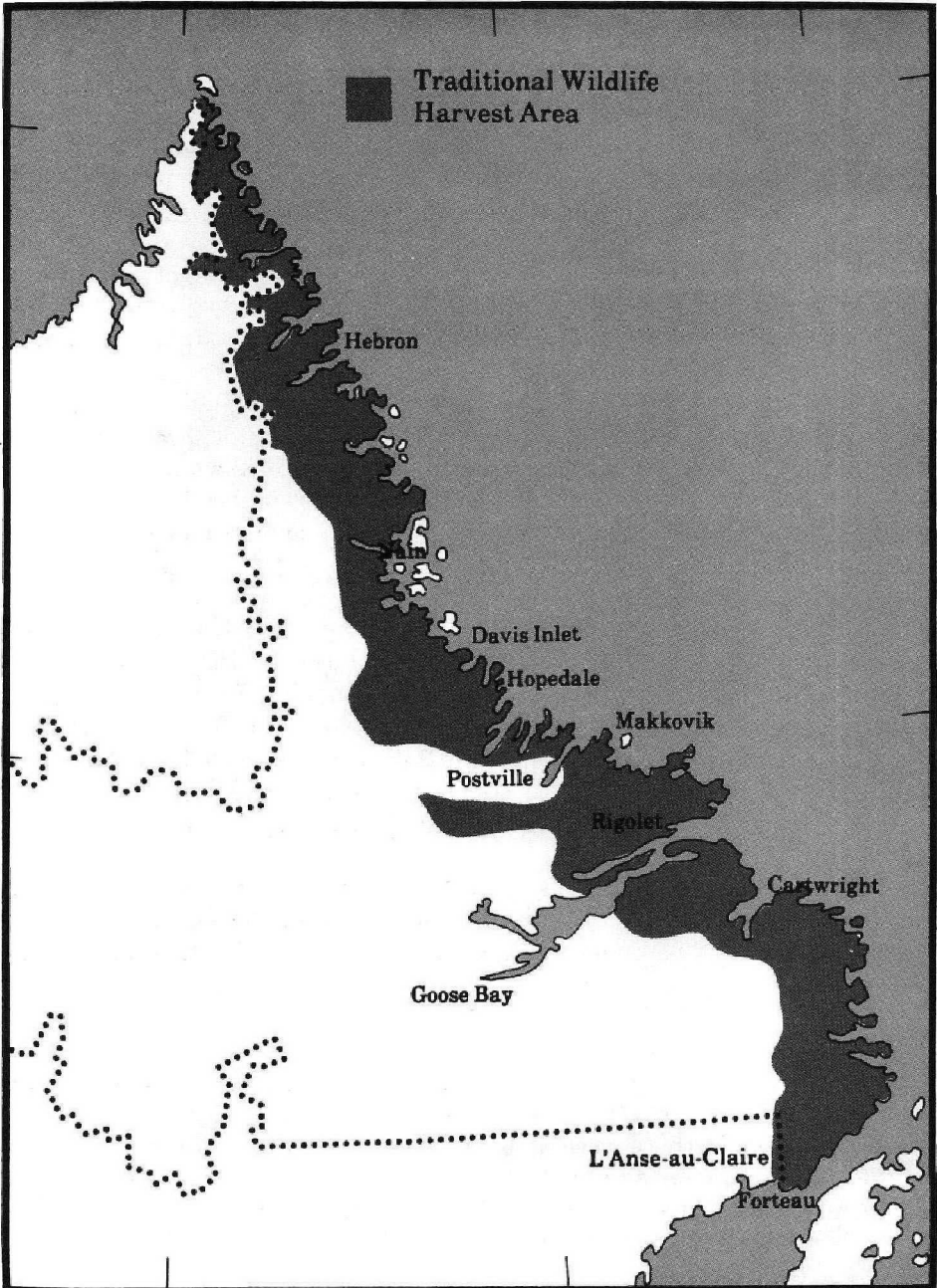


Table 14.5
Sealers Licensed in Newfoundland/Labrador, 1981 and 1983

Location	1981 Total	1983			Total
		Fishermen		Others	
		Full-time	Part-time		
Northern Labrador: ^a					
Nain	22	-	-	-	-
Makkovik	48	5	1	6	12
Rigolet	80	33	18	49	100
Other	52	8	-	-	8
Sub-total	202	46	19	55	120
Southern Labrador:					
Cartwright	145	66	27	30	123
L'Anse au Loup	89	20	11	3	34
Forteau	59	5	4	-	9
Other	655	273	139	354	766
Sub-total	948	364	181	387	932
All Labrador:					
Total	1,150	410	200	442	1,052
Province of Newfoundland/ Labrador:					
Grand total	5,848	3,363	1,823	2,105	7,295

Source: Special tabulations by DFO, St. John's.

a. Inuit seal hunters are not required to hold licences.

Nain

At one time there were up to a dozen netting crews located throughout the outer archipelago in the Nain area. They tended the netting stations from October until just before Christmas. The nets are elaborate mazes set across narrow channels or "tickles". Some crews permitted shooting in the vicinity of the net fishery. In good years the crews collectively harvested as

many as 5,000 seals. Two-thirds were harp seals, which migrated south along the coast just before freeze-up. The remaining third were mainly ringed seals.

Between 1979 and 1982, only two netting crews operated out of Nain, one at Black Island, about 40 kilometres northeast of Nain and the other at Ivilik, about 40 kilometres due east of Nain. The sealing operation at Black Island is a family affair which has been carried out by three successive generations. In each of the 1980, 1981 and 1982 seasons, 400–500 seals were taken.³ The family members involved in the hunt grossed \$5,000–\$6,000 each per season. In the same period, they grossed only \$3,000 each in the salmon fishery. Expenses for the seal fishery are not high, and income from sealing has been an important addition to their household. Moreover, it has enabled the family to purchase new boat engines, snowmobiles and other hunting and fishing equipment. In these same years, the crew at Ivilik averaged about 200 seals per year. There were five men in the crew but not all from the same household. Each crew member grossed about \$2,000.

In 1983, neither crew went sealing. The price for sealskins had dropped to \$7 a piece. This was the first time in living memory that no Black Island crew went sealing. In 1984, however, some 80 seals were netted or shot. To the surprise of the sealers, they discovered that they could sell the frozen carcasses for \$25 each to Nain residents, who wanted the meat for food and the skins for boots. The demand greatly exceeded the supply. With such a market in the immediate area, the Black Island crew planned a full-scale hunt in 1985.

Makkovik

Seven or eight people usually net seals in the Makkovik area. Individual seal netters can handle four to six nets. Between 1,000 and 1,500 seals were taken in the Makkovik area, but because prices were so low in 1984, only 600 seals were taken. One sealer interviewed in Makkovik stated that he caught 67 seals for subsistence purposes in the autumn of 1984, using four nets. He claimed that he might have taken at least 200 seals if the price had provided an incentive.

3. While statistics reported by informants do not always match official statistics, informant data are retained because of their value in establishing local situations.

Rigolet

The relationship between harvest levels and prices of sealskins for Rigolet and North West River is shown in Figures 14.4 and 14.5. Subsistence use of seals is more important at Rigolet than at North West River because the latter community has access to food markets in Happy Valley and Goose Bay. Moreover, much of the labour force at North West River is permanently employed or has access to employment opportunities.

The labour force characteristics and economy of Rigolet are similar to the other northern Labrador coastal communities, rather than to the Happy Valley and Goose Bay area.

Hopedale and Postville

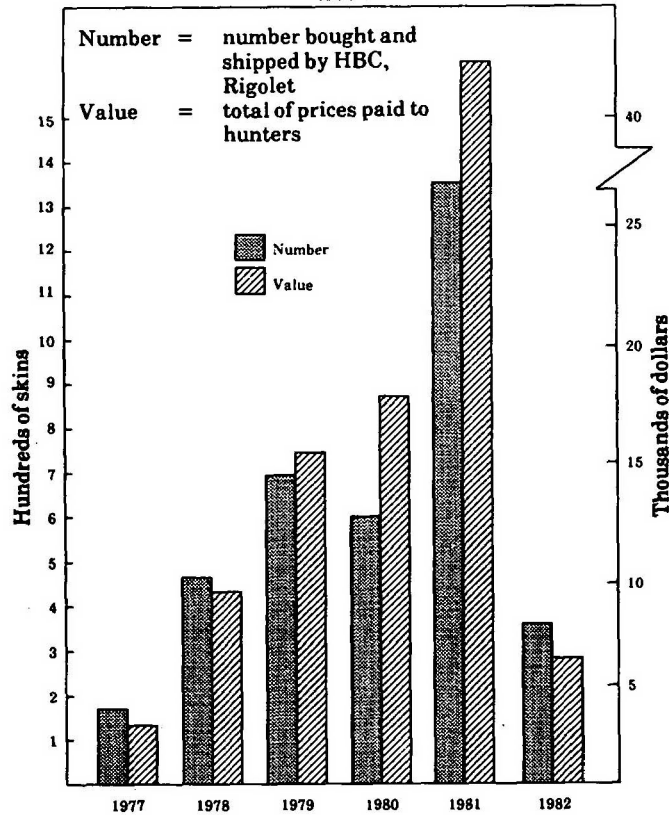
No hunters were interviewed in Hopedale and Postville, but Makkovik sealers said that harvest levels in these communities were comparable to conditions in Makkovik. In recent seasons, following the collapse of the seal-skin market, subsistence harvests at Hopedale have amounted to approximately 1,000 animals and those at Postville to about 600 animals.

Southern Labrador

For most people in southern Labrador, seal meat has not been as preferred a food as it is for Inuit, although for many it has been a desirable food addition. During the winter and early spring, for example, seal meat has accounted for anywhere from 50% to 85% of food locally obtained in coastal communities like Black Tickle and St. Lewis (Mackey, 1981). The main thrust of seal harvesting in southern Labrador had been for cash returns. Since 1982, however, the seals harvested in southern Labrador have been taken for food, clothing or other personal use.

Table 14.5 compares the number of seal licences held in northern and southern Labrador in 1981 and 1983. More licences were held in southern Labrador than in the north, but it should be remembered that the Inuit do not require a licence, and thus the number of licences in the north under-represents the number of sealers in that area. Table 14.6 shows that the number of licences held in 1984 was considerably less than the number held in 1983, indicating a sharp decline in interest in sealing. The licence data also suggest that in southern Labrador about 60% of licence holders are

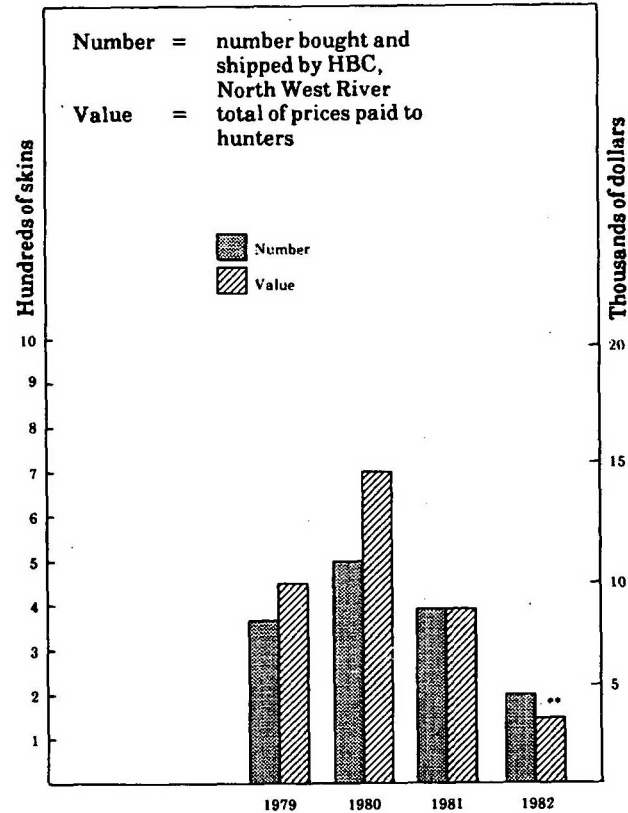
Figure 14.4 Sealskin Sales and Prices in Two Communities, Labrador
Rigolet 1977*-1982**



Source: Boles et al. (1983)

- * Incomplete: Includes data from June-December only.
- ** Incomplete: Includes data from January-September only.

North West River, 1979 - 1982*



Source: Boles et al. (1983)

- * 1982 data is from January-August only.
- ** Includes 12 harp seal skins spoiled by poor handling.

fishermen (roughly 40% full-time and 20% part-time), while for the province as a whole, the proportion is over 70%.

Table 14.6
Sealing "Effort" and Seal Harvests, by Fishery Statistical Area,
Labrador

	Licensed ^a Sealers 1984	Licensed Vessels (35'-65') 1984	Seals Harvested				
			1980	1981	1982	1983	1984
L'Anse au Clair- Cape St. Charles	235	1	975	9,263	636	831	44
Cape St. Charles- Island of Ponds	249	0	1,454	2,326	878	378	908
Island of Ponds- Cape Harrison	149	0	2,775	8,805	641	608	702
North of Cape Harrison	0	0	5,527	1,900	1,664	99	1,891
Total	633	1	10,731	22,294	3,819	1,916	3,545

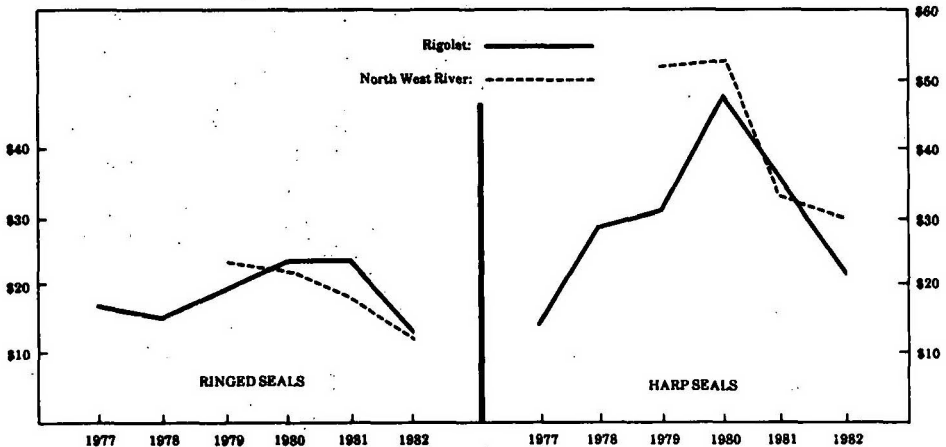
Source: Special tabulations by DFO, St. John's.

a. Most, if not all, licensed sealers in Labrador engage actively in the hunt.

Seal landings are shown by area in Table 14.6 and, for selected southern and northern communities, in Table 14.16. Seal landings by area and by specific community have varied sharply from year to year. This variation is typical for a landsman net-based fishery, which depends on ice conditions and the particular migration pattern followed by the seals. The landings data indicate that since 1982, sealing has not been an important commercial activity either in the south or in the north. In the past, seal netting has been a major autumn activity all along the southern coast. Some places, such as Battle Harbour, yielded as many as 5,000 seals in a season. More recently, when the price of skins was high enough to justify the expense, owners of longliners in the straits region have also pursued seals in the spring, following break-up. Licence information indicates, however, that only one longliner from Labrador was engaged in sealing in 1984.

As in northern Labrador, seal harvesting in the south was an important component of a mixed economy, although a longer fishing season and seasonal work in the woods, producing pulpwood or lumber, gave less emphasis to sealing in some of the bays. Nevertheless, almost 1,000 persons have held sealing licences in southern Labrador in the recent past, although perhaps only 40% of these were regularly active sealers. The available data suggest that sealing has provided varying amounts of cash income, ranging on average from the low hundreds to more than \$1,000 per hunter. Moreover, seal meat was important as a source of food, and seal pelts were used to make clothing and boots. The commercial part of the hunt appears to have ceased in southern Labrador, but a return of the sealskin market would see a resurgence of seal harvesting in many of the communities of this area.

Figure 14.5
Average Price Paid for Seal Skins
Rigolet and North West River, 1977 - 1982



Source: Hudson's Bay Company, Rigolet and North West River

Source: Boles et al. (1983).

Island of Newfoundland

Landsmen

Newfoundland landsmen hunt seals either from small boats or by walking out onto the ice from land. Incomes earned by landsmen are lower

than those earned by sealers operating from longliners or larger vessels, since landmen are more dependent on good ice and weather conditions for success.

Landmen sealers are of two kinds. In the first place, there are commercial landmen, who usually hunt on a partnership basis, sharing the income earned from pelts and other seal products. Very little product is wasted by this group of sealers. Secondly, there are the non-commercial landmen who hold a licence so that they can meet their personal requirements for a few seals and other products.

The small boats used by landmen for sealing double, for the most part, as fishing craft. The small boat fishermen are an important element in the Newfoundland fisheries despite government programs of modernization. The small boat fishery is characterized by low capital investment and low operating costs. Although the earning potential is not as great as with a longliner, small boat fishermen are not as dependent on large catches, since the difference between gross and net income is reduced. When small boats are used for sealing, however, operators cannot participate in the hunt on days when weather and ice conditions are adverse.

Sealing income earned by fishermen using small boats, as for those using longliners, was available at a time of year when there was no other means of earning a livelihood. The income often provided capital needed for investment in fishing gear for the upcoming season. Estimation of landmen's incomes is inhibited by the fact that many participate in the hunt on a very casual basis. King (1981) indicated that participation by licensed landmen ranged from 27% to 40% in 1978-1980. He found that 60% of those participating in 1980 reported some income from sealing.

Longliners

Longliners have been used extensively in the seal hunt between January and May on the west and northeast coasts of Newfoundland. A longliner crew might consist of from three to 10 men; the captain is usually the vessel owner. The vessels operate from a home port, but they can travel long distances and work under adverse weather conditions. Longliners are relatively expensive to run and are at considerable risk when out in the ice. The larger boats may stay out for a number of days at a time. Smaller, older boats operate from home port on a daily basis.

Table 14.7 shows the number of vessels that participated in the Newfoundland hunt from 1979 to 1983, the last year of significant sealing activity by longliners.

Table 14.7
The Longliner Seal Hunt, Newfoundland^a, 1979-1984

Year	Licensed Vessels Engaged	Vessels Landing Seals ^b
1979	126	84
1980	146	138
1981	137	145
1982	124	127
1983	85	85
1984	41	n.a.

Source: Canada, DFO (1985).

- a. Excluding Labrador.
- b. The apparently anomalous figures for 1981 and 1982 may result from the landing of seals taken as by-catches by longliners engaged in fishing operations.

Data provided by Dunn (1977) and King (1981) indicate that an average longliner crew consists of four or five men. This would suggest that in the peak production year of 1981, over 600 sealers participated in the hunt aboard longliners. The number actually licensed, however, was 550 in Newfoundland/Labrador (see Table 14.4). The income earned by these vessels is divided on a share basis among the crew. The vessel also has a share allotted to it. Calculating on the basis of the Royal Commission's survey data, vessel shares ranged from a single share (equal to a sealer's share) to a set percentage (15%-25%) off the top. The vessel's share covered the cost of capital investment in the boat, as well as fixed costs such as insurance. Many vessel owners use this share to contribute to the repayment of boat loans. The operating expenses of participating in the hunt, which include fuel, food and ammunition, were shared equally by all sealers. Most Newfoundland longliners sold their pelts to the Carino Company in Dildo. The

pelts were landed in the home port and trucked to Dildo, where they were graded and payment was made.

Seal carcasses and flippers were sold in local markets. If no market existed locally, carcasses were sold to Notre Dame Bay Fisheries Limited, where the seal meat was canned. The longliner operators interviewed by consultants to the Royal Commission said that they attempted to sell the carcasses of every seal taken. Only when a vessel's limited storage capacity forced a trade-off between taking more pelts or saving the carcasses were carcasses thrown overboard. The importance of the income derived from meat sales has usually been underestimated. Most meat sales were made at the wharf on a cash basis and were not usually recorded. A rule of thumb among sealers is that meat sales brought in enough cash to offset their share of operating expenses.

The longliners used for sealing have been near-shore fishing vessels, crewed by the same individuals during the sealing season as during the fishing season. Virtually every person involved in the longliner seal hunt has been a full-time fisherman. A longliner enterprise was often a family operation in which the father was the owner and the crew was made up of sons or other family-related members. A single longliner might provide the main source of household income for all members of the crew, and thus one vessel could be supporting five or six families.

Most longliner owners interviewed by the Royal Commission's consultants were between 45 and 60 years of age; crew members were usually younger, in the 25-40-year range. The education levels tended to be inversely related to age: older sealers had formal education of grade six to grade nine levels, while many younger sealers were high-school graduates.

Many longliner sealers had worked in other occupations before becoming full-time fishermen-sealers. Many had worked away from the community in which they now live. By choice or because of economic circumstances, however, they had returned to fish in the communities where they were born. They expressed no interest in pursuing other types of work if they could make a reasonable living from the fishery.

Large Vessels

When not involved in sealing, the large vessels (over 65 feet in length overall) that participated in the Newfoundland seal hunt have often served as fishery patrol vessels or coastal freighters and might be chartered

for other purposes. These vessels were quite powerful and sturdily constructed to operate under very heavy ice conditions. For sealing purposes, a typical vessel was manned by 15–25 sealers and 8–10 crew members. The vessels traditionally travelled to the Front or Gulf for the whitecoat hunt. From 1978 to 1982, five or six large Newfoundland vessels participated in the seal hunt. A vessel would normally spend up to one month taking its seal quota. Participation in the hunt usually represented the only opportunity for the crews to earn an income in the February–March period. Table 14.8 shows the number of vessels crewed by Newfoundlanders, their crew and the total pelt value of the seal catch from 1979 to 1983. For the most part these vessels operated from St. John's and harvested seals at the Front. The Karlsen Company of Halifax, too, sometimes sent one or more of its ships to the Front.

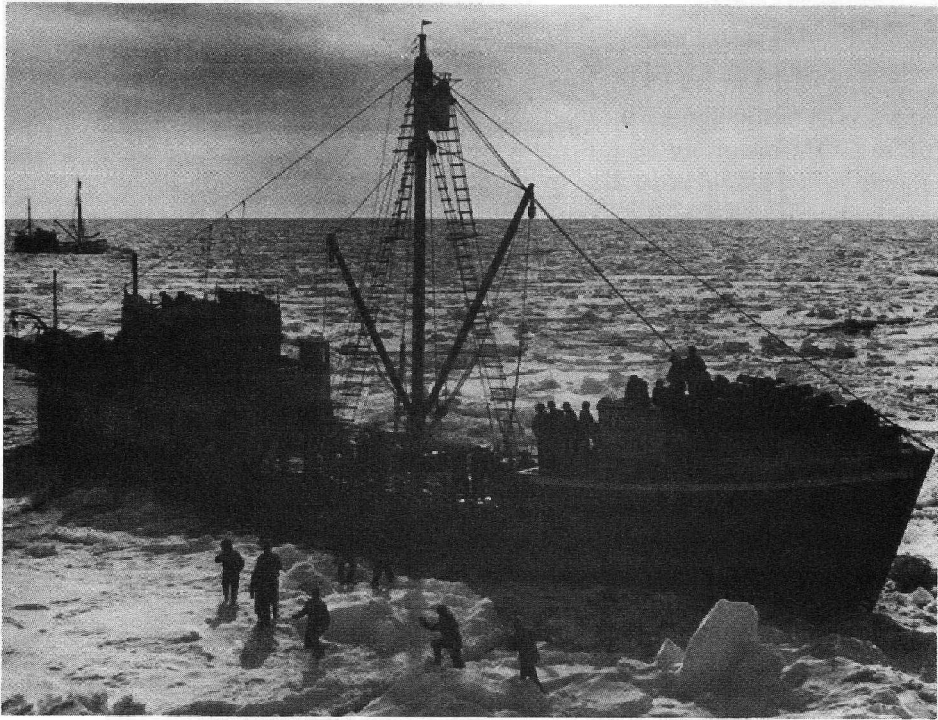
Table 14.8
The Large-Vessel Seal Hunt, Newfoundland, 1979–1983

Year	Ships Operating (no.)	Men Engaged (no.)	Value of Harvest (\$)
1979	5	136	1,070,137
1980	4	111	1,100,073
1981	6	148	1,250,521
1982	6	163	1,411,252
1983	1	22	47,571

Source: Canada, DFO (1984).

The Karlsen vessel took its pelts to Blandford, Nova Scotia, and the Newfoundland vessels sold their pelts to the Carino plant in Dildo. In addition, the sealers derived income by selling other seal products such as flippers, carcasses and male genitals. Shares on the large vessels were split evenly among the sealers and the crew after the vessel's share was deducted.

Two owners of large vessels reported that sealing income accounted for between 20% and 50% of the vessel's annual gross income.



Sealing vessel near the "Front"

Sealers working on large vessels had to be available during February and March. Only persons who were unemployed or who had flexible or seasonal work schedules could participate in the offshore seal hunt. The majority of sealers on these vessels were either inshore fishermen or fish-plant workers.

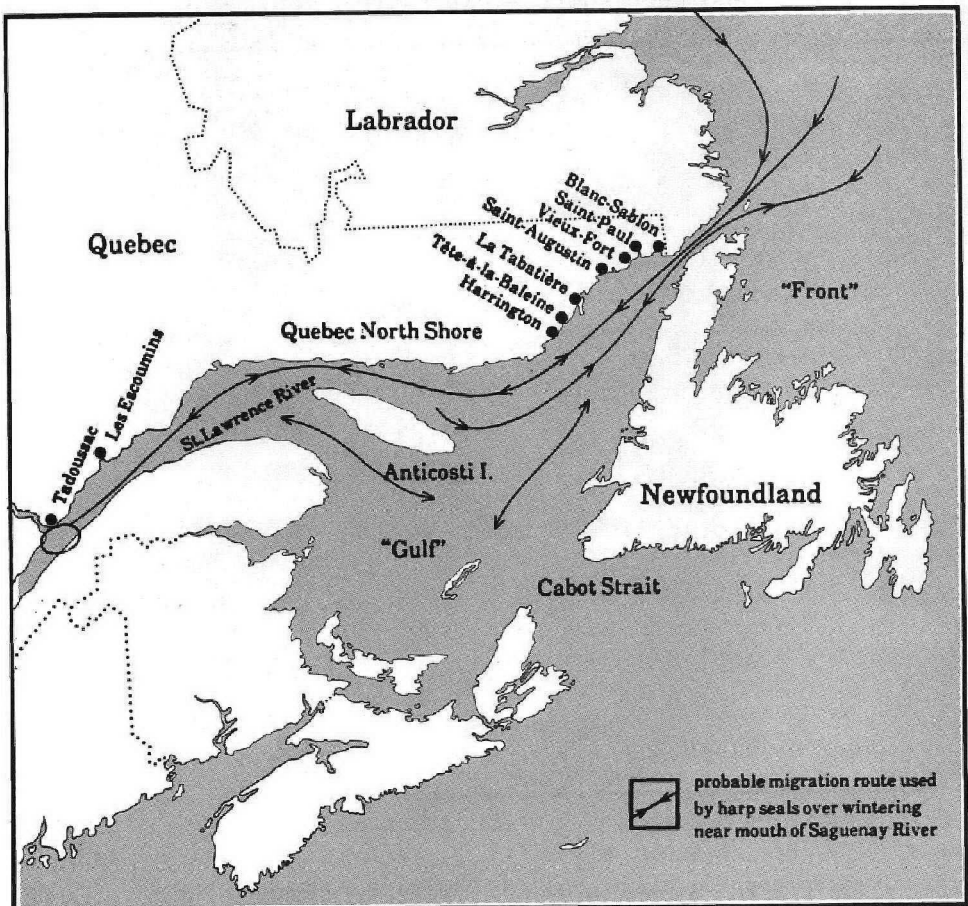
Each year approximately 25% of the crew would be first-time sealers. Old hands usually formed a small group of sealers who had many (at least 10) years' experience in the large-vessel hunt. Regular sealers (with less than 10 years' experience) formed the bulk of the crew. The sealers' average age was 25-35 years. The physical hardship associated with the hunt required young men.

If the vessel did not participate in the seal hunt, it was likely to remain idle. There is little possibility of alternative work for these vessels during the months of February and March, except as scientific/observer vessels related to the seal hunt. All large vessels were reported to be inactive during the traditional sealing period in 1985.

North Shore, Quebec

The annual migration patterns of the seal herds have determined which lower north shore communities participate in the seal fishery. Possible seal migration routes along the north shore of the Gulf of St. Lawrence are shown in Figure 14.6. The seals follow the Quebec coast on their way from the north Atlantic to the Gulf. A small population over-winters at the mouth of the Saguenay River (Sergeant, 1986). Migration dates and herd sizes vary from year to year. For the most part, the seals are harvested by means of nets. Heavy ice keeps them away from the shoreline where the nets are set; light ice usually foretells a good catch.

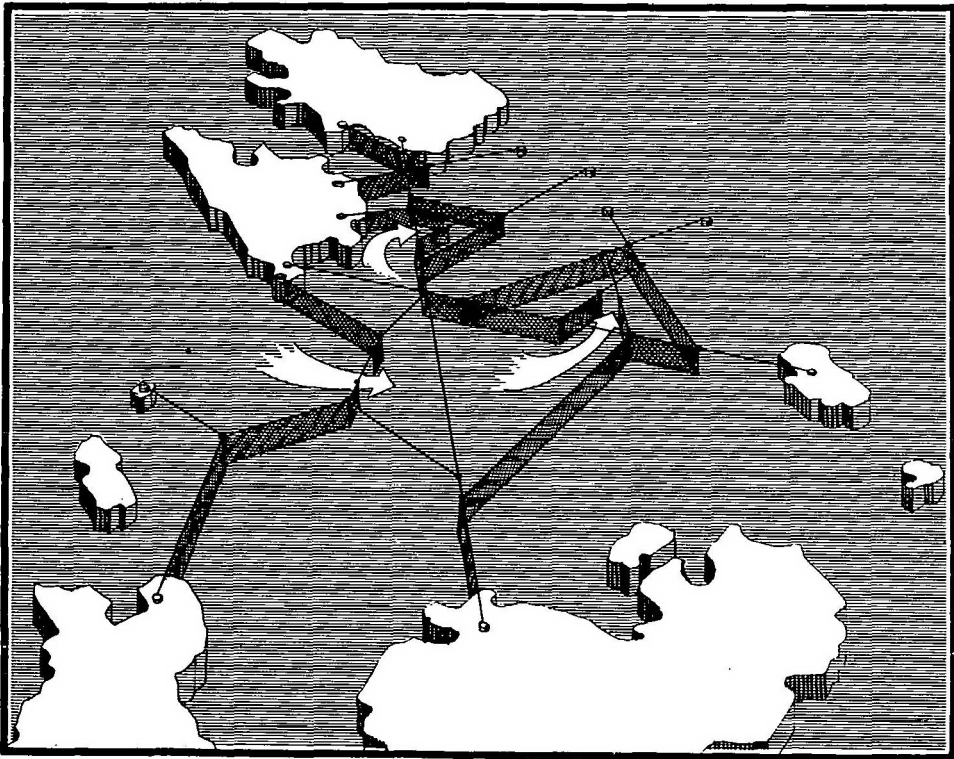
Figure 14.6
Principal Sealing Stations, North Shore, Quebec



In general, it would be fair to say that the seal hunt was a basic contributor to "the permanent settlement of the lower north shore littoral in the last century. It still colours many aspects of the cultural life of the inhabitants of this region as well" (Baril and Breton, undated).

In the early 1980s, there were over 100 seal-fishery berths along the lower north shore. Berths are specific zones for the salmon and seal-net fisheries, the rights to which are owned by individual families. Close to three-quarters of them were between Harrington and Saint-Augustin where there are many islands and reefs amenable to the setting of nets. A smaller concentration was located near Vieux-Fort and Blanc Sablon, but the net fishery has declined in this area in recent years.

Figure 14.7
Seal Net Fishery, North Shore, Quebec



Source: Winter Sealing at La Tabatière, Crawley Films Ltd., NFB (1963).

Seals are caught in intricate nets set about three to four metres below the surface of the water to avoid contact with ice floes. (See Figure 14.7.) The pelts were shipped to secondary processors such as the Carino Company in Newfoundland. The meat was kept for personal use and also fed to sled dogs. Traditionally, there has been little waste.

The only other concentrated hunting along the north shore is carried out by a family at Tadoussac, near the mouth of the Saguenay River, using rifles. In some years, this family gained 90% of their total income from sealing, selling the pelts directly to the Hudson's Bay Company. Recently, they have diversified their income sources to snow crab, cod and halibut fisheries and to moose hunting (Greendale, 1985).

Magdalen Islands

As in Newfoundland, sealing in the Magdalen Islands has been carried on by three distinct types of enterprise: large vessels, longliners and landsmen (Table 14.9).

The last typical year for the seal hunt on the Magdalen Islands was 1982, when two large vessels operated near the Magdalens with a total crew of 41 persons, all but six of whom were Magdalen residents. These vessels took virtually their full allowable catch of 10,000 seals per vessel, which would have yielded earnings of as much as \$3,000 for each of the sealers. Eighteen longliner vessels, with a total crew of 141, were licensed for the hunt, but the harvest of 10,617 seals was taken by only 10 vessels, with a total crew of 78. Landsmen operating from small boats or snowmobiles killed 6,751 seals. Although there is some variability from year to year, this quantity seems to be fairly typical. During recent years, the estimates of the Department of Fisheries and Oceans (DFO) show that there are about 1,200 seal-licence holders in the Magdalens. Only about 400 sealers, however, are regarded as serious hunters.

Landsmen composed the largest number of sealers on the Magdalen Islands. According to DFO, in a typical year about 1,000 seal-hunting licences were issued to Magdalen landsmen. Up to 25% of these licences were held by fishermen operating from small boats (of less than 35 feet in length overall). Sealers who participated only if the ice was close enough to shore accounted for another 600-700 licences. On average, about 40% of the licence holders were dedicated or active sealers, a figure consistent with the findings of Dunn (1977) and King (1981).

Table 14.9
Distribution of Sealers by Category, Magdalen Islands,
Recent Period

Category	Active Participants (approx. no.)
Landsmen:	
on foot (occasional)	600-700
with dories	200-250
Sub-total	800-950
Longliner Crews	100-150
Hunters on Large Vessels	35-40
Total	950-1,140

Source: Gardner Pinfold Consulting Economists Limited (1986).

The use of longliners was well established in the Magdalen's seal fishery, although the official hunt statistics are sketchy. According to Dunn (1977), 5.2% of seal licences were granted to Islanders operating from longliners. Longliner catch and crew data for the Magdalens are usually included with landsmen data in the official statistics, but evidently some 18 vessels were licensed annually for the seal hunt with a total crew complement ranging from 100 to 150 persons.

From 1978 to 1983, at least one and usually two large vessels participated in the seal hunt off the Magdalen Islands. These vessels were also available on charter for scientific work, sealing observation or as coastal freighters. Normally they would spend about two weeks during March taking their seal quota of 10,000 seals per vessel. The exact timing of the hunt depended on ice conditions and ice movement. Consequently, sealers on large vessels had to be available for work during the whole month of March. Because the ice can move rapidly away from the Magdalens and carry the seals with it, all segments of the hunt were concentrated within a short period. Variable ice conditions also meant that the seal catch and corresponding income varied sharply from year to year for landsmen and longliners.

The high rate of seasonal unemployment in the Magdalens ensured that there was no shortage of sealers. The year-to-year turnover of sealers on large vessels was about 25%. As elsewhere in the Atlantic region, most Magdalen Island sealers were fishermen. Sealers in the Magdalens have relied on a mix of earned income and unemployment insurance. As a 60% winter-unemployment rate suggests, drawing unemployment insurance was the main source of income during the winter months. Table 14.10 summarizes the sealing activity in the Magdalen Islands.

Table 14.10

Summary of Sealing Activity, Magdalen Islands

Year	Type ^a	Participation				Harvest	
		Craft		Sealers			
		Licensed (no.)	Active (no.)	Licensed (no.)	Active (no.)	(no.)	(\$)
1982	Landsmen	-	-	1,000 ^b	400	6,751	129,400
	Longliners	18	10	141	78	10,617	218,600
	Large Vessels	2	2	35	35	19,984	399,000
1983	Landsmen	-	-	831	300-400	5,847	107,500
	Longliners	21	6	91	n.a.	2,825	52,700
	Large Vessels	2	2	35	35	5,800	69,000
1984	Landsmen	-	-	1,000 ^b	150	1,000 ^b	10,800
	Longliners	-	-	-	-	-	-
	Large Vessels	-	-	-	-	-	-

Source: Canada, DFO (1984); Gardner Pinfold Consulting Economists Limited (1986).

- a. Prior to 1982, the landsmen and longliner operations are undifferentiated in sealing statistics for the Magdalen Islands, and some uncertainty about the distinction persists, as indicated by the apparent variation in longliner crew numbers between an average of 7.8 (1982) and 4.3 (1983).
- b. Estimated.

Cape Breton

Seal hunting in Cape Breton took place near the northern tip of the island in the Aspy Bay area. The sealers were from Neil's Harbour, Dingwall and Bay St. Lawrence. Sealing in this area has always been "hit and miss"; success depended on ice conditions.

The sealing labour force was made up predominantly of landsmen who were inshore fishermen during the summer. Most fishermen relied on unemployment-insurance benefits during the winter. The best fishermen involved in the seal hunt off Cape Breton, which took place in the winter, generally earned less than 10% of their annual income from this endeavour. Table 14.11 summarizes the numbers involved in the northern Cape Breton seal hunt.

Table 14.11
Sealing in Northern Cape Breton

Year	Licences Held	Active Hunters	Seals Caught ^a
1983	?	?	900
1984	160	10-12	300
1985	32	1	1

Source: Conway (1985).

a. Total allowable catch of seals: 900.

Primary Production (Harvest)

Tables 14.12-14.19 summarize the scale of the seal harvest, both for the Atlantic region as a whole (see Table 14.12) and for the major sealing areas.

Some inconsistencies and apparent contradictions among these tables or with other tables in the Report indicating catch levels will be observed. These problems are largely the result of the different methods of recording catches; in some instances the catch is attributed to the hunters' place of residence, in others to the actual location of the hunt, and in still

others to the site of the landings. To illustrate, Table 14.11 recorded the catch levels of the hunt off Cape Breton. Table 14.20, on the other hand, records landings in Nova Scotia from the hunt both off the province and elsewhere in the Atlantic region.

Table 14.12
Seal Harvest, Canadian Atlantic Coast, 1979-1984^a

	1979	1980	1981	1982	1983	1984
<u>Species</u>						
Harp Seals:						
Whitecoats	120,134	102,856	153,068	114,450	-	-
Other	40,407	66,670	44,764	52,289	57,889	30,900
Sub-total	160,541	169,526	197,832	166,739	57,889	30,900
Hooded Seals:						
Bluebacks	11,948	11,153	10,661	7,757	-	-
Other	3,177	1,963	3,015	2,636	129	444
Sub-total	15,125	13,116	13,676	10,393	129	444
Other species	3,362	9,773	8,993	5,204	882	1,993
Total	179,028	192,415	220,501	182,336	58,900	33,337
<u>Type of Enterprise</u>						
Landsmen	48,187	48,897	65,106	33,226	34,591	28,439
Longliners	18,173	39,118	55,866	40,001	19,368	3,883
Large Vessels	112,668	104,400	99,529	109,109	4,941	1,015
Total	179,028	192,415	220,501	182,336	58,900	33,337

Sources: NAFO (1979-1984); DFO, special tabulations.

a. Including catch by Norwegian sealers prior to 1983.

Taking 1982 as representative of a "normal" hunting year, it is apparent that, as Table 14.13 shows, the seal-pup hunt (i.e., the hunt for whitecoats and bluebacks) was a major part of the harvest. Indeed, two-thirds of the harvest consisted of pelts from very young seals. Newfoundland was the major source of seal-pup pelts, but sealers from the Magdalen Islands and Nova Scotia also concentrated on this form of hunt.

Table 14.14 indicates that large vessels accounted for a little more than half of the total seal harvest. Inclusion of the catch by Norwegian vessels would augment this proportion. Of the "domestic" catch, landsmen and longliners divided about equally that proportion unaccounted for by the large vessels. This division, however, varied from year to year, as ice conditions greatly influenced the catch of landsmen.

Table 14.13
Provincial^a Harvest by Species and Age of Seal, 1982

Species and Age	Newfoundland	Quebec	Nova Scotia	Atlantic Region
Harp: Whitecoat	58,506	22,513	9,987	91,006
Beater	25,509	4,883	173	30,565
Bedlamer	16,238	-	4	16,242
Adult	4,688	-	-	4,688
Hooded: Blueback	4,428	-	-	4,428
Adult	1,403	-	-	1,403
Unspecified	1,256	3,948	-	5,204
Total	112,028	31,344	10,164	153,536

Source: Canada, DFO (1983).

a. Province of participating landsmen and vessels.

Evident in all the tables (Tables 14.15–14.19, inclusive) recording numbers of seals killed and the value of the catch is the dramatic collapse of the hunt after 1982. Pelt prices dropped from an average of \$24 in 1982 to just over \$13 in 1983. In most sealing areas, the 1983 catch was half the 1982 catch; in some areas the drop was even more severe. On the Magdalen Islands, for example, the value of the sealskin landings dropped by 54% between 1982 and 1983. If account is taken of the cessation of the large-vessel catch off the Magdalen Islands, the collapse is even more dramatic. (See Table 14.10.)

Table 14.14
Provincial^a Seal Harvest by Type of Enterprise, 1982

Type of Enterprise	Newfoundland	Quebec	Nova Scotia	Atlantic Region
Landsmen	22,319	10,731	176	33,226
Longliners	29,384	10,617	-	40,001
Large vessels	60,325 ^b	9,996	9,988	80,309
Total	112,028	31,344	10,164	153,536

Source: Canada, DFO (1983).

- a. Province of participating landsmen and vessels.
- b. The difference between this and the corresponding quantity in Table 14.15 derives from the fact that the catch (9,996 seals) of the Quebec-based vessel was landed in Newfoundland.

Overall catch levels have varied considerably in Newfoundland and other sealing regions, with very low catch levels in the early 1970s rapidly being replaced by large catches in the late 1970s and early 1980s. The increased catches coincided with an increase in the prices for pelts. The seal fishery is very sensitive to international pelt prices, and the bleak outlook for overseas markets is predictive of low catches in the future in the Atlantic region.

Table 14.15
Commercial Seal Harvest (Quantity Landed) by Source,
Newfoundland and Labrador, 1971-1984

Year	Landsmen (no.)	Longliners (no.)	Large Vessels ^a (no.)	Total (no.)	Gross Value (\$)
1971	10,100	4,934	58,372	73,406	598,259
1972	17,198	3,459	21,086	41,743	434,962
1973	29,822	6,485	8,650	44,957	460,809
1974	17,292	5,985	22,507	45,784	684,927
1975	23,298	22,050	32,779	78,127	1,630,341
1976	29,950	32,546	32,121	94,617	1,496,834
1977	24,872	35,010	28,819	88,701	1,756,408
1978	47,446	28,050	36,067	111,563	2,128,622
1979	28,313	18,773	52,743	99,829	2,217,702
1980	32,459	29,118	50,646	112,223	3,322,381
1981	40,504	55,866	56,597	152,967	3,889,244
1982	22,319	29,384	70,321	122,024	3,100,756
1983	23,244	19,368	6,453	49,065	608,353
1984	24,468	3,883	1,015 ^b	29,366	336,656

Source: Canada, DFO (1984); ICNAF and NAFO (various years).

- a. Includes landings by vessels based outside the province.
 b. There was no commercial hunt at all by large vessels in 1984. These landings represent seals taken by vessels conducting research for DFO.

Table 14.16
Commercial Seal Harvest, Labrador, 1980-1984 with Areal
Breakdown by Selected Communities

Location	Number Taken				
	1980	1981	1982	1983	1984
Northern Labrador:					
Nain	2,122	603	587	3	622
Hopedale	1,273	738	132	41	297
Makkovik	1,987	378	842	55	353
Rigolet	683	2,318	216	255	237
Other	145	181	103	0	619
Sub-total ^a	6,210	4,218	1,880	354	2,128
Southern Labrador:					
Cartwright	93	5,871	16	0	35
L'Anse au Loup	885	3,178	376	0	0
Forteau	0	3,325	110	817	0
Other	3,543	5,702	1,437	745	1,382
Sub-total	4,521	18,076	1,939	1,562	1,417
All Labrador					
Total	10,731	22,294	3,819	1,916	3,545
Province of Newfoundland/Labrador					
Grand Total	122,223	152,967	122,024	49,065	29,366

Source: Special tabulations by DFO, St. John's.

- a. An additional subsistence harvest of seals in northern Labrador is estimated to approximate 5,000 animals annually.

Table 14.17
Seal Harvest, North Shore, Quebec

Year	Lower North Shore		Saguenay		Total	
	no.	\$	no.	\$	no.	\$
1975	7,203	149,115	285	4,275	7,488	156,603
1976	4,687	131,532	171	2,500	4,858	136,390
1977	1,384	23,058	223	3,545	1,607	26,603
1978	5,965	119,328	510	10,200	6,475	129,528
1979	2,604	45,559	1,247	23,610	3,851	69,169
1980	5,427	100,830	3,220	59,825	8,647	160,655
1981	5,720	114,238	1,239	25,662	6,959	139,900
1982	2,235	33,650	1,713	25,695	3,948	59,345
1983	1,292	24,100	320	6,000	1,612	30,100
1984	815	14,670	2,020	38,875	2,835	53,545

Source: Québec (1985).

Table 14.18
Seal Harvest, Magdalen Islands, Quebec^a

Year	Quantity (no.)	Value (\$)
1975	3,995	40,000
1976	3,081	39,700
1977	14,259	241,800
1978	15,628	253,900
1979	16,002	288,000
1980	7,743	157,200
1981	14,932	278,800
1982	17,368	348,000
1983	8,662	160,200
1984 (est.)	1,000	10,800

Source: Québec (1985).

- a. Excludes the catch of large vessels operating in the Gulf of St. Lawrence and crewed largely by sealers from the Magdalen Islands, but landing in Newfoundland and Nova Scotia.

Table 14.19
Seal Harvest, Nova Scotia^a

Year	Quantity (no.)	Value (\$)
1975	33,309	635,000
1976	24,591	357,320
1977	23,487	310,046
1978	18,871	254,728
1979	30,752	567,362
1980	27,882	660,767
1981	17,894	397,406
1982	10,164	180,788
1983	5,170	60,655
1984	140	1,303

Source: Statistics Canada (various years); DFO, special tabulations.

- a. These data represent the main landings from the Front and Gulf sealing grounds. The province formerly sent as many as four large vessels, manned largely by Newfoundland sealers, to the Front and latterly had one large vessel operating in the Gulf as well.

The Secondary Sealing Industry: Processing Plants and Labour Force

Seal processing involves the following basic activities:

- primary processing of the skin so that it can be preserved while awaiting final processing;
- final processing of the skin, which entails chrome tanning if the skin is to be used for leather, or alum tanning if the skin is to be used as fur;
- removing the blubber and refining it into oil;
- removing the meat, which may be sold fresh, frozen or processed.

Sealskin Processing

Processing capabilities and procedures vary from country to country. The Inuit of Greenland and Canada carry out the processing of the skins in traditional fashion, whereas initial processing in other areas is conducted industrially. In the Inuit method, the seal is flayed immediately after being caught. After flaying and flenching, only a very thin layer of blubber remains. The remaining blubber is scraped off with a knife. This is done on a slanting wood board. To remove superfluous oil, the skin is washed after being scraped, and a roller removes excess water. The skin is stretched on a square frame and dried, and is then ready to be sold.

In other areas, such as the Canadian Atlantic coast and the Pribilof Islands, the sealers sell their pelts in a raw state. Processing plants such as those in Canada and the one in the Pribilofs accept raw skins with blubber attached and carry out the primary processing mechanically. If there is a delay in delivering the raw skin to the processing plant, it is necessary to treat it immediately with an anti-oxidant to prevent yellowing.

Seal pelts harvested in Atlantic Canada received primary processing (cleaning, deblubbing and the application of anti-oxidant) by the Carino Company Ltd. (a subsidiary of G.C. Reiber and Company of Norway) at Dildo in Newfoundland, and by the Karlsen Company at Blandford, Nova Scotia. The procedure is described in Appendix 14.1.

The final dressing of skins (secondary processing), especially for furs, is a highly specialized operation, undertaken by relatively few firms in the world. The Fouke Company in Greenville, South Carolina, because it possesses "an exclusive processing method that has yet to be duplicated" (United States, 1985), has a monopoly for the dressing of U.S. fur sealskins. The largest dresser of sealskins is G.C. Rieber and Company of Bergen, Norway. In peak years this company has handled up to 250,000 skins, or close to two-thirds of the total world supply. Tanning for leather is a less difficult task and a larger number of firms undertake this operation. Table 14.20 records the domestic market for sealskins in 1982, and Table 14.21 the value of sealskins purchased in that year. Table 14.22 shows the quantity and value of skins retained by sealers for their own use.

As indicated in Figure 14.8, nominal prices for sealskins of all types, raw and dressed, generally reached a peak about 1980, although, in real terms, prices in 1980 were not higher than those in previous years. By 1984, prices in current dollars were usually less than half what they had been in 1980. Prices of raw skins paid to Canadian and Norwegian sealers in 1984

were about \$11. These are prices for skins with the blubber. The most dramatic fall was in the prices at the Royal Greenland Trade Department's Copenhagen auctions. In 1984, harp sealskins were sold in Copenhagen at only 17% of the price obtained in 1980. Such prices do not cover the cost of harvesting. Moreover, the large stocks in inventory would first have to be sold or disposed of before any significant improvement in prices could be expected, even if demand did pick up again.

The decline of the seal hunt since 1982 precipitated the demise of the seal-processing industry in Atlantic Canada. The Karlsen Company's plant in Blandford had a seal-processing work force of 15-20 persons during late March and early April, and hired additional employees (generally another 15-20 persons) as needed. The plant, as of 1985, processes fish from late April to early October. Of the 15 to 20 core workers, five have retired and two who were close to retiring are now fishermen. The remainder are still considered part of the core work force. Instead of starting work in mid-March, however, as it did when sealing played a role, the plant now opens in late April. Five to six weeks of employment are lost. All plant workers are eligible for unemployment-insurance benefits during the off-season.

The workers at the Carino Company's plant in Dildo, Newfoundland, have not fared as well. The plant was closed in 1984. It had employed 14 people on a full-time basis, with peak seasonal employment increasing to 65. This labour force has few skills that might be useful in other forms of employment.

Twenty-two people who had worked in this plant were interviewed. Work experience within the group varied, although with few exceptions the level of technical skill did not go beyond that of general labour. Five persons had experience in whale processing (an activity now dormant in Dildo), while seven others had worked as unskilled labourers. Four plant workers had worked in fish-processing plants, and one had worked as a carpenter and painter. Only three had specialized training: one man to drive a truck, another to grade sealskins and the third as a power engineer.

Sixteen of the sample group grew up in Dildo, and although most had worked away from home, the opportunity to work at the Carino plant drew them back. They were employed there from four to 20 years (until 1970, in whale processing); most had been there for about nine years. Two are still employed at the plant as maintenance workers. The others are unemployed and dependent on unemployment-insurance benefits and secondary-income sources (such as spouses' income) for their livelihood.

Table 14.20
Number of Skins Purchased from Sealing Enterprises by Province^a
and Location of Processor, 1982

Type of Enterprise	Newfoundland	Quebec	Nova Scotia	Atlantic Region
Landsmen:				
Dildo, Nfld.	21,047	3,723 ^b	-	24,770
Blandford, N.S.	-	6,396	176	6,572
Total	21,047	10,119	176	31,342
Longliners:				
Dildo, Nfld.	29,090	-	-	29,090
Blandford, N.S.	-	10,511	-	10,511
Total	29,090	10,511	-	39,601
Large vessels:				
Dildo, Nfld.	59,722	9,996	-	69,718
Blandford, N.S.	-	-	9,988	9,988
Total	59,722	9,996	9,988	79,706
Total:				
Dildo, Nfld.	109,859	13,719	-	123,578
Blandford, N.S.	-	16,907	10,164	27,071
Total	109,859	30,626	10,164	150,649

Source: Canada, DFO (1983). Purchases by processors assumed to be 94.3% of landsmen's catch and 99.0% of vessels' catch. (See King, 1981, Table 18.)

- a. The province in which the producers (landsmen and vessels) are based.
- b. Includes a small number of skins purchased by the Hudson's Bay Company.

Table 14.21
Value of Skins (including Blubber) Purchased, by Province^a and
Location of Processor, 1982

Location of Processor	Newfoundland	Quebec	Nova Scotia	Atlantic Region
Dildo, Nfld.	2,878,508	281,593	-	3,160,101
Blandford, N.S.	-	347,946	180,788	528,734
Total	2,878,508	629,539	180,788	3,688,835

Source: Canada, DFO (1983).

a. The province in which the producers are located.

Table 14.22
Skins Kept by Sealers for Own Use, by Province,^a 1982

	Newfoundland	Quebec	Nova Scotia	Atlantic Region
Number	2,169	818	-	2,987
Value	\$60,078	\$15,978	-	\$76,056

Source: Canada, DFO (1983). It is assumed that Nova Scotia sealers kept no skins for their own use.

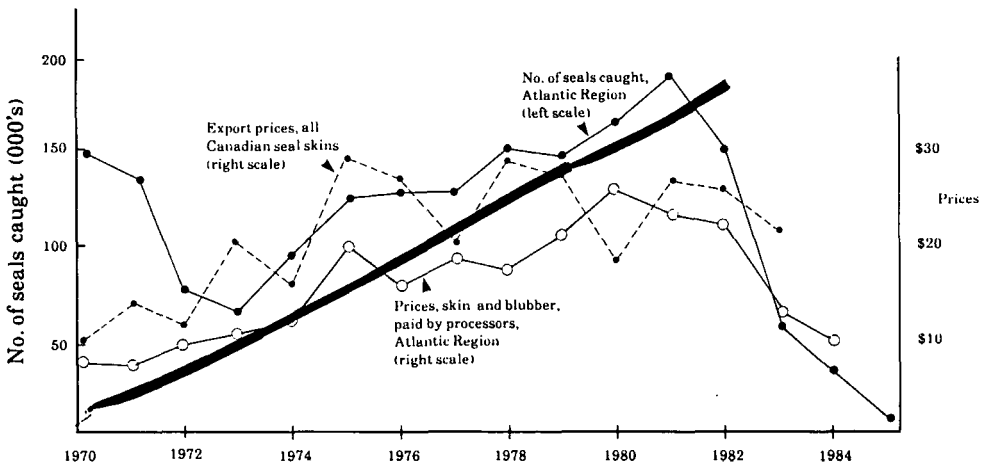
a. The province of sealers' residence.

Seal Meat Processing

Notre Dame Bay Fisheries, located at Comfort Cove, is the only seal-meat processing facility still operating in Newfoundland or, for that matter, in Canada. The plant is the main source of employment in the small community of 700 persons. The plant employs 50-60 people full-time and many

others for long enough to qualify them for unemployment-insurance benefits. The plant is a diversified operation. Besides canning seal meat and various species of fish, the workers pickle and freeze herring and mackerel, prepare salt cod, and handle lobster and squid. This combination of products enables the plant to operate almost year-round.

Figure 14.8
Number of Seals Caught and Prices Paid for Sealskins, 1970–1984



Source: Canada, DFO (1984).

The plant's market for seal meat is on the island of Newfoundland, and the main source of supply is the seal hunt conducted by landsmen and longliners. Most sealers, however, attempt to sell seal meat in local markets, where they can get a better price than the company will pay. Tables 14.23 and 14.24 record data concerning seal meat retained and sold by sealers in 1982. Once local demand is met, sealers sell surplus meat to the plant at roughly \$0.25/lb (1983–1984 prices). In the past few years, the seal-meat canning operation has employed 20–25 individuals for a six-to-eight-week period from mid-March to early May. Until 1984, total annual production was in the range of 144,000–192,000 fifteen-ounce cans of seal meat. The plant is no longer able to secure the carcasses needed to supply its market. Notre Dame Bay Fisheries has been financially affected by the decline of the herring and squid fisheries. The key to the company's success has been its diversified operation. The loss of a single element could affect its financial stability.

Table 14.23
Number of Carcasses Sold and Kept by Sealers, by Province,^a 1982

	Newfoundland	Quebec	Nova Scotia	Atlantic Region
Sold:				
by landsmen	10,356	4,979	-	15,335
by vessels	24,042	5,524	-	29,566
Total	34,398 ^b	10,503	-	44,901
Kept	18,485	5,172	29	23,686

Sources: Table 14.14 and King (1981, Table 9). From the latter, the proportions of the catch which are sold and kept in Newfoundland and Quebec are:

Sold:	landsmen	.464
	vessels	.268
Kept		.165

In Nova Scotia, it is assumed that no carcasses were sold and that only landsmen kept any for their own use.

- a. Province of sealers' residence.
- b. Of this quantity, 30,698 carcasses were sold as fresh meat and the remainder to canners.

Table 14.24
Number of Flippers (Pairs) Sold and Kept by Sealers, by Province,^a
1982

	Newfoundland	Quebec	Nova Scotia	Atlantic Region
Sold:				
by landsmen	3,817	1,835	—	5,652
by vessels	59,567	13,687	9,988	83,242
Total	63,384	15,522	9,988	88,894
Kept	17,588	4,921	5	22,514

Sources: Table 14.14 and King (1981, Table 9). From the latter, the proportions of the catch which are sold and kept in Newfoundland and Quebec are:

Sold:	landsmen	.771
	vessels	.664
Kept		.157

- a. Province of sealers' residences, except for Nova Scotia where landsmen are assumed to have sold no flippers and sealers on the large vessel to have sold all flippers in Newfoundland.

Appendix

Appendix 14.1 The Primary Processing of Sealskins

Sealskin Preparation

The raw pelts are first placed in a tub of slightly warm water, to thaw out frozen portions and remove foreign matter. They are then transferred to the pre-fleshing equipment, where the thickest layer of fat (blubber) is separated from the skin by a sharp blade (band knife). This operation

can be done by hand, but that method tends to produce inconsistent quality. Machine fleshing is preferable for the maintenance of consistently high quality.

Most of the fat is thus removed from the skin, but another fleshing operation is usually needed to eliminate remaining blubber. This second fleshing by mechanical scrapers can be carried out to a finer degree of adjustment than is attained in pre-fleshing, avoiding damage to the skin and increasing the yield of blubber. Additional fat is removed by tumbling the skins in a rotating drum, or dry mill, containing hardwood sawdust and a perchloroethylene solvent. The interior of the drum must be very smooth and the sawdust extremely fine to avoid marking the skins. The oil-soaked sawdust is suitable for use as a fertilizer.

When the skins emerge from the dry mill, they are generally coated with sawdust. This can be removed by brushing by hand, but it is preferable, for quality and economy, to put the skins through another revolving drum or cage equipped with a vacuum system for removal and collection of the sawdust. The skins are then soaked in a brine solution to preserve them for further processing. The preserved skins are usually stored for a period of one to two months, in covered vats, in a cool place away from light, to await shipping. Finally, they are packaged in aluminum or fibreglass containers, each containing 180–450 skins, and shipped to the final processor.

After the second tumbling, the skins can be graded more accurately than at the time of arrival at the plant. Those of young harp seals are classified as whitecoat, overgang, tanner or ragged-jacket and are graded from 1 to 4, depending on condition: number 1 skins are those without damage, and number 4 are heavily damaged. The beater, bedlamer and hooded sealskins are classified A, B and C, according to colour quality: A indicates a perfect specimen. Then, like the others, these three types are also graded 1 to 4, according to condition. This ranking by type, colour and condition results in a total of 80 categories for harp and hooded sealskins. Ringed and harbour sealskins have 12 categories, and bearded sealskins have eight categories. After grading, each category is separated for storage.

Seal-Oil Production

The blubber obtained from the fleshing operations described above is transferred to a hogger for mincing. It is then placed in cookers (each holding some 10 tonnes) into which steam is injected, and the fat is cooked



Deblubbing sealskins, St. John's (circa 1920)

for three to three-and-a-half hours. It is then allowed to settle for about one-half hour, and the clear oil is siphoned off. This oil, in turn, is allowed to settle in another tank for an hour, and then the top portion is siphoned off and again allowed to settle for two days. Finally, the top portion of the settled oil is pumped into storage.

The cloudy, heavier quantities of oil remaining after each settling are put through separators, vibrator screens and some, again, through the cooker (waste material usually being disposed of as fertilizer). Up to four qualities of seal oil are thus produced. These products are exported directly to market by tanker ship.

(Material in the section above is based on NewLantic Group (1984) and Ryan (1986).

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Chapter 15

The Benefits and Costs of the Seal Hunt

As an underdeveloped region we cannot afford to lightly dismiss even a few million dollars. Neither can we afford to overlook the fact that sealing provides employment for 5,000 to 6,000 of our people and that this employment helps to sustain the base of our vital rural economy and lifestyle (Rideout, 1985).

The benefits and costs of the seal hunt in Atlantic Canada have been both material and less tangible. In this chapter, the material benefits and costs, comprising money income, food supply, and cost outlays are estimated in order to undertake a benefit-cost assessment of the hunt. (See also Appendices 15.1–15.4.) It is concluded that the net economic benefits to Canada in 1982 were on the order of \$2.5 million.

The less tangible, but nonetheless real, benefits and costs are considered next. These include the contribution of sealing to sustaining fishing enterprises and, thereby, the viability of fishery-dependent communities in several parts of the Atlantic region, and the enrichment of the cultural life of those parts of the region. The latter type of benefit, especially, is illustrated with quotations from both observers and members of the indigenous culture. Among the costs have been the lost lives of numerous seal hunters over the years. This has become part of the folk history of the region. No attempt to measure these less quantifiable benefits and costs is made in this study. Although they cannot reasonably be counted in dollars and cents, that does not make them unimportant.

Benefit-Cost Assessment of the Seal Hunt

Analysis of the impact of the seal hunt on Atlantic Canada is carried out here within the framework of an economic benefit-cost study. Though such a study is a procedure more often used to assess the effect of a new project, it is also suitable for estimating the effect of the removal of an

economic activity. The appraisal seeks to answer the question, "If the 1982 hunt had not taken place, how much income would have been lost?" The same query might have been phrased as, "How much net income did the hunt yield in 1982?" The year 1982 is selected as it was the most recent one in line with the long-term trend in catches and prices. It was the last year before the dramatic decline of the hunt occurred. (For the moment, concern is limited to economic effects. Non-economic effects will be discussed later.) The procedure is to estimate benefits, costs and net benefits for the three provinces directly involved – Newfoundland, Quebec and Nova Scotia – and for the Atlantic region as a whole. Finally, account is taken of costs incurred by the federal government to arrive at net benefits for Canada. (See also Appendices 15.1 and 15.2.)

As incomes from sealing and seal processing declined, the government transferred money to the areas affected to soften the impact. Some of these "transfer payments" were automatic, since unemployment benefits and welfare payments automatically rise as employment falls, income taxes are automatically reduced as incomes drop, liability to pay unemployment-insurance contributions is lifted when employment ceases, and welfare payments are increased as need becomes greater. In addition, a direct subsidy was initiated, partially to compensate sealers and vessel owners for the decline in sealskin prices. Although these transfer payments are important to those concerned, they are not brought into the following computations. To include them would obscure the true effect of the decline of the hunt; indeed, if they were included and the federal government chose to compensate fully all those adversely affected, the analysis would determine that the hunt was irrelevant to the material incomes of people in the Atlantic region.

Benefits

The benefits of the seal hunt are here defined as the value of the goods and services it produced – the skins, oil and meat – whether they were sold or retained for the use of the hunter. Almost 85% of returns from sealing came from the pelts: somewhat over 70% from (semi-processed) sealskins and a further 12% from seal oil (rendered from the blubber). The remaining 15% of the economic benefits of the hunt came from seal meat, either consumed locally, distributed commercially in fresh or frozen form, or canned.

The analysis avoids double-counting of "intermediate products". The value of sales of processed skins, for instance, is added to benefits, but the sale of raw skins by the hunter to the processor in his own province is



Discharging sealskins, St. John's

omitted. However, if a landsman sold his raw skins to a processor in a different province, the returns the hunter received are included in the computations of benefits to his province. This "intermediate" sale, of course, is excluded from the total for the Atlantic region.

Skins Sold or Put to Inventory

Pricing the processed skins produced in 1982 presents difficulties. As indicated in Chapter 14, the Carino Company Ltd. is a subsidiary company of G.C. Rieber and Company of Norway. The price at which the transfer of skins was made to the parent company was a matter of corporate policy, rather than a price which might be obtained in a competitive market. But the benefits accruing to Newfoundland from the sale of skins, however the prices are determined, are what Rieber actually pays. It is therefore the value declared to customs by Carino when it exported its skins in 1982 that is taken as the basis for calculating benefits.

The Benefits and Costs of the Seal Hunt

The Karlsen Company, the other skin processor, also presents difficulties. When it exported skins in 1982, it retained possession of them, merely sending them to Finland for dressing. However, since the mix and quality of skins appear to have been similar to those exported by Carino, it is assumed that they were worth a similar price.

The number of skins exported in 1982 was rather lower than the number of skins processed in that year; the difference resulted in an increase in the level of inventory. Those skins put to inventory are assumed to be of similar value to those exported. The value of processed skins in 1982, calculated as described above, was as follows:

Province ^a	Value (\$)
Newfoundland	3,398,000 ^{b,d}
Quebec	630,000 ^{c,d}
Nova Scotia	745,000
Atlantic Region	4,143,000

- a. The province identified here is that of the production units, i.e., landmen and vessel enterprises, involved.
- b. Some of the skins were finished in a small tannery operated by Carino in 1982. Since their finished value was little different from the export price of processed skins in that year, they are not distinguished from the exports.
- c. The \$630,000 worth of skins produced in Quebec were raw skins sold to the processors in Newfoundland and Nova Scotia. Since they are "intermediate products" and their value is incorporated in the values shown for Newfoundland and Nova Scotia, they are excluded from the Atlantic region figures to avoid double counting.
- d. The figure includes a few skins from seals caught in Labrador and along the north shore that were deblubbered and dried by the sealers and sold to the Hudson's Bay Company or to a small Quebec tanner.

Oil Sold

The blubber attached to the skins when they were bought by the processors was rendered down and the oil exported to Europe. The value of the exported oil is computed from the estimated average export price in 1982. Benefits from the sale of oil amounted to:

The Benefits and Costs of the Seal Hunt

Province	Value (\$)
Newfoundland	583,000
Quebec	-
Nova Scotia	128,000
Atlantic Region	711,000

Meat Sold

Carcasses and flippers brought ashore by Newfoundland landmen and vessels (other than those landed in Labrador) found a ready market in that province; they were sold at dockside or through wholesalers and retailers. The large Quebec and Nova Scotia vessels also landed their meat in Newfoundland. Elsewhere in the region, little meat was sold commercially.

The value of the meat sold is computed from the estimated number of carcasses and flippers sold as fresh meat and the estimated landed price in 1982. (See Tables 14.23 and 14.24, Chapter 14.)¹ To the Newfoundland total is also added the estimated value of the small amount of canned meat produced by two processors in Notre Dame Bay. With this addition the totals become:

Province	Value (\$)
Newfoundland	575,000
Quebec	98,000
Nova Scotia	27,000
Atlantic Region	700,000

Products Kept for Own Use

Sealers kept a small number of skins for their own use. For the purpose of these computations, these skins have been assumed to have had the same market value as those sold to processors.

1. Seal meat is valued here at about \$1.00/kg, or \$10 per carcass, based on actual port-market prices. The much higher value indicated in Table 15.8 (Appendix 15.4) is based on the cost of substitutable meat products available in Labrador.

The Benefits and Costs of the Seal Hunt

Landsmen and sealers on longliners kept for their own use part of the meat they brought ashore; indeed, in Labrador, Quebec and Nova Scotia, all meat landed was consumed locally or thrown away, since there was no commercial market for it. In the following computation, products kept for own use have also been valued at the estimated market price of meat sold in Newfoundland.

The total value of products kept for own use is estimated to have been:

Province	Value (\$)
Newfoundland	205,000
Quebec	57,000
Nova Scotia	- a
Atlantic Region	262,000

a. Less than \$500.

Shares Earned by Sealers Serving on Large Vessels of Other Provinces

The two large vessels, one based in Quebec and the other based in Nova Scotia, which operated in the Gulf, both took aboard their sealers in the Magdalen Islands, as a government regulation required. In effect, sealers on the Nova Scotia-based vessel sold their services to a firm in another province, and the income (shares) they received was a benefit to Quebec. The benefit to Quebec, however, was exactly matched by costs to Nova Scotia and therefore did not produce a benefit to the Atlantic region. One Newfoundlander served on the Nova Scotia vessel and the income he received for the services he sold is treated in a similar fashion. Benefits on this account were:

Province	Value (\$)
Newfoundland	3,000
Quebec	40,000
Nova Scotia	-
Atlantic Region	-

Commissions Earned by Agents Acting for Processors in Other Provinces

Karlsen's agent in the Magdalen Islands received commissions on skins landed by landsmen and longliners. He was therefore, in effect, selling his services to a firm outside the province, and his commissions were a benefit to Quebec. Agents also operated in Newfoundland and along the north shore, but in 1982 they acted on behalf of the sealers, not the processors. The commissions earned by Karlsen's agent, though a benefit to Quebec, generated an equivalent cost to Nova Scotia, so that no benefit accrues to the Atlantic region from this source. The effect was therefore:

Province	Value (\$)
Newfoundland	-
Quebec	35,000
Nova Scotia	-
Atlantic Region	-

Other Benefits

A few other parts (hearts and livers) of seals were eaten by sealers, sold to government research establishments (stomachs and other entrails) or to foreign buyers (penis bones exported to the Orient as aphrodisiacs). The total value of these parts, however, was small and is therefore ignored.

There are other benefits which many fishermen and fish packers believe accrue from the seal hunt: as the hunt thins the seal herds, it increases the fish available for fishermen, reduces the incidence of parasites in commercial fish and curtails the damage that seals cause to fishing gear. These questions are discussed at length in Chapters 24, 25 and 26; the impact of harp seals on fish stocks and the value of the fishery is extremely difficult to quantify reliably and, therefore, has not been included in the benefit-cost analysis.

Costs

The costs of the seal hunt are the value of goods and services which have to be given up so that the labour and other factors of production may be devoted to the hunt and to the transportation and processing of seal products.

The Benefits and Costs of the Seal Hunt

Since our concern is confined to the costs which had to be incurred in order to initiate the hunting and processing, all the computations are done on a marginal basis. "Costs" which would not have decreased if there had been no hunt, such as interest payments on money borrowed by a fisherman/sealer to finance a longliner, are ignored.

The normal way to compute costs is to take the payments actually made to the factors involved (including sealers), on the assumption that these factors would have been paid a similar reward in alternative occupations, had there been no hunt. Sealers, who were self-employed, would be allocated costs in line with their earnings in other occupations if they had not been hunting seals.

An important problem arises, however, where factors of production engaged in the hunt and associated activities would otherwise have been unemployed. Using these factors in the sealing industry would then have imposed no cost upon the region, since no other goods and services would have had to be given up so that sealing and processing could go on. In this situation a "shadow price of labour" of zero is appropriate.

In benefit-cost analysis the use of a zero shadow price of labour is rare. It appears, however, to be a reasonable procedure in the unusual circumstances surrounding the seal hunt, since it and the associated processing activities generally took place over a short period in winter, in small isolated communities where seasonal unemployment sometimes reaches 50%. Inquiries on this point invariably produced answers that if there had been no hunt in 1982, no other paid employment would have been available for sealers. About half the sealers were fishermen prevented from fishing by ice, who generally relied during the winter on savings and unemployment-insurance benefits; the other half might well have been unemployed or might have sealed in their spare time. Informants insisted that nobody with a firm job would leave it to go sealing. Similarly, informants confirmed that no significant alternative employment existed for process workers and others associated with the hunt. A zero shadow price of labour, therefore, is adopted in the following computations. The results of a "sensitivity analysis", which assesses the effect of adopting this procedure, is presented at the end of our discussion of benefit-cost analysis.

Costs appear in the form of the expenses of sealers when they are engaged in the hunt, of vessels while sealing, of agents and of processors.

*The Benefits and Costs of the Seal Hunt***Landsmen's Expenses**

Landsmen incurred costs for food, ammunition and certain other items they needed on the hunt. These costs are estimated to have been:

Province	Expenses (\$)
Newfoundland	850,000
Quebec	124,000
Nova Scotia	3,000
Atlantic Region	976,000 ^a

a. Due to rounding, column does not add to total.

Vessels' Expenses

The operation of longliners and large vessels also involves expenditure, which was normally shared between the owners and the crew. The extra costs that arose because the vessels took part in the hunt included fuel, food, damage to equipment and the like. These costs are estimated to have been:

Province	Expenses (\$)
Newfoundland	836,000
Quebec	115,000
Nova Scotia	136,000
Atlantic Region	1,043,000 ^a

a. Total excludes payments to crew from Quebec and Newfoundland serving on the large Nova Scotia vessel, since these were not costs to the region as a whole.

Earnings Lost by Sealers Because of Participation in the Hunt

On the assumption that sealers taking part in the hunt would otherwise have been unemployed during its duration, the alternative earnings they lost are zero.

Handling and Transportation Costs

Ten agents operated in Newfoundland, collecting skins and arranging for their transportation to the Carino plant at Dildo. Some also handled meat. Three agents operated in Quebec, one overseeing the transportation of skins from the Magdalen Islands to Karlsen's plant at Blandford, the other two arranging the delivery of north shore skins to Dildo. In Nova Scotia, a sealers' co-operative looked after the transportation of skins to Blandford but the costs involved were insignificant.

Since the Royal Commission is assuming that persons working as agents would otherwise be unemployed, there is no cost for their labour. Transportation costs were involved, however, and are estimated at:

Province	Costs (\$)
Newfoundland	135,000
Quebec	17,000
Nova Scotia	-
Atlantic Region	152,000

Skin and Oil Processors' Costs

Labour costs are again assumed to be zero, so that the costs to Newfoundland and Nova Scotia for skin and oil processing were limited to miscellaneous manufacturing costs (power, water, chemicals, depreciation of buildings and equipment because of their use in seal processing, and the like), the cost of raw skins purchased from other provinces, and the commissions paid to agents in other provinces. These are estimated to have been:

Province	Costs (\$)
Newfoundland	606,000
Quebec	-
Nova Scotia	437,000
Atlantic Region	379,000 ^a

- a. Costs of skins purchased from other provinces have been excluded from the total, since they are not a cost to the Atlantic region as a whole.

Meat Processors' Costs

Assuming that employees of the meat-processing plant in Notre Dame Bay would otherwise have been unemployed during the period when they were processing seal meat, the only costs of the plant are miscellaneous production costs, estimated to amount to \$24,000 for Newfoundland.

Net Benefits

Summarizing the benefits and costs listed above leads to net benefits as shown in Table 15.1. The total net benefit of sealing and seal processing to the Atlantic region is therefore estimated to have been \$3.2 million in 1982 (\$3.8 million in March 1985 dollars). A little over 70% of this amount accrued to Newfoundland, rather less than 20% to Quebec, and the remaining 10% to Nova Scotia.

Indirect Effects

When one section of the economy of a region receives extra income, the effects spread out and benefit other sectors of the region. There is a "multiplier effect". Some benefit-cost studies take such effects into account. The use of multipliers is fraught with conceptual difficulties, however, and in any event, no multipliers relating specifically to the sealing industry have been computed by Statistics Canada. For these conceptual and practical reasons, multipliers are not applied in this benefit-cost analysis. Some understatement of net benefits may possibly result, but it appears better to tolerate a little understatement than to risk presenting an exaggerated picture based on inappropriate data.²

2. If, in spite of the above, the application of a multiplier is deemed appropriate, the net benefits, of course, will be inflated, the degree depending on the multiplier chosen. If the multiplier (1.685) that seems to enjoy favour in DFO is used, net benefits become:

Province	Net Benefit (\$)
Newfoundland	3,901,000
Quebec	1,016,000
Nova Scotia	548,000
Atlantic Region	5,464,000

The Benefits and Costs of the Seal Hunt

Table 15.1
Net Benefits of the Seal Hunt (\$'000)

	Newfoundland	Quebec	Nova Scotia	Atlantic Region
<u>Benefits</u>				
Skins sold or put in inventory	3,398	630	745	4,143
Oil sold	583	-	128	711
Meat sold	575	97	27	700
Seal products kept for own use	205	57	-	262
Shares earned by sealers serving on large vessels of other provinces	3	40	-	-
Commissions earned by agents acting for processors in other provinces	-	35	-	-
Other benefits	-	-	-	-
Total	4,765	859	900	5,816
<u>Costs</u>				
Landsmen	850	124	3	976
Vessels	835	115	136	1,043
Earnings lost by sealers from participation in hunt	-	-	-	-
Handling and transportation	135	17	-	152
Skin and oil processing	606	-	437	379
Meat processing	24	-	-	24
Total	2,459	256	575	2,574
<u>Net Benefits^a</u>	2,315	603	325	3,243

a. All lines and columns do not add to totals because of elimination of interprovincial transfers or rounding.

Sensitivity Analysis

The reasons for adopting a zero cost of labour in the previous computations were given above. In the special circumstances of the hunt, and based upon the assessments of the situation obtained from those close to the industry, it seems a reasonable procedure. It is useful, however, to know the effect of adopting such a procedure. This effect can be estimated by performing a "sensitivity analysis", which involves redoing the computations on the basis of a different assumption. A possible alternative assumption is that if the seal hunt had not taken place in 1982, those usually involved in sealing and associated activities would have suffered the same rate of unemployment as that existing in their districts as a whole.

Substituting this alternative assumption greatly increases costs and reduces net benefits to:

Province	Net Benefits (\$)
Newfoundland	13,000
Quebec	433,000
Nova Scotia	191,000
Atlantic Region	637,000

The assumption on which the foregoing analysis was based is thus very important to the result. Other assumptions would lower estimates of net benefits further, perhaps reducing them to small values. In the view of the Royal Commission, however, the most reasonable assumption for the alternative labour income or cost of labour during the sealing season is zero.

National Economic Impact

The net benefits arising in the Atlantic region are also net benefits for Canada as a whole. Account must also be taken, however, of certain costs of the 1982 hunt connected with the federal government's research on seals, its supervision and control of the hunt, its ice-breaking services, and its actions intended to counteract the campaigns of anti-sealing organizations. All these costs were unusually heavy in 1982. Many people, vehicles, vessels and aircraft and much equipment were employed by the federal government in connection with the hunt that year, and considerable expense was incurred in negotiations with member governments of the European Community.

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Such costs can only be estimated from information in the possession of the Department of Fisheries and Oceans (DFO) and other departments and agencies, including the Department of External Affairs, the RCMP and the Department of National Defence. DFO, therefore, was asked to estimate the costs incurred in 1982 by the federal government which would not have been incurred had it been known at the beginning of the year that there would be no seal hunt. The figure requested was the marginal cost of the hunt to the federal government, and it was made clear that any costs which had to be met, seal hunt or no seal hunt, should be omitted. The latter costs would include, for instance, depreciation on vessels that would have been kept for other purposes and salaries of people who would have remained in government employment, but whose output of useful work unconnected to the hunt would not have increased significantly if no hunt had taken place in 1982. DFO was asked to analyse the relevant costs under four headings - "research", "surveillance", "ice-breaking", and "publicity" - or any others it considered appropriate.

It was recognized that when a large operation is discontinued, it takes time to eliminate all the expenditure connected with it. Equipment has to be sold and people must be discharged or reassigned. Consequently, annual savings from the ending of the hunt may be expected to rise as time passes. For that reason, DFO was asked to make a second analysis, along the same lines as the first, but including savings that would only be achieved after a year or more had passed.

Emphasizing that some of the required estimates depended heavily on the assumptions made to derive them (Chapter 30 raises a number of reservations about the estimates), DFO supplied the following data:

Activity	Savings in 1982	Annual Savings After Readjustments
Research	\$137,000	\$247,000
Surveillance	\$295,000	\$295,000
Ice-breaking	-	-
Publicity & Public Relations	\$240,000	\$50,000
External Affairs	\$5,000	\$5,000
COSS	\$60,000	\$60,000
Total	\$737,000	\$657,000

The Benefits and Costs of the Seal Hunt

The total of the first column is close to that provided earlier by DFO for the year 1976/77 (Canada, DFO, 1979). One might have expected a larger figure. To adjust for inflation alone would bring the 1976/77 figure of \$706,000 to about \$1.2 million by 1982, and federal government efforts to control and counteract the activities of anti-sealing groups increased during the period.

Part of the apparent discrepancy would appear to arise because the 1976/77 estimate was not made on a consistent marginal basis. It seems that various fixed costs were included that would not have altered even if hunting seals had been banned in that season. Among these costs, for instance, were depreciation of vessels, research on seals, and salaries of fisheries officers who would have been retained to enforce the ban instead of monitoring the hunt.

The total of figures in the second column is lower than that of figures in the first, even though annual savings in research expenditures related to the hunt were expected to rise as time passed. The explanation of this unexpected result is that in 1982, expenditures on publicity and public relations to counteract the activities of anti-sealing groups were exceptionally high and would have declined considerably in 1983 and subsequently even if the hunt had continued at its 1982 level.

The difficulty of arriving at meaningful estimates of the extra expenditure that the federal government had to incur because of the seal hunt must be recognized. Some research on seals, for instance, would have continued even if the hunt had ended in 1982. Indeed, because concern would likely have increased about the adverse effects that enlarged seal herds might have had on fish stocks and the parasitic infection of commercial fish, certain types of research on seals might well have increased. Whether or not this actually occurred, however, would have been a matter of future policy, which could not be predicted with any degree of certainty.

One other cost of the hunt is the damage it has done to Canada's international image. The campaigns of the anti-sealing organizations undoubtedly have tarnished that image. (See Chapter 9.) This damage must be reckoned an additional cost to Canada of the Atlantic seal hunt. No specific value can be put on it, but it is important.

Subtracting the above estimate of costs of the seal hunt borne by the federal government from the net benefits previously calculated results in net benefits of the hunt to Canada in 1982 of \$2.5 million.

The Interdependency Between Sealing and the Fisheries

The life of fishermen is really a hard life. They have to work many hours from 4 to 5 in the morning to 9 or 10 at night with very little to show for it. Time after time I've seen . . . go out in the morning, gone all day and return home with nothing and maybe a net or two gone or torn up too bad to put back in the water again. It's really heart breaking sometimes to see them. But they got no other choice but to keep at it. This is why in the spring we in the outports of Nfld hunt for seals. It means a great deal to us. The meat helps out with the groceries. We keep some fresh, bottle some and salt some for the coming winter. And the money we get for the pelts we use to pay off the bills which pile up over the winter and gives the fishermen a good start for the fishing season. If they're lucky enough to catch a few seals they have money to get their boats ready, repair their nets and buy a few new ones. I'll just use us as an example. This year . . . was unable to go seal hunting so we are living on \$104 a week which he collects from U.I.C. You must realize how much you can do on \$104 a week for 6 people. It's not enough to buy groceries at the cost they are here so we have no fresh milk, fruits, burgers, juices or french fries the thing most kids take for granted. I am just able to buy the bare necessities. Now this is only the groceries. Then there is the oil bills power bills, phone bills. The upkeep of the house. Clothing etc. If . . . had been able to seal this winter we would owe no bills. We would be able to eat better and I would be able to buy things for the kids they really need. Also he would be able to buy a few more new nets to fish with as the more nets you have the more fish you can get and if you have a few extra ones you can have them in the water while you're repairing the torn ones. Believe me when people say that the Nfld fishermen don't need the money they get from the seal hunt they don't know what they're talking about (Jefferson, 1984).

Sealing statistics from the middle of the 18th century to the present day reflect the highly variable nature of sealing activity. Effort and catches have fluctuated from year to year and among regions. In some years, sealers in the Gulf of St. Lawrence enjoyed access to seals for an extended period, while their counterparts in Newfoundland were unable to reach the seal herds because of local ice conditions. Tables 14.15 to 14.19, Chapter 14, illustrate the variability of sealing results and suggest that sealers could never depend exclusively on sealing to provide food or income. Earnings from sealing, however, often meant the difference between keeping a fishing enterprise viable or going bankrupt. Sealers perceived that the benefits involved outweighed the attendant risks. Tables 15.11 and 15.12 (Appendix 15.5) indicate the important financial contribution made by Newfoundland longliner fishing vessels, and Appendix 15.5 provides further details.

Socio-Cultural Benefits and Costs

In this section, no attempt is made to weigh benefits or costs of the life-styles that are associated with sealing. Instead, this section captures something of the folklore and culture associated with sealing. Benefits and costs there clearly are, but there is no reasonable way to translate such intangibles into dollar yardsticks.

Although fishermen/sealers/hunters participate in the seal fishery primarily for economic reasons, sealing activities also have important social and cultural dimensions that reinforce community spirit, and psychological dimensions that contribute to self-esteem. While a majority of sealers are also fishermen, many outsiders do not comprehend the relationship between hunting and fishing. Sealers have been depicted as representing the darkest side of humankind: destructive, ignorant, cruel and selfish. Fishermen, in contrast, are more often represented in romantic terms as kind, honest, hard-working individuals. Partly because of the spectacular imagery that the whitecoat hunt offered the media and partly because of the method (clubbing) of killing whitecoats, questions have been raised about the potentially brutalizing effects of seal killing. Madelinot and Newfoundland sealers admit that hunting excesses have occurred in the past, but most reject the notion that they are insensitive to killing, or that they are unconcerned about resource conservation and management. Evidence of the cultural importance attributed to responsible resource use is reflected in the testimony of the Local Development Committee of Fleur-de-Lys:

The Benefits and Costs of the Seal Hunt

It was the year of 1888, commonly referred to as the "Year of the Great Seal Haul". In this year approximately 12,000 seals were killed just off a point of land known as Partridge Point. People came from all over the Green Bay and White Bay to haul seals. Men, women and children, and even the local priest, Father Shene, were involved in this sealing expedition. It is said that people got so sick of seals that they started being cruel to the animals, whereupon Father Shene became very angry, warning the people that it would be a long time before seals would be taken in such quantities again. Incidentally, they have never been taken in such a quantity since and they most likely never will (Walsh and Lewis, 1985).

A number of sealers have expressed their distaste for participation in the whitecoat hunt, and some have gone out once and subsequently limited their efforts to the landsmen or longliner hunt (Wright, 1984). One landsman hunter described his feelings about his relationship to animals and the environment:

I have a great appreciation for nature. I respect nature and learn from it. I am amazed by it. If I were to kill a seal and didn't kill it clean, then I would feel for it. The majority of fishermen I know feel that way. When you kill something, blood has got to flow. To the people who don't understand, it looks terrible. It makes you look like a savage, but it is the right thing to do when it is done right (Walsh and Lewis, 1985).

In the spring of 1981, the ice in the Gulf of St. Lawrence carried seals to the shores of Prince Edward Island. Inexperienced men, taking advantage of the unexpected resource opportunity, began clubbing seals. Fisheries officers quickly closed the hunt when they realized that the hunters were unskilled and that the killing was inhumane. (See also Chapter 20.) Madelinot sealers often refer to that incident as an example of thoughtless and cruel behaviour. They maintain that sealing is a professional activity that can only be learned through years of experience and apprenticeship.

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Aboriginal peoples are generally perceived as possessing greater reverence for the environment and animals than their southern non-aboriginal counterparts. Even among the Inuit, however, episodes of cruelty have been witnessed, and such behaviour is not well-received by the elders. Unacceptable behaviour is often attributed to alcohol abuse and alienation:

I have lived with and participated in the lives of hunters and food gatherers from Alaska to Greenland over a 30 year period and have seen no brutality toward animals. I have seen wasteful and careless killing of animals by young people who have been away at residential schools, or by young people who have not apprenticed with their elders. They are judged by their own society as well as by the global society. I have also witnessed degenerate and harmful behaviour, almost always under the influence of alcohol, by individuals who by and large are caught in small communities and are not able to live the life of their forebears nor to take a meaningful role in the larger society. In general, it has been my observation that people who live by hunting, or by killing if you will, have a respect and reverence for life which I have not seen amongst the sports hunters from urban and industrialized society, who kill not to live but perhaps to recapture a sense of self which has been lost in modern society (Williamson, 1986).

Researchers from the Quebec north shore explained in a brief to the Royal Commission that sealing is not a "blood sport", but a hard and brutal way to earn a living with few employment alternatives (Evans et al., 1985).

For more than a decade, Atlantic coast fishermen-sealers have been the subject of an intense protest campaign conducted by numerous animal-rights groups. (See Chapter 9.) Initially, sealers were surprised and shocked by the protest, but as the effect of the campaign began to erode coastal community economies, surprise was transformed into anger and then determination to defend the right of primary producers to earn their livelihood by honest work.

For many Atlantic coast residents, the annual seal harvest is an occasion to reaffirm community spirit, manifested as the topic of everyday conversation, in material culture, and in songs and stories told and re-told over generations.

Northern Labrador

Sealing on the Labrador coast has to be understood in the context of widespread change. Over the past three decades, for example, there has been a gradual trend to permanent residence in communities. A number of factors have contributed to this trend, including resettlement of the communities of Hebron and Nutak in the 1950s to the communities of Nain, Hopedale, and Makkovik; the takeover of schools by the Newfoundland government, which keeps the children – and therefore their parents – in the communities; and the centralization and expansion of community or social services, especially health and welfare services. In general, improved access to goods and services has enhanced material welfare, reduced infant mortality, and improved health care, but there have also been negative consequences of the move to permanent communities.

Because families are required to remain in centralized communities so that children can attend school and adults can retain eligibility to receive certain transfer payments, there is an enforced idleness during the winter months. This inactivity, coupled with overcrowding, because housing has not kept pace with population growth, contributes to social conflict, often in association with alcohol abuse. Many communities now include substantial numbers of outside bureaucrats and entrepreneurs, reducing the sense of ownership and of responsibility for community affairs. A remarkable increase in deaths by misadventure, including suicide, homicide, drowning, exposure and accidental shooting, also reflects a growing social malaise. Employees of medical and social agencies have noted that extreme forms of behaviour or symptoms of stress and social conflict are often minimized when families return to summer or outpost camps (Williamson, 1986).

Among the Inuit of northern Labrador sealing is perceived as an important affirmation of cultural identity. The successful hunter is recognized for his skills, which reflect how well he has been taught by his elders. When a hunter returns home, he is often greeted with the question "Anguvene?" Loosely translated, this means, "Have you killed anything?" but the exact translation is, "Have you become a man"? This question illustrates the central importance of hunting to Inuit society. Hunting and the skills which it requires in northern Labrador also define the well-being and success of the individual. A young Inuit leader, returning to Nain after a week of meetings in St. John's and Ottawa reflected: "Too much talk, too much sitting; I feel bad". Immediately he assembled his hunting outfit and headed north to Okak Bay. He returned several days later with four seals. "Now I feel like a man again", he said. "Now I can return to my office at the

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LIA" (Labrador Inuit Association). The current President of the LIA takes his children hunting on his holidays to teach them the skills and values that he has learned as a hunter. The Co-chief Negotiator for Land Claims, a settler, sets seal nets in the autumn and hunts otok (seals basking on the ice) in spring. Most of the young men of northern Labrador, Inuit or settler, hunt as a method of finding meaning in their lives and of restoring themselves (Williamson, 1986).

The pursuit of seals is more than a cultural activity. It is a means of augmenting income, providing fresh meat (which is more nutritious than many store-purchased foodstuffs imported to northern Labrador), and providing skins for mittens and boots. Sealing requires the exercise of personal skills and knowledge of the environment. The extent of such indigenous knowledge is recorded in *Our Footprints Are Everywhere* (Labrador Inuit Association, 1977), the northern Labrador Inuit and settlers' own history of land use and occupancy.

The young learn from the old to identify good ice and bad ice, and the signs of oncoming storms. They learn about frostbite, handling small boats in rough water, which seals will sink and which will float when shot in the water, how to build a snow shelter, and how to use a rifle, a harpoon or a net. All of these skills are taught and absorbed while hunting seals and other animals. The environment can be unforgiving to individuals without such knowledge, and mistakes can be fatal.

The hunt also teaches values. Young hunters learn to respect animals, not to kill what cannot be retrieved, not to kill what cannot be used. The fact that some of these values have been lost is a reflection of how the educational system has deprived many young people of apprenticeship with their elders and has made some ashamed of their own culture.

In them days, we use to have everything. The Labrador people had control of themselves. They could do what they liked, and they wasn't going to destroy anything that wasn't supposed to be destroyed. There is not one trapper or hunter that ever killed a bird or destroyed an animal if he knowed that that bird or that animal was going to breed, and they was going to have their young the next year. They left that alone . . .

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I would like our land to belong to us, because we will always live by hunting anywhere on the land. I would like the land to belong to the Inuit and not to the Kabloonaat [non-aboriginal]. I think all of it is useful, the land and the sea. There are seals in the water and animals go where they should go. Some go south and some go north. It is for the use of the people (Labrador Inuit Association, 1977).

In recent years, the people of northern Labrador and their school board have tried to remedy the effects of isolating young people from their elders. Courses based on aboriginal information and life skills are gradually being integrated into the school curriculum, and the people are seeking the right to appoint their own school board.

Sealing has a recreational element, even for men who hunt seriously for meat and pelts. Boles et al. (1983) explain that "The ice on a fine spring day is an exhilarating environment, and men look forward to the opening of the season with keen interest." Seal hunting in Labrador is primarily an individual enterprise and does not require a co-ordinated group effort as whaling activities once did; but it does involve community co-operation to the extent that elders and others unable to participate directly in the hunt often help to plan the hunting trips. Sealers usually share their success by distributing meat to others in the community.

Island of Newfoundland

For many Newfoundlanders, the seal hunt is an expression of collective identity. The history of the sealing industry is a long record of personal tragedy and triumph, poverty and profit. Although the excesses of seal profiteering are largely a part of history, Newfoundlanders have not forgotten how many lives were lost at the ice, nor how painful is the wait on shore for a sealer's return. The bravery and foolhardiness of sealing ventures are still celebrated in oral tradition, and many folksongs and recitations recount famous and infamous sealing expeditions (Ryan and Small, 1978). Contemporary literary and artistic works also find inspiration in sealing. Brown and Horwood's now-classic book, *Death on the Ice* (1972) and David Blackwood's etchings provide powerful images of sealing and rural outport life of bygone days. In recent years, the anti-hunt protest movement has triggered a variety of counter-reactions. (See also Chapter 9.) Some

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Newfoundlanders have been outraged at what appears to be an attack on a long-established way of life. Others have responded with sarcasm, wit or humour (Lamson, 1979).



"Copying" at the Front

In the rural communities of northern Newfoundland, an individual's reputation and social status depend on how well that person conforms to the predominant cultural values of the community. These values centre around work, family and, in some communities, religion. Anyone who is seen to be working hard and who is making every effort to remain economically independent is generally respected, irrespective of his/her current employment status. However, the person who makes little effort to exploit available local resources and who depends on government transfer payments, particularly social assistance, loses the respect of the community.

Apart from forest resources, seals are one of the few resources available during the winter months. Sealing licences are available to all fishermen and to any other person who has held a licence within the previous five years. The seal hunt provides a major opportunity for men who have no other work to demonstrate their commitment to community values. Men who relinquish their unemployment-insurance benefits and pursue the hunt are highly respected.

Although sealing, like the fisheries, is basically a co-operative enterprise, there is a degree of rivalry among sealers to determine who is the best hunter. Fishermen/sealers take pride in demonstrating their seafaring and

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navigational skills in the depth of winter, and in testing their endurance on the open water in small boats from dawn to dusk, with temperatures well below zero. The men exhibit their commitment to the work ethic and to economic independence even when there are no guarantees of making a profitable voyage. The most successful sealers are often the most successful fishermen (locally called "highliners"). They are among the most industrious workers in the community and are the ones most likely to exhibit leadership and entrepreneurial skills within the fishery. Hence, in northern Newfoundland, sealing activities enhance a person's social status in the community, as well as feelings of self-esteem and respect:

As fishermen/sealers living in small communities of fifty to several hundred people dotted along the northeast coast of Newfoundland, we live close to the land in harmony with nature. It's a lifestyle which we enjoy. We appreciate what we have and we know that many people living in urban areas of Canada would covet our lifestyle if they only knew that it existed. We are poor in many ways. Yet in others we are rich. We survive month-to-month, year-to-year, living in hope for better times. On average, our incomes are well below the poverty line, yet we live a lifestyle that brings great day-to-day satisfaction. We have often heard from our critics that men such as myself only earn a few hundred dollars a year from sealing. Therefore, it is of no great economic benefit. But Canadians and this Royal Commission must realize that for families living near the poverty line, a few hundred dollars means a lot. This is cold hard cash at a cold hard time of the year. Without that money we can't continue to make money, because we need it to reinvest in the rest of the year's fishery. In 1981, before expenses, I received more than \$10,000 from the seal fishery, in 1984 I earned \$184. Where do I look to replace this income? (Canadian Sealers Association, 1985).

Participation in the large-vessel, offshore hunt also reinforced cultural values. Wright (1984) notes that hardiness and the ability to provide for one's family are two criteria of manhood in Newfoundland, though they are certainly not exclusive to Newfoundland:

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It is physically demanding, exclusively male and has a mystique that demands respect from all individuals, whether they have been to the ice or not. Indeed, part of the hunt's mystique is that it takes place in an environment that most people can only imagine . . . The sealers can strip away the fetters of ordinary existence and, for one month, test their resilience in an almost primordial world fraught with dangers and discomfort (Wright, 1984).

Wright also points out that a successful seal hunt requires solidarity, fraternity and trust among sealers. Young men who become part of such a group develop a positive self-image and are respected by their peers and elders. Of course, employment and income derived from participating in the offshore hunt also enhance the social status of the sealer in the community.

One of the hallmarks of the seal fishery was the level of activity and excitement that the arrival of seals brought to isolated communities and households:

The men around here say that seal fishing is one of the best jobs they've ever done. It was hard work, but fun.

Some days it would be 20 degrees below zero F out there. We'd work together.

When you'd see a long school of seals come in . . . I can't explain it . . . Well, you'd get so excited . . . I can't explain it. Now when we see them pass, we notice that there are many more seals than there were before, but we can't fish for them like before.

I can't explain it, but the first seal we'd catch, well that's what we'd have for our next meal. No matter whether it was dinner or supper, that's what we all had to have (Blanchard, 1985b).

In sum, the harvesting of seals and processing of meat and pelts were activities that many residents looked forward to during the long winter months of unemployment. The activities involved teamwork among family

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members and friends, and the camaraderie shared among workers was expressed in the telling of tales and anticipation of another season of sealing. Women were involved in the home processing of meat and in the cottage industry that uses pelts for moccasins, mittens and dolls. They, too, would often engage in conversation about the harvest and readily admit that it is an activity which their husbands enjoy.

North Shore, Quebec

Economic activity of lower north shore fishermen was characteristically organized along family lines. Beaucage (1968) charted the relationships of fishermen and hunters in several settlements and discovered a complex web of co-operation, investment and the exchange of labour and information, determined partly by heritage, partly by choice and partly from the exigencies of labour and investment. At La Tabatière, for example, the seal fishery was a collective and co-operative effort of 10 local families. In contrast, the cod-fishing activity is usually limited to individual households. The rights to specific zones (called "berths") for the salmon and seal-net fisheries are owned by individual families, and are passed down from generation to generation. Descendants of the early pioneering families, including Robertsons at La Tabatière, Mangers at Tête-à-la-Baleine, and Joneses at Wolf Bay, maintained control of the prime fishing locations and had a competitive advantage over more recent migrants to the north shore. The decline of markets for sealskins, however, may alter traditional, family-based resource-harvesting activities. Leonard Robertson summarized his concern that younger persons would not be able to acquire necessary skills to continue the family fishing legacy in this way: "People talk about how in the future men won't know how to operate the big [seal-net] fisheries any more. My older sons will. My younger son is nine and he won't know how to operate it. I'm sad about this" (Blanchard, 1985a).

Sealing activities are an expression of community renewal for many lower north shore residents. The arrival of seals in the month of December and the first meal of fresh seal meat recall memories of years gone by when seals represented winter-survival insurance before unemployment insurance or other sources of assistance were available (Evans et al., 1985).

Magdalen Islands

Madelinots refer to the seal fishery as a "spring gift" because bumper years enabled sealers to earn substantial sums that could be used for major

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investments such as buying or building a home or boat. Langford (1985), a local writer, explained that Madelinots anxiously await the arrival of seals as a sign of spring; their appearance always rejuvenates Islanders, who have wearied of winter. Mainlanders can observe the gradual arrival of spring as trees begin to bud, but Madelinots have no natural indicators other than the gradually lengthening days.

By the end of February, a sense of waiting reaches its peak . . . the seals have been sighted. From this moment on, for the next few weeks, the everyday life of the Madelinot becomes wrapped up in the seal hunt. Tales of the hunt are on everyone's lips. The local radio frequently broadcasts the old ballads recalling the hunt, the tragedy of lost lives and even the false-sounding discourses of the protesters; all this heightens a feeling of celebration brought about by the arrival of the seals. Ice conditions and the activities of the herd are the subjects on every adult's mind. This is the time when the hunters pool together their ancestral knowledge about the winds, the tides and the currents to establish quite precisely the position and movements of the herd (Association des chasseurs de phoque des Iles-de-la-Madeleine, 1985). (Translation).

Although the arrival of seals in the Gulf is greeted with general enthusiasm, not all residents are equally enthusiastic about the prospects of going to the ice. Geistdoerfer (1974) reported that wives and girlfriends would often try to dissuade men from undertaking the hunt on grounds that it was too risky to be worth the generally meagre profits, that the men could easily find alternative and useful activity around the home, and that the smell of seal fat and blood was unpleasant and difficult to eliminate. Such arguments were seldom persuasive enough to convince sealers that the risks were too high, because sealing was perceived as a type of lottery that might, just once, pay off substantially.

Sealing is a demanding physical activity, and sealers must be of sound mind and body to endure the rigours of going to the ice:

Hunting seal is not a game. To come home with a profit, the Madelinot hunter must first be in excellent physical

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condition and possess a strength of character that rises to every challenge. The work is hard, demanding and dangerous. The hours spent on the ice are very long and the weather conditions, which are extremely variable at that time of year, are a constant source of peril (Labelle, 1985). (Translation).

There are numerous signs that sealing activity is at the core of Madelinot identity. Historians (Hubert, Chiasson and Landry), ethnographers (Roy and Geistdoerfer), artists (Langford, Chantraine) and community workers have all represented the seal hunt as more than an economic activity. Because the Island is a small community, people know one another and share common joys and sorrows. In years when fishing is good, everyone benefits, but no one is untouched by the effects of a declining economy or the tragedy of a sea disaster. As the Magdalens are small and relatively isolated in the Gulf, folklore and oral tradition are part of everyday life. Sealing is a prominent subject or motif of traditional Madelinot cultural expression. The 1911 tragedy of Daniel LeBel and the loss of his sealing party, for example, inspired the composition of a folk ballad which continues to survive in local tradition, as well as in repertoires of Acadians living on other Gulf shores.

Fishermen and sealers are keen observers of environmental conditions and of fish and animal behaviour because their lives and livelihoods depend on such knowledge. Observations are shared with other fishermen and may eventually become the basis of traditional belief. One old sealer told Chiasson (1981) that seals are not afraid of men on the ice until they are close enough to see their faces. To avoid frightening the animals and to get close enough to kill them, hunters are admonished to wear veils covering their faces. Certain natural events are taken as signs of impending sealing fortunes. The appearance of crows flying inland towards a group of landmen walking out to the ice is a sign of good luck; crows flying seawards from land in the same direction as the hunters are walking is a sign that seals and ice will move offshore (de l'Orme and LeBlanc, 1980).

Members of the Madelinot community are demonstrating their support for the seal fishery in a variety of ways. A recently published collection of Madelinot recipes includes several for seal-meat preparation. A local bakery uses seal oil for pastry production. Island restaurants serve seal meat in season, and an annual sealing festival is held each summer during the tourist season. The local media report regularly on sealing and related matters, songs and poems are circulated on the airwaves and in print, and Island merchants sell locally produced seal products.



Landsman sealer, Magdalen Islands

In our present society there is a temptation to take seriously only that which can be readily translated into numbers – especially into financial measures. The kinds of intangibles, however, discussed in the previous section, are not to be treated cavalierly in any assessment merely because they do not have dollar signs attached to them.

Consequences of Decline in the Seal Hunt

The 1982 hunt was the last of the traditional kind. In 1983, only 64,509 seals were taken, compared with 153,536 in 1982. Only three large vessels took part; Norwegians had been allocated a quota, but decided against sending ships to Canadian waters. In 1984, the number of seals caught, at approximately 33,500, was hardly more than half the 1983 catch. By 1985, the hunt was a pale shadow of what it had been, for only 23,200 seals were caught. Neither Carino nor Karlsen bought skins, and the hunt was mainly conducted to provide meat; indeed, instances were reported of skins being thrown away.

The decline of the seal hunt had both economic and non-economic consequences. To Canada, a rich country which in 1982 produced goods and services worth some \$329 billion, the loss of the sealing industry must be deemed insignificant from an economic point of view. Even in Newfoundland, one of Canada's poorest provinces, in which three-quarters of sealing activity took place, the hunt generated only about 1% of the gross provincial

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product. In Quebec and Nova Scotia, the other two eastern provinces where seals were hunted, the decline of the hunt caused scarcely an economic ripple.

If sealing is viewed very narrowly, and one is content merely to cite averages, the economic value of commercial sealing can be made to appear minute; for example, the average landsman who took part in the hunt in 1980, when harvest levels were relatively high, was only about \$150 better off after expenses. Sealers on vessels earned more, but in that year still received only about \$1,300 (longliners) and \$2,600 (large vessels), after expenses (King, 1981, Table 12). Sealing was generally limited to a week or two and contributed only a small percentage to average incomes. Indeed, for some longliner owners who also engaged in the relatively lucrative crab and lobster fisheries, the returns from sealing must have been a very small part of their annual income.

The hunt was also an unreliable source of income. The weather and the path of ice floes could sometimes reduce catches to low levels. For instance, Labrador's 1982 catch was only one-sixth of that of the preceding year, although prices offered by the processors were much the same.

It is also true that some landsmen participated in the hunt mainly for sport. In the Magdalens, it is said that, weather permitting, almost every able-bodied man used to go out on the first day of the hunt, but by the second and third days, most had given up. In 1980, 74% of the Magdalen landsmen who took part in the hunt received no cash incomes from the activity (King, 1981, Table 13). Incomes seem to many landsmen to have been a very subsidiary consideration, and cessation of the hunt can scarcely be thought of as a crippling economic blow.

Average figures, however, can be misleading. The hunt was geographically concentrated. In 1982, 86% of the Newfoundland catch (by value) was taken along the northern coast between Cape Norman and Cape Freels, and 90% of the Quebec catch (by value) was concentrated in the Magdalen Islands. Surveys of sealers, carried out for the Royal Commission in St. Anthony, Newfoundland, and in the Magdalens, showed how important sealing could be in those small communities. It provided between 5% and 20% of annual incomes of those surveyed and occurred when many fishermen had exhausted their unemployment insurance (UI) entitlements or were close to so doing. Longliner owners particularly welcomed the sealing season, since it occurred before they could go fishing and traditionally

provided money to buy gear and supplies for the coming season without running them yet further into debt.

The hunt played a particularly important part in the lives of coastal Labradorians. Because of their isolation, many had no alternative source of cash income other than the inshore fishery (Hill, 1983, p. 56). The short fishing season led to low family incomes, and a large percentage of families (approximately 25% in southeast Labrador and over 30% in northern Labrador) live below the poverty line set by Statistics Canada. Sealing income, therefore, was an important support for families in this area.

Although the average earnings from sealing were low, this was in part because of the participation of people who regarded it as a sport or social activity. If one considers only those active landmen who earned some income from the hunt, the average income for landmen in 1980 was about \$375. If one restricts the assessment to serious hunters, the average would be higher. The loss of income from sealing in 1983 was significant also because it was accompanied by depressed catches and prices for groundfish, the mainstay of most serious sealers.

While the sale of skins to processors provided most of the cash income gained from sealing, seal meat was also important. Some seal meat was kept by Newfoundland sealers for their own use, and the remainder was sold at wharves or through supermarkets and other outlets. While there was little or no commercial market outside Newfoundland, seal meat was consumed in the Magdalens and along Quebec's north shore. It was particularly important to the coastal Labrador communities. A 1980/81 survey of households in Rigolet indicated that over 90% of families consumed ringed seal meat during the 12-month period in amounts ranging from 1 kg to 180 kg. Of the 13 households (out of a total of 59) that consumed more than 45 kg, the average cost of buying red meat to replace the protein the seal meat contained would have been \$830 in 1980 (Boles et al., 1983, p. 96-97). The cessation of the seal hunt could well have an increasingly deleterious effect on the nutritional value of food consumed by Labrador residents.

Sealers and their families were not the only people to be hurt by the decline of the hunt. Perhaps the worst hit were employees involved in seal-skin processing. At Blandford in Nova Scotia, where processing took place during March to mid-May, many of the plant workers were fishermen whose position was similar to that of fishermen who went sealing. The plant still operates as a seasonal fish plant and provides employment for a core group of workers. The loss of seal processing has eliminated five to six weeks of employment for each worker, but their jobs still exist.

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The individuals who probably suffered the greatest loss are the plant workers at Dildo in Newfoundland. Many of them were older employees with long service in what were thought to be secure jobs. Normally, the employees worked for about eight months of the year and claimed unemployment-insurance benefits for the rest. The closing of the processing operation deprived them of their main – in some cases their only – means of earning a livelihood. The chances of finding alternative employment in an isolated community are remote. Their level of education is low, and the skills they gained in seal processing are not very marketable even if they were to move away.

The impact on the seal-meat processing workers at Comfort Cove, Newfoundland, is less predictable, as their future depends on the availability of seal carcasses. This, in turn, depends on continuance of the hunt, the price paid to sealers for carcasses, and the market for canned seal meat. If the plant ceases to process seal meat, six to eight weeks of employment will be lost for 20 to 25 individuals. As long as the plant continues to process fish products, however, these people will be able to obtain seasonal employment in that operation.

The social and non-material damage inflicted by the decline of the seal hunt may well be of much greater importance than the economic effects. While to attempt to translate these effects into monetary terms is to overstretch the analytical tools of economic benefit-cost analysis, the social and non-material effects are nonetheless of importance. Some of the main social and non-material effects are described below.

People living in small communities who lose a significant part of their incomes because sealing and seal processing have ceased suffer not only economic deprivation, but also a loss of dignity and self-respect. The receipt of unemployment-insurance benefits nowadays carries with it little stigma, in part because such benefits are paid only to those who have had employment. Unemployment-insurance benefit payments, therefore, are often taken as a sign of industry. On the other hand, those who have to rely on welfare assistance do lose status (Hill, 1983, p. 150). Their self-esteem suffers, and the absence of gainful employment often takes away whatever purpose in life they previously felt. The work ethic is still strong in small communities.

Sealing also provided stimulation at the end of a hard winter when activities were restricted. Hunting seals on the ice on a good day was for some an exhilarating experience. It provided an activity which cemented

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community relationships and restored morale. In Inuit communities, hunting provided an opportunity for men to display their skill and to learn patience and other qualities highly valued in their society. The end of the hunt may therefore be expected to cause social and cultural damage.

It may be argued that the post-1982 behaviour of sealers demonstrates that the social and cultural benefits of the seal hunt have been exaggerated. Once the market for sealskins collapsed, and the cash return from catching seals disappeared, most sealers seemed to lose interest in the hunt. Some observers conclude from this that sealers took part in the hunt mainly for the money, and that "psychic" benefits were minor, at most (e.g., Watson, 1985).

Although this argument may possess some validity, it is itself an exaggeration. When sealskins could be sold, there was a yardstick by which the success of sealing could be measured. For sealers merely to kill seals and leave them on the ice would seem a senseless slaughter and bring no satisfaction or benefit.

It is a situation not very different from that of senior executives of large corporations. There is no doubt that they gain satisfaction from their work. They are continually presented with challenges and receive "psychic income" from success in dealing with them. Monetary incomes, of course, are important partly because they are needed to maintain desired standards of living and security, but also because they provide a measure of success. Take away those money incomes, and the psychic income, undoubtedly present before, disappears.

The dramatic demise of a centuries-old industry was reinforced by the ban on the importation of pup sealskins imposed in October 1983 by the European Community (EC). Even if there had been no ban, however, it is unlikely that the hunt could have been saved. The market for sealskin clothes collapsed, partly because of poor economic conditions and partly, perhaps, because of the swing of fashion; the main cause, however, was the effectiveness of the anti-sealing organizations. (See Chapter 9.) Few people in Europe were buying sealskin garments. Even the skins from older seals, which were not included in the ban, could not be sold. G.C. Rieber and Company closed part of their seal-processing plant in Bergen, Norway, and some merchants and furriers went out of business.

Canadian processors appear to have been gambling, in 1982, that the market would hold up; they bought the 150,000 skins offered to them at close to peak prices. They were wrong; the bottom fell out of the market halfway

through the year. The Karlsen processing plant at Blandford ceased to buy after the 1983 hunt; the Carino Company at Dildo kept going one more year, but on a reduced scale. By the time the 1985 hunt would normally have been held, sealers had no buyers of any size to whom they could sell.

Against the background of the Canadian fur trade in general, valued at several hundred millions of dollars and similarly liable to attack from animal-rights activists, the trade in sealskins has been of small significance. Worldwide, sealskin garments accounted for something like 1% or 2% of the total value of fur garments manufactured. If campaigns such as those directed against imports of Canadian fish products in the United Kingdom and the United States had succeeded, the damage inflicted on the economy of the Atlantic region would have been incalculable. (See Chapter 9.) Exports of fishery products from Canada, some 65% of which originate in the Atlantic region, exceed one billion dollars in value annually: even a slight diminution in this trade would outweigh all the economic benefits of the seal hunt many times over.

A revival of the demand for sealskins would require a change in public attitudes, particularly in Western Europe, and there is little indication as yet that this is imminent. There is some evidence of disarray among anti-hunting organizations resulting from encounter with the contradiction between the rights of animals and those of aboriginal or native peoples and with the distinction between concern for the individual animal and that for the species or ecosystem.

Another consequence of the decline of the seal hunt may be an increase in the size of seal herds and a consequent intensification of competition with the fishing industry for commercial fish stocks. This possibility is not included in the preceding benefit-cost analysis, but it clearly could become of great economic significance. Another potential danger is that larger harp seal herds will exacerbate the parasitic infection of demersal fish stocks and thus add to the cost of parasite removal for fish packers. These matters are discussed in Chapters 24 and 26 of this Report.

Appendices

Appendix 15.1 Purpose and Methodology of Benefit-Cost Analysis

The primary purpose of benefit-cost analysis is to assess the net economic benefits generated by the seal hunt carried out by landmen, long-

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liners and large vessels, for Canada as a whole, for the Atlantic region, and for the provinces that make up that region. Sealing in Atlantic Canada is an ancient occupation, but it attracted little attention outside the areas involved in the hunt and in processing seal products until the early 1960s, when anti-sealing groups started to appear. These groups mounted campaigns aimed at the abolition of the hunt, which they claimed caused unnecessary suffering to the seals and might lead to their extinction. (See Chapter 9.) So effective were these campaigns that the market for garments made of sealskin has virtually disappeared, the European Community (EC) has banned the import of skins from young harp and hooded seals, and although the hunt still officially continues, the take of seals has shrunk from 192,752 in 1981 to about 23,200 in 1985.

In designing the methodology, decisions had to be made about which year's seal hunt was to be examined, which jurisdiction would be covered, how benefits, costs and net benefits would be measured, and which sources would be relied on.

Year

Even when the seal hunt was in full swing, the take of seals varied from year to year, mainly because of weather conditions and the path of ice-floes; no year was "normal" in every respect. The most meaningful approach appeared to be to compute the economic benefits and costs of the hunt in a year that was consistent with the long-term trend and as recent as possible, since otherwise the results of the computations would be of little interest.

Figure 14.8, Chapter 14, shows the number of seals landed, the prices paid by processors for raw skins, and the selling price of sealskins, exported between 1970 and 1984. The year 1982 satisfies the two conditions quite well. If trend lines are fitted to each of these data series, the values for 1982 would be close to those trends, though the catch was down from 1981, a record year in recent times, and a little lower than 1980. It was also the last year before the dramatic decline of the hunt. The year 1982, therefore, is taken as the basis for computing the economic costs and benefits of the seal hunt to the Atlantic region.

Coverage

Separate computations are undertaken for the Atlantic region and for the three provinces (Quebec, Newfoundland and Nova Scotia) which are

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considered for present purposes to be within the region, and which were involved in the seal hunt in 1982. No licences to hunt were issued in Prince Edward Island or New Brunswick in that year. Moreover, because of the distinctive life-style and culture of some sealing communities in Labrador, separate computations are done for that part of Newfoundland. Finally, a computation is made for Canada as a whole.

Benefits

The benefits of the seal hunt are measured by the value of the goods and services it produced: the skins, oil and meat, whether sold or retained for the use of the hunter. In computing benefits for individual provinces, the earnings of sealers while serving as crew on vessels from other provinces and the commissions earned by agents for processors of other provinces are included in the provinces to which they belonged.

Double-counting of "intermediate products" is avoided. For instance, the value of sales of processed skins is included in benefits, but the value of sales of raw skins by the hunter to a processor in his own province is omitted. If a landsman sold raw skins to a processor in a different province, however, the returns the hunter received are included in the computations of benefits to his province; but in computing benefits for the province in which the processor is located, to arrive at totals for the Atlantic region, those raw skins are not counted.

Costs

The costs of the seal hunt are the value of goods and services which have to be given up so that labour and other factors of production may be devoted to the hunt and the transportation and processing of seal products.

Since our concern is confined to the costs which had to be incurred in order to have the hunting and processing undertaken, we shall do all the computations on a marginal basis. Costs which would not have decreased if there had been no hunt, for instance, interest payments on money borrowed by a fisherman/sealer to finance the building of his longliner, are ignored if he would have kept the boat for fishing.

The usual way to compute such costs is to take the payments actually made to these factors on the assumption that they would have been paid a similar reward in an alternative occupation if there had there been no hunt.

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Sealers who were self-employed would be allocated the costs in line with their expected earnings in other occupations if there had been no hunt.

In areas of high unemployment, such as those in which sealing and seal processing took place, the price for labour is particularly difficult to assess. Some sealers might have been able to find other employment if they had not gone sealing, in which case their earnings in those alternative employments provide an approximation to the value of goods and services they would have produced in sealing. Inquiries on this point, however, invariably produced answers that no paid employment would otherwise have been available. This could be near the truth, since about half those involved generally existed during the winter on savings and unemployment-insurance benefits; and the other half could well have been unemployed or have sealed in their spare time. Informants insisted that nobody with a firm job would leave it to go sealing. Similarly, informants confirmed that no significant alternative employment existed for process workers and others associated with the hunt.⁴

The first approach taken in the computations is to assume that the informants were substantially correct, and that no alternative employment would have been available. A "shadow price" of zero is applied to the labour of sealers. The labour employed by processors and agents is treated similarly. This is an extreme assumption, rarely made in benefit-cost analysis, and one adopted here only with misgiving and after much hesitation. But the circumstances surrounding the seal hunt are unusual, since the hunt and the processing activities generally take place over a short period in winter, in small isolated communities where seasonal unemployment sometimes reaches 50%.

Because the assumption is extreme, however, "sensitivity analyses" were carried out to measure its effect. The computations were redone using the alternative assumption that in the absence of the hunt, the rate of employment among sealers and employees of processors and agents would have been the same as the general level of employment in the area. It seems to be the only other practicable assumption, but it is even more extreme in

4. None of this comment should be taken to imply that sealers and others concerned merely sit around idle when deprived of their normal work; rather the contrary, since the work ethic is alive and well in the districts concerned. The men chop wood, go hunting, repair their houses, and do other useful work. In principle the value of such activity should be considered the opportunity cost of going sealing or working on other jobs connected with sealing. But it does not necessarily result in much extra work being done during the year; it may merely redistribute work over time or among people.

the opposite direction, since sealers and persons employed as agents and in processing plants come from occupations normally subject to higher rates of unemployment in winter than is the general population. Other levels of unemployment could be postulated (20%, 30%, 40%, and so on) but each would be difficult to justify.

The first assumption, requiring the use of a zero shadow price for labour, would appear to be sufficiently close to the truth to justify its adoption, and the sensitivity analysis was carried out merely to indicate its effect.

Net Benefits

Net benefits are computed by deducting costs from benefits. It should be noted that this study seeks to establish the overall effect of the seal hunt on the Atlantic region and the provinces which it comprises, and does not concern itself with the manner in which net benefits of sealing and processing seal products were distributed. For instance, the returns to capital and the returns to labour are not separately computed, and no attempt is made to attribute the net benefits to primary, secondary or tertiary sectors of the region. Some comment, however, is made about the value of the hunt to those communities most dependent on it.

Indirect Benefits

When one sector of the economy of a region receives income, the effects spread out and benefit other sectors of the region; in other words, there is a "multiplier effect". If, for instance, part of the income a sealer receives for joining the hunt is spent on fishing gear for the next season and on building materials to finish his basement, the regional producers and distributors of that gear and those building materials would benefit indirectly from the hunt. Such multiplier effects would therefore seem relevant to benefit-cost analysis.

Nevertheless, the use of multipliers is fraught with conceptual and practical difficulties.⁵ Among them is the argument that some, at least, of any indirect effects are caught by the use of shadow prices. Both multipliers and shadow prices rely on the existence of surplus capacity in the economy, since indirect effects can only occur if unused resources are available to

5. See, for instance, Canada, Treasury Board Secretariat (undated). Also refer to Kent and McAllister (1985, p. 61).

expand output in industries linked to the industry being analysed, and shadow prices are appropriate only when some of the resources to be used have been idle. When shadow prices are employed, as in this analysis, the effect of surplus capacity has already been accounted for, at least in part.

Moreover, in the approach used in this analysis, at the conceptual level the computation of benefits is based on the full output of processing plants; this method thus takes account of the value of raw skins produced in the sealing industry. The principal linkage, that between processing and sealing, is thereby recognized and incorporated in the calculations.

For such reasons, multipliers are not applied in this benefit-cost analysis. Some understatement of net benefits may possibly result, but it appears better to tolerate a little understatement than to risk presenting an exaggerated picture based on a dubious theoretical concept and inappropriate data.

Transfer Payments

Since this study sets out to assess the net benefits of the seal hunt to the Atlantic region, no account is taken in the computations of changes in transfer payments (taxes, unemployment-insurance contributions and benefits, and welfare payments) into and out of the region. The federal government could, if it wished, adjust transfer payments so that they matched the loss of net benefits from the hunt; in these circumstances, a benefit-cost analysis which took such payments into account would produce a figure of zero. It would not be answering the question it set out to answer.

Sources

The sources relied upon in this study include material published or otherwise provided by government departments and agencies, briefs to the Royal Commission, non-governmental publications, interviews with public servants and other people connected with sealing and seal processing, and information obtained by consultants engaged in associated studies for the Royal Commission.

Three sources have been used particularly extensively. They are the Department of Fisheries and Oceans (DFO), "Statistics of the Canadian Seal Catch" (various years), and two sample surveys of sealers, vessel owners and processors carried out by DFO and written up in Dunn (1977) and King (1981).

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This study, like every other benefit-cost analysis, has had to grapple with shortage of data. Other information has been used as a proxy where precise data were not available, a good deal of estimation has had to be carried out, and assumptions have had to be made. Once the methodological framework had been established, the task was to select the best proxies and to work on the most reasonable assumptions.

Again, like all other benefit-cost analyses, this study has had to work under constraints of limited resources and time, and the desire for completeness and precision has had to be tempered by the bounds of practicality; in the absence of such constraints, one could have spent a lifetime following up all the economic ripples caused by the seal hunt.

Appendix 15.2 The Economic Value of the Seal Hunt off Canada's East Coast: A Comparison of Five Estimates

Over the past eight years, several estimates of the value of the Canadian east coast seal hunt have appeared. The values of five such estimates have been:

Dunn (1977) ⁶	(referring to the 1976 hunt)	\$ 5.4 million
King (1981)	(referring to the 1980 hunt)	\$12.1 million
Canada, (DFO, 1985)	(referring to the 1982 hunt)	\$ 9.8 million
George (1986)	(referring to the 1982 hunt)	\$ 2.5 million
Watson (1985, p. 36)	(referring to the 1984 hunt as if it had been on same scale as that of 1978)	\$20.5-37.5 million

What follows is a brief account of each of these estimates.

Dunn

This appears to have been the pioneering study. It sought to estimate the "value of the 1976 seal hunt to the Atlantic region". Its method was described as "the value-added approach of subtracting the cost of raw materials from total receipts for each sector of the industry." The study took the receipts of the primary and secondary sectors involved in sealing and

6. The value \$5.4 million appears in the summary table but a figure of \$5.9 million is mentioned at two points in the text.

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deducted the cost of raw materials purchased by each sector; "raw materials" included only sealskins and seal meat. This is an unconventional procedure that yields results which are not very meaningful.

The value-added approach is properly used when computing the contributions of an industry to the value of output produced in a region. It avoids double-counting of goods and services sold by one firm to another. To arrive at a correct "value-added", however, one must deduct not only any raw materials purchased by firms, but also anything else purchased from other firms. For instance, any electric power, chemicals, water, and other goods and services (except labour) bought by a sealskin processor should be deducted from the value of the processed skins produced. Similarly, the cost of ammunition, clothing, equipment and gasoline used in the primary sector should be deducted from the value of raw skins and meat produced by sealers, to arrive at the value-added.

Because Dunn considered only the value of raw materials, he assessed landmen's costs at only \$1 per landman, and costs for longliners and large vessels at only \$14 and \$489 per vessel respectively. From the figures provided elsewhere in his report, it appears that the cost of purchases other than raw materials, by sealers, vessel owners, agents and processors was about \$1.5 million.

The value-added approach, even when conventionally applied, would only provide an estimate of the value of the seal hunt to the Atlantic region if one assumed that the labour and other inputs to sealing and seal processing (except those purchased from other firms) would otherwise have been idle. If this had not been so, their employment in sealing and seal processing would result in a reduction in the output of the activities in which they would otherwise have been employed, thereby incurring cost to the region in terms of forgone production.

Dunn does not mention his assumption that sealers would otherwise have been unemployed, but the assumption is reasonable given the special circumstances in which the hunt and seal processing took place. The majority of sealers were fishermen who were prevented by ice from fishing during the period when most sealing took place, and when alternative employment in the isolated communities in which they lived was scarce.

Dunn notes that "The economic benefit accumulated within the region through associated industries and occupations are not reflected in [his] study." He does not, therefore, apply conventional multipliers. However, he

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does compute a kind of multiplier which was used subsequently in the DFO study; its significance will be discussed later.

Since Dunn was concerned only with the Atlantic region, he took no account of costs to the federal government for surveillance, research, law enforcement and publicity to counteract the activities of anti-sealing groups. DFO estimated that these costs amounted to \$706,000 in 1976/77.

Adjusting Dunn's estimate to take account of costs not included in his computations produces the following:

Dunn's estimate	\$5.4 million
Costs of sealers, vessels, agents and processors	-\$1.5 million
Costs of federal government	<u>-\$0.7 million</u>
Revised estimate	<u>\$3.2 million</u>

King

King's method was similar to that used by Dunn. If he had deducted from the receipts of sealers, vessels, agents and processors the costs of all goods and services purchased from other firms, instead of just the cost of raw materials, his estimate of value-added by sealing and seal processing would have been reduced by about \$1.9 million. Deducting federal government costs as computed by DFO for 1976/77 leads to a further reduction of \$0.7 million.

Another reason that King's result was high is that he estimated the export value of processed skins in 1980 at \$6.1 million. In fact, the export price from Canada in that year averaged \$18.70 per skin, making the export value of the 162,000 skins processed in the Atlantic region in that year only \$3.0 million.

Finally, unlike Dunn, King sought to capture indirect effects of the seal hunt on other sectors of the Atlantic economy, by applying a multiplier of 1.685 to both primary and secondary sectors. The source of this multiplier is given as the DFO Economic Development Directorate, but it seems more likely that it originated from Statistics Canada and was computed for an activity other than sealing and seal processing.

Making appropriate adjustment, and removing the effect of applying a multiplier, in order to produce comparability with the methodology of others, King's estimate becomes:

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King's estimate	\$12.1 million
Costs of sealers, vessels, agents and processors not taken into account	-\$ 1.9 million
Costs of federal government	-\$ 0.7 million
Overstatement of value of processed skins	-\$ 3.1 million
Effect of multiplier	<u>-\$ 4.9 million</u>
Revised estimate	<u>\$ 1.5 million</u>

Department of Fisheries and Oceans (DFO)

The Department of Fisheries and Oceans took the same approach as Dunn and King, but did not deduct the expenditure on raw materials from the receipts of the primary sector.

The deduction of the cost of all goods and services purchased from other firms in both primary and secondary sectors would have reduced the economic impact of the Atlantic sealing industry by about \$2.7 million.

The use of another procedure in its computations resulted in an inflation of value-added. Because the difference between the declared value of processed skins exported from Canada and the value of raw skins sold to processors averaged about \$10 per skin from 1978 to 1981, it was assumed that this differential would apply in 1982, and the value-added by processing in 1982 was computed as \$1.6 million (Canada, DFO, 1985). Added to the \$3.7 million of raw skins produced by the primary sector that year, this produced a value of processed skins of \$5.3 million. In fact, the average export price in 1982 was \$26.90, making the export value of the 151,000 skins processed in 1982 only \$4.1 million. DFO's value-added is therefore \$1.2 million too high.

DFO computations do not take account of the cost of the hunt to the federal government. If the Department's estimate for 1976/77 is used, the value-added falls by another \$0.7 million.

To reach the "total dollar contribution to the regional economy" (Canada, DFO, 1985), DFO used an "impact multiplier" of 2.668. This was the one Dunn computed for the 1976 hunt by dividing the value of processed seal skins by the value of raw skins. Such a multiplier is unrelated to the indirect effects of the seal hunt on other sectors of the Atlantic region. Applied to the value of raw skins produced in any year, it might provide a quick, though unreliable, way of estimating the value of the final products of the seal

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industry in that year, but since DFO computed this value for 1982 in other ways, its use leads to double-counting.

Making appropriate adjustments, DFO's estimate becomes:

DFO's estimate	\$9.8 million
Costs not taken into account	-\$2.7 million
Overstatement of value of processed skins	-\$1.2 million
Costs of federal government	-\$0.7 million
Effect of multiplier	<u>-\$2.6 million</u>
Revised estimate	<u>\$2.6 million</u>

Watson

Watson evaluated the benefits of the hunt to sealers, processors and others, and then deducted their costs. He included in his computations several items that others ignored or did not attempt to quantify. These were:

- cost of the "seal war" (the cost to government incurred by the need to devise policies relating to the hunt, to police the hunt, and to counteract anti-sealing demonstrators);
- income losses to Canadians in other industries (resulting from damage to Canada's European trade);
- external costs to Canadians who do not approve of the hunt (the amount Canadians would be prepared to pay to see the hunt ended). This item is so large that it swamps the computation;
- psychic benefits to sealers (the satisfaction they derive from sealing);
- external benefits to supporters of the hunt (the pleasure some other Canadians experience because of the hunt).

Though he argues against the relevance of multipliers, he includes multiplier effects.

Watson stresses that the only value in his computations which can be regarded as "firm" is the income received by sealers. He makes no claim for the accuracy of his other data since they were "guesstimates" (Watson,

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1985). Even his firm figure is suspect because he assumes that incomes in the sealing industry rose at the same rate as prices in general between 1978 and 1984. They did not. Export prices of processed skins were at their peak in 1978, and the catch and the number of skins processed were as high as in any recent year except 1980 and 1981. His estimate of \$10 million to \$18 million for sealers' and processors' income in 1984, assuming a hunt on the 1978 scale, seems unrealistic, given that exports of skins have never exceeded \$5 million in any recent year except 1981.

Removing items not included in the other estimates, eliminating multiplier effects, and making other appropriate adjustments results in the following revised estimate:

	Low Estimate (\$)	High Estimate (\$)
Watson's estimate ^a	-(21 million)	-(38 million)
Costs of "seal war"	+ 1 million	+ 3 million
Income losses to Canadians in other industries	+ 0	+ 1 million
External costs to Canadians who do not approve of the hunt	+ 25 million	+ 50 million
Psychic benefits to sealers	-0	-5 million
External benefit to supporters of the hunt	-1 million	-3 million
Income gains to Canadians in other industries (multiplier effect)	<u>-1 million</u>	<u>-3 million</u>
Revised estimate	<u>2 million^b</u>	<u>5 million</u>

a. The bottom of the range is the rounded difference between Watson's low estimates of costs and benefits, while the top of the range is the rounded difference between his high estimates of costs and benefits. If instead one subtracted his low estimate of costs from his high estimate of benefits, and vice versa, the range would be extended to \$3.5 million-\$54.5 million.

b. Due to rounding, figures do not sum to the totals shown.

*The Benefits and Costs of the Seal Hunt***George**

George carried out a benefit-cost analysis along traditional lines. Non-economic factors and non-quantifiable economic factors were omitted from the calculations, though their possible importance was acknowledged.

Because of the special circumstances in which the hunt took place, George assumed that labour employed in the hunt and associated activities would have otherwise been unemployed. On theoretical and practical grounds, multipliers were not used.

Summary

After making adjustments, the revised estimates are:

Dunn (1976)	\$3.2 million
King (1980)	\$1.5 million
DFO (1982)	\$2.6 million
George (1982)	\$2.5 million
Watson (1984, but assuming a hunt the size of that of 1978)	\$2-\$5 million

All of these results would need adjustment upward if:

- the non-economic benefits of the hunt were significant;
- multipliers were deemed appropriate.

They would need downward adjustment if:

- because of the existence of the hunt the extra expenses of the federal government were higher than the \$0.7 million incorporated in the above figures for Dunn, King, DFO and George, and the \$0.5-\$1.5 million assumed by Watson;
- non-economic costs and economic costs difficult to quantify were significant;
- the assumption that labour employed in the hunt or in seal processing would otherwise have been unemployed and therefore unproductive was deemed unrealistic.

Appendix 15.3 Cash Earnings from the Hunt

Northern Labrador

Cash income from the sale of sealskins has been important to individuals and households in northern Labrador. For fishermen and part-time wage earners, it provided critical bridging precisely at the time when unemployment insurance benefits were running out and preparations for the next fishing season were beginning. When market prices were high in 1980 and 1981, the most successful seal harvesters augmented their individual income by \$5,000–\$6,000. By comparison, income from the salmon fishery averaged about \$3,000 (Williamson, 1986). In this same period, hunters primarily concerned with seal hunting for food could augment their annual incomes by between \$500 and \$1,000. Not all skins were sold; according to one survey, 73% of the hunters of Rigolet sold all their skins, and 64% of the seal hunters of North West River did the same. Unsold skins were used for domestic purposes or for craft/cottage-industry activities (Boles et al., 1983). The loss of income from seal pelts, coinciding with bad ice years, has brought considerable hardship to the people of Labrador, especially in northern Labrador, and has increased their reliance on welfare or unemployment-insurance payments.

Island of Newfoundland

The analysis in the preceding chapter underscored the importance of sealing income to Newfoundland sealers/fishermen. Up to 75 longliners operating along the northeast coast and the Baie Verte peninsula earned 25%–30% of their annual income from sealing. These vessels provided employment for about 350 persons. In addition, approximately 400 power-boat operators on the east coast of the northern peninsula had annual earnings from sealing averaging \$500–\$1,000. In 1982, six large vessels from Newfoundland carrying 163 sealers took part in the hunt, and the latter earned incomes of \$3,000–\$5,000 from this source. According to vessel owners, most of the sealers lived in communities along the northeast coast.

Tables 15.2 and 15.3 provide a picture of the total income from the landmen hunt and the average income earned in recent years. Based on the number of sealers engaged in 1984, between 2,000 and 2,500 sealers earned an income from this hunt in Newfoundland. Sealers in Newfoundland/Labrador applying for price support for the 1982 and 1983 seasons num-

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bered 783 and 661 respectively. In most cases, each applicant would represent up to four individuals. The numbers include sealers on longliners and large vessels as well as landmen.

The tabulated data represent gross income based on pelt sales only. It is estimated that income from the sale of carcasses more than offsets operating expenses associated with the hunt. The estimates of sealing income, therefore, can be considered conservative.

Table 15.2
Distribution of Landmen's Earnings from Sealing,
Newfoundland/Labrador, 1976 and 1980

Gross Earnings from Sealing (\$)	Proportion of Landmen (%)	
	1976 ^a	1980 ^b
0	30.4	
1-100	32.9	
101-200	12.6	
201-500	14.7	
501-1,000	7.0	
1,000 +	2.4	
0		40.9
1-249		34.2
250-499		11.9
500-749		2.2
750-999		4.5
1,000-1,249		1.1
1,250-1,499		1.9
1,500-1,749		1.4
1,750 +		1.9

Source: a. Dunn (1977).

b. Calculated from King (1981).

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Table 15.3 sets out the income information for landmen by major sealing area. (See Figure 15.1.) In Area A, between Cape Norman and Cape St. John, the income level in some years was almost double the provincial average. The area has accounted for as much as 57% of the seal pelts harvested by landmen in Newfoundland. There were approximately 400 active commercial landmen in Area A, the majority of whom were concentrated in the St. Anthony, St. Lunaire and Griquet area on the end of the northern peninsula. Area B, between Cape St. John and Cape Freels, had more landmen (500), but the income per sealer was considerably less than in Area A. The data suggest that the largest income losses from collapse of the hunt were concentrated in the northern part of Area A.

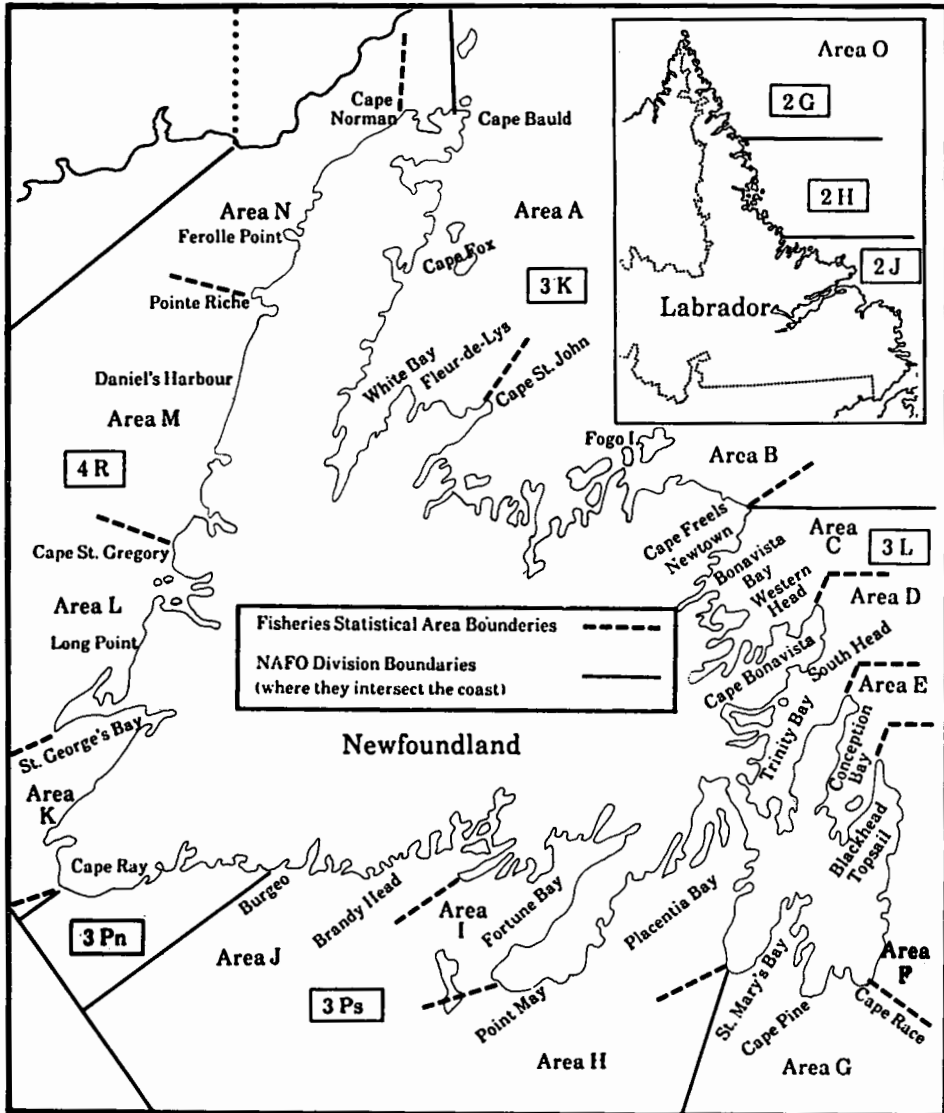
Table 15.3
Earnings from the Landmen's Seal Hunt in Newfoundland, by Area,
1979-1983

	1979 (\$)	1980 (\$)	1981 (\$)	1982 (\$)	1983 (\$)
Area A					
Total sealing income	271,037	393,104	294,011	334,507	157,257
Average income/sealer	678	983	735	836	393
Area B					
Total sealing income	141,503	159,086	102,967	114,488	88,884
Average income/sealer	282	318	206	229	178
Areas M & N					
Total sealing income	26,152	67,657	122,745	n.a.	n.a.
Average income/sealer	105	271	491	n.a.	n.a.
All Newfoundland					
Total sealing income	557,493	892,160	944,852	582,783	n.a.
Average income/sealer	338	541	573	353	n.a.

Source: Derived from DFO tabulations by Gardner Pinfold Consulting Economists Limited (1986).

The total income earned from pelt sales by longliners in Newfoundland, and the average earnings per vessel and per man, from 1980 to 1982, are shown in Table 15.4. The data indicate that a longliner sealer was able

Figure 15.1
Fishery Management Areas of Labrador and Newfoundland



to earn between \$1,000 and \$2,000 a season at that time. According to King (1981), longliners averaged 13.5 days actively hunting seals each season.

Table 15.5 shows that approximately 50% of longliners earn 90% of gross sealing income. Thus, if the vessels earning less than \$5,000 gross per year are excluded, average incomes for vessels and sealers increase substan-

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tially, from 65% to 96% higher for sealers. In 1981, the average sealer in this latter category grossed over \$3,100. If meat sales cover the individual's share of expenses, then \$3,100 is probably equal to the sealer's net return.

These data indicate that a substantial number of longliner sealers made a significant portion of their personal income from sealing activities. The total annual income from 1980 to 1982 for these fishermen/sealers ranged from \$10,000 to \$20,000. Thus it was possible for some individuals to earn 25%–30% of their annual income from sealing. The data indicate that approximately 350 individuals benefited in this way. The remaining longliner sealers (employed on vessels earning less than \$5,000) accounted for less than 10% of total earnings from sealing. Per man, this amount averaged less than \$1,000 a year.

Table 15.4
Longliner Sealing Income from Pelt Sales, Newfoundland, 1980–1982

Year	Longliners ^a (no.)	Sealers ^b (no.)	Total Sealing Income (\$)	Average Earnings Per Vessel (\$)	Average Earnings Per Sealer ^c (\$)
1980	138	620	1,100,905	7,977	1,418
1981	145	650	1,479,748	10,205	1,814
1982	127	570	884,473	6,964	1,238

Source: Derived from DFO tabulations by Gardner Pinfold Consulting Economists Limited (1986).

- a. Note that, for each of the years involved, the number of longliners (and sealers thereon) shown here as reporting income exceeds the numbers indicated as being actively engaged in sealing in Table 14.4, Chapter 14. The explanation appears to be that by-catches of seals occasionally are landed by fishing vessels licensed (or unlicensed) for sealing. (See also Table 14.2, Chapter 14).
- b. Average of 4.5 men per longliner based on statistics recorded in Dunn (1977) and King (1981).
- c. Average earning per sealer based on total earnings by vessel less 20% for vessel share, divided evenly among sealers – a common but not universal arrangement.

The fact that 50% of vessels earned 90% of income is not atypical of the fishing industry in Newfoundland. The report of the Task Force on the Atlantic Fisheries, *Navigating Troubled Waters* (Canada, 1983), noted that 90% of the Newfoundland groundfish catch was taken by 60% of the vessels. The Task Force's data indicated that "good" fishermen are consistently good

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and "poor" fishermen are consistently poor. The same appears to be true of sealing activity.

The level of effort devoted to sealing to earn income can be estimated only roughly. In interviews with the Royal Commission's consultants, sealers said that sealing income was earned over a six-to-eight-week period, usually in March and April. Considering that the high-income vessels were generally ice strengthened, and that their crews, according to the interviews, were strongly committed to the seal hunt, the Royal Commission concluded that these vessels devoted more than the average level of effort to sealing (i.e., a longer period than the 13.5 days indicated by King), but exactly how much more is unknown.

Table 15.5
Longliner Sealing Income from Pelt Sales, for Vessels Earning at
Least \$5,000, Newfoundland, 1980-1982

Year	Longliners (no.)	Sealers (no.)	Proportion of All Longliners (%)	Proportion of Longliner Income (%)	Average Income Per Vessel (\$)	Average Income Per Sealer (\$)
1980	77	350	56	92	13,154	2,338
1981	76	340	52	92	17,913	3,185
1982	57	200	45	88	13,655	2,428

Source: Derived from DFO tabulations by Gardner Pinfold Consulting Economists Limited (1986).

Sealers on the large vessels earned more from sealing than either landmen or crews sealing from longliners. Large-vessel owners reported that sealers on their vessels earned between \$3,000 and \$5,000 from all seal products in the last few years of the hunt. In most instances, this income was earned in one month and represented one-third to one-half of the individual's total annual income. It was earned at a time of year when no alternative income could be earned. For many, it helped to finance the start-up costs of the spring fishing operation.

North Shore, Quebec

Since 1976, there has been a steady decline in the number of licensed landmen sealing on the lower north shore. Dunn (1977) recorded 1,013 licensed hunters, with a participation rate of approximately 40%. By 1980, the number of active hunters had dropped to 121 (King, 1981), although, according to the Institute of Social and Economic Research at Memorial University, Newfoundland, there were still 649 licensed sealers in this area in 1982. With the decline of the commercial hunt, some of the traditional hunting families have reduced their efforts. The Robertsons of La Tabatière, for example, no longer operate their net fishery.

Estimates of cash income from the hunt vary considerably. According to one observer, the seal fishery generally provided between \$400 and \$1,000 for the average north shore hunter, depending on the type of nets used, ice conditions and the size and location of the herd (Bobbit, 1985). However, Léonard Robertson has stated (Blanchard, 1985b) that he cleared \$2,000 in each of the last three or four years of the fishery and, in good years like 1979, he made \$4,000. These figures are probably higher than average, since the Robertsons had one of the larger sealing operations.

The sealing labour force along the north shore of Quebec consisted of about 120–150 people, most of whom lived in the Harrington–La Tabatière area. The lower north shore sealers were mainly inshore fishermen during the summer months. The incomes earned from the seal fishery fluctuated from year to year, and on a gross basis, reached a maximum total of about \$160,000 in 1980. (See Table 14.17, Chapter 14.) The commercial hunt has declined steadily since that year, and it effectively ceased in 1982. With changes in the local economy, sealing is no longer a major source of cash income, but some families still hunt seals on a small scale for meat.

Magdalen Islands

From the data available on landmen it appears that as many as 1,000 sealing licences were issued to Magdalen Islanders in any given year. Active hunters would probably account for 300–400 of the licensed landmen. The cash incomes earned by the active landmen varied, averaging about \$300 in 1980. In that year, almost three-quarters of the active hunters earned no cash income, and a further 17% earned sealing incomes of less than \$250 (Table 15.6). On the other hand, in 1980, a few sealers earned incomes in the \$1,000–\$2,000 range, figures confirmed in interviews with

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sealers. For many Magdalen Islands sealers, unpredictable ice conditions meant that their sealing income varied sharply from year to year.

For the years 1978–1981, sealing data combine landmen and longliner activity. The best of these years was 1979, when over 16,000 seals were taken, with a gross value of \$288,000. If there were between 300 and 400 active sealers, the average gross income would fall between \$720 and \$960, but this is clearly an overestimate because the income data include the longliner catch. The corresponding income ranges in 1982 and 1983, for which it was possible to isolate the landmen's gross income, are \$630–\$850 and \$270–\$360 respectively.

Table 15.6
Income Accruing to Landmen from the Seal Hunt, Magdalen Islands, 1980

Earnings Level (1980\$)	Landmen (no.)	Proportion per Level	
		Cumulative (%)	Adjusted ^a (%)
0	441	74.3	
1–249	102	91.6	67.1
250–499	33	97.1	88.1
500–749	7	98.3	93.4
750–999	0	98.3	93.4
1,000–1,249	2	98.7	94.7
1,250–1,499	6	99.7	98.6
1,500–1,749	0	99.7	98.6
1,750–1,999	0	99.7	98.6
2,000–2,999	2	100.0	100.0
Non-response	17		
Total	610		

Source: King (1981).

a. Omitting zero category.

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Using averages based on all licensed sealers to infer sealing income may be misleading, as King (1981) shows. According to that survey, an estimated 610 landsmen participated in the Magdalen Islands seal hunt. As the income distribution data presented in Table 15.6 demonstrate, however, 441, or 74%, of these hunters earned no income from the seal hunt. Of those hunters who did earn income, 102, or 17%, reported incomes below \$250. Adjusting for the non-earners, the average gross earnings per landsmen sealer in 1980 was \$296. If the results of the 1980 survey are typical of all years, they indicate that in the Magdalens most of the landsmen hunters earned a very small income from the seal hunt, while fewer than 10% earned income accounting for 10%–20% of their total income for the year.

Because these earnings figures represent only cash income, they understate the full value of sealing to the landsmen. Since sealers keep some seals for their own use, many of the sealers reporting a zero cash income from sealing are likely to have gained income in kind (King, 1981); the fact that these sealers earn no cash income may not affect their continued interest in sealing.

Longliners provided sealing employment for another 100–150 persons. Incomes for this group varied from year to year and may have been earned by 40–50 sealers in any given year. The longliner results in Table 14.10, Chapter 14, show that in 1982, for example, 18 vessels, with a total crew of 141, were licensed for the hunt. However, the longliner catch of 10,617 seals was taken by only 10 vessels, with a total crew of 78. Four of these vessels accounted for 83% of the longliner catch. Based on an average 1982 price in the Gulf of \$20 per seal, this works out to average gross earnings on the high-catch vessels of about \$5,000 per crew member. In 1983, the catch declined sharply. Although 21 vessels were licensed, the 2,825 seals harvested were taken by just six vessels. None of the four vessels with the highest catches in 1982 were among these six.

According to one source (Chambre de Commerce des Îles-de-la-Madeleine, 1985), crewmen on a longliner earned about \$3,000 per year from the seal hunt. The 1982 longliner data show that such an earnings level is possible, but probably not typical. Some of the sealers interviewed reported earnings in the \$3,000 range, but several stated that their sealing income varied a good deal from year to year. Both the 1982 and 1983 longliner results reviewed above are consistent with high variability. Still, the available information does show that it was possible to earn a reasonable income from longliner sealing. For crew members reporting earnings from sealing in the \$3,000 range, these earnings would have accounted for 10%–20% of

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the sealer's annual income; this level of earnings may have been received by a relatively small number of longliner sealers.

About 40 sealers from the Magdalen Islands were employed on large vessels during the hunts prior to 1983. Their pelts were taken to Blandford, Nova Scotia, for processing or landed at Port Aux Basques, Newfoundland, and trucked to Dildo for processing there. Once the vessel's share was deducted from pelt revenue, the remainder was split among the sealers and crew on a share basis. The sealers realized additional income from the sale of flippers and carcasses.

Large-vessel sealers generally earned a higher income than hunters operating from longliners or as landsmen. Specific income information for this group of sealers is unavailable but, judging from the harvest levels, sealing earnings were in the \$3,000–\$5,000 range. This income would be earned in a two-to-four-week period, and, if the Newfoundland experience applies, it would represent from one-third to one-half of the sealer's total annual income. When large vessels were active in the Gulf, this income was important for the vessel owners as well, and it could have accounted for between 20% and 50% of the vessel's annual gross revenue. Except for sealing, it is reported, the vessels mentioned would have been inactive at the time.

Cape Breton Island

When the catch in Cape Breton was large enough, and the price for pelts was sufficient, the sealers trucked pelts to processors. Some flippers and meat were sold locally on the island, and personal consumption was also an important end use. The seal hunt in Cape Breton has not been an important regular component of the Atlantic sealing economy. Sealing income came as a windfall in years when the ice carried the seals close enough to the shore to make sealing possible. Even then, except for 1981, earnings from sealing were a very small proportion of the sealers' total annual income.

Cash Income from the Processing of Seal Products

The last year in which a significant portion of total household income came from seal processing was 1982 (Table 15.7). Seal-processing workers have been unable to replace this lost income. A detailed examination of the household-income data revealed that, as late as 1984, the plant worker was

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still the principal wage earner in each of the survey households. In several households, however, the worker's spouse appears to have entered, or more intensively participated in, the labour force.

Table 15.7
Income Characteristics of Workers at the Dildo Seal-Processing Plant

Income Distribution					
<u>Employment Income</u>					
Year	<u>\$2,000-\$4,999</u> (no.)	<u>\$5,000-\$9,000</u> (no.)	<u>\$10,000+</u> (no.)		
1984	14	7	1		
1983	9	11	2		
1982	6	6	10		
<u>Unemployment-Insurance Income</u>					
Year	<u>\$2,000-\$4,999</u> (no.)	<u>\$5,000-\$9,000</u> (no.)	<u>\$10,000+</u> (no.)		
1984	1	16	0		
1983	2	14	0		
1982	3	9	0		
<u>Total Household Income</u>					
Year	<u>\$5,000-\$9,999</u> (no.)	<u>\$10,000-\$14,999</u> (no.)	<u>\$15,000-\$19,999</u> (no.)	<u>\$20,000+</u> (no.)	
1984	2	15	4	0	
1983	5	12	4	0	
1982	1	11	7	2	

Source: Gardner Pinfold Consulting Economists Limited (1986).

Appendix 15.4 Food Supply

Mackey (1985) explains why country foods are central to the well-being of coastal Labrador communities:

Community economies are marked, in the present as in the past, by the relative abundance or scarcity of game. While imported foodstuffs have recently become more available in coastal communities, access to "country food" or "wild food", the term residents use for game which they obtain themselves, continues to be important not only to the economy but also to the health and social well-being of families.

Table 15.8 indicates the importance of "wild food" to residents of northern Labrador in 1979. Health and nutritional problems in the region have been attributed, in part, to changes in dietary habits, including increased consumption of imported foodstuffs.

Table 15.8
Value of Meat and Fish Consumed, Northern Labrador, 1979

Species	Edible Weight (lb)	Proportion of Total Country Food (%)	Value per Pound (\$)	Total Value (\$)
Caribou	151,625	25.4	4.00	606,500
Seal	119,525	20.0	4.00	478,100
Birds and small game	44,000	7.4	2.50	110,000
Fish	282,000	47.2	2.00	564,000
Total	597,150	100.0	-	1,758,600

Source: Usher (1982, Table 2.7).

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In 1980/81, a Labrador food study was undertaken to examine sources of food supplies and consumption patterns for the purpose of analysing nutrients available to the residents of Black Tickle, St. Lewis, Rigolet and Makkovik. In Table 15.9 the importance of seal meat is related to that of other country foods. The Labrador food study identified distinctive patterns of consumption of country foods, which correspond to the six seasons of game availability and abundance: summer, early fall, late fall, winter, early spring and late spring. The relative contribution of seals to the country-food supply for each community is summarized by season in Table 15.10.

Table 15.9
Sources of Country Food Consumed, Four Labrador Communities, 1981^a

Species	Community			
	Black Tickle (%)	St. Lewis (%)	Rigolet (%)	Makkovik (%)
Fish	68	70	44	30
Shellfish	1	1	0	0
Seals	15	16	23	11
Dolphins	0	0	0	1
Land Mammals	1	5	16	39
Birds	15	9	16	19
Total	100	100	100	100

Source: Mackey (1985).

a. Due to rounding, columns may not add to 100% exactly.

The significance of seal-meat consumption in terms of overall health and nutrition is described as follows:

Seal meat is an exceptionally nutritious food. It contains more high quality protein, needed for body growth and repair, and less crude fat than domesticated animals such as beef and pork and the flesh of fat or moderately

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fat fish. Seal meat is a very rich source of iron (7.5 times as much as beef) needed for the development of haemoglobin, the carrier of oxygen, in the blood. Seal meat is also a rich source of Vitamin A, containing 20 times the amount found in the muscle tissue of beef. Seal meat is low in fat and the fat that is present is relatively unsaturated as determined from its iodine number (121). Because of its low fat content and high content of myoglobin, seal meat has a high nutrient density with one-third of the energy equivalents found in beef (Boles et al., 1983).

Table 15.10
Seals as a Percentage of Total Country Food, Recorded by Season

Season	Community			
	Black Tickle (%)	St. Lewis (%)	Rigolet (%)	Makkovik (%)
Summer	2	-	2	2
Early Fall	2	2	16	4
Late Fall	11	8	7	16
Winter	35	35	48	40
Early Spring	27	50	22	4
Late Spring	2	5	10	24

Source: Mackey (1985).

Some households use much more seal meat than others. In Rigolet, for example, 53 of 59 households participating in the Labrador food study consumed ringed seal meat in amounts ranging from 1 kg (2.2 lb) to almost 180 kg (400 lb). Thirteen households reported average consumption of more than 45 kg of seal meat. The substitution value of ringed seal meat was calculated to range from \$158/household to \$2,147/household (Boles et al., 1983).

Seal meat makes a substantial contribution to the economy. The meat of one seal is worth \$140, assuming a rate of \$8.80/kg. If subsistence

hunting of seals were to cease, the cost of replacing seal meat alone would amount to nearly half a million dollars, based on the 1979 consumption rate cited earlier. Nor is it clear that the same nutritional equivalent to seal meat would actually be substituted; if it were not, a variety of health risks might result.

While seal meat is most important to Inuit communities, other residents of the Atlantic region also use the meat extensively. Reference was made to this fact in Chapter 14, and other sections of the present chapter provide additional information on the benefits associated with the consumption of seal meat.

Appendix 15.5 Sealing and the Fisheries: Further Details on their Interdependency

The seal hunt continues to attract sealers, as reflected in licence renewals in Newfoundland and the Magdalen Islands. In Newfoundland sealing retains a perceived value, despite the loss of the export market. Numbers of licensed landsmen actually increased between 1981 and 1983. (See Table 14.5, Chapter 14.) Longliner activity remained relatively stable in the 1970s, but has fallen off sharply since 1982. High levels of regional unemployment may provide a partial explanation for licence renewal. Other factors, however, such as the desire to demonstrate a commitment to community and to the value of work may also be important motivations.

A high licence-renewal rate is also characteristic of sealers in the Magdalen Islands, where other employment opportunities are similarly scarce. The decision to renew sealing licences in the Magdalen Islands, despite the knowledge that markets are very weak, is indicative of three facts.

First, fishermen have witnessed how non-renewal of licences in other fisheries has led to elimination from future participation, thereby reducing the number of total options (Québec, Ministère de l'Industrie et du Commerce, 1975).

A second factor may be a sense of determined optimism that Made-linots will succeed in their efforts to develop a viable, locally based, seal-fur industry. Magdalen Islanders have accepted the fact that the European markets for seal products probably are lost indefinitely, but they believe that a new industry, based on Canadian and local tourist demand, is a realistic

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Crews' quarters on sealing vessel

goal. L'Association des chasseurs de phoque des Îles-de-la-Madeleine (ACP) and the Madelinot community at large, despite several setbacks historically, are enthusiastic about the potential of local seal processing and craft production to provide renewed marketing opportunities for sealers and new employment opportunities for others. A number of concrete steps to that end are being initiated.

The third factor encouraging annual sealing licence renewal is based on social and cultural aspirations. Sealers have been frustrated and angered by anti-hunt protesters. The act of wearing a sealer's badge is perceived as an expression of cultural and community defence against outside interference and misrepresentation (Simon, 1985). Madelinots and Newfoundlanders, in particular, are puzzled and angered by the international protest, but are also perplexed by the lack of support for their culture and way of life from other Canadians. They cite the publication of hate letters and cartoons in the national media as examples of cultural bigotry and slander. As a consequence of their history, Madelinots have become defiant and determined to protect their way of life against all threats. The incident that

occurred in 1984, when a helicopter belonging to protesters was overturned at the Cap aux Meules airport, was widely recognized as a long-overdue expression of cultural self-defence.

Newfoundland/Labrador

The renewal of sealers' licences in the Atlantic region is testimony to the complementary role that sealing plays with other income and employment opportunities. It is also testimony to the lack of such other opportunities. In northern Labrador, for example, survival for the majority of Inuit people is based on a combination of income derived from seasonal and casual wage employment, transfer payments, earnings from the sale of local commodities, and domestic or subsistence consumption of locally harvested resources. In 1979, income in cash and kind from local resources was estimated at \$3 million, or slightly less than half the total economy. Seasonal fish-plant work during the months of July to November engages approximately 35% of the labour force. Some 80% of adult and adolescent males still hunt seals sporadically for a variety of reasons: to supplement domestic needs, to satisfy nutritional requirements and the preference for country foods, to demonstrate individual hunting skills, and to express a sense of cultural pride and identity.

The importance of sealing income is related to the time of year in which it is earned. During the sealing season, the northeast coast of Newfoundland experiences heavy ice conditions, making fishing activity impossible. The only source of income (besides unemployment-insurance benefits) at this time of year has been sealing activity, and extra income was particularly useful to fishermen just prior to the start of the fishing season. The other factor of significance, especially along the northeast coast, is that unemployment-insurance benefits for fishermen stop on 15 May. It is often well into June before fishing gets underway, and there is no other way to earn an income. Income earned from sealing helped fishermen over these periods.

A longliner fishing vessel which participated in the seal hunt had an opportunity to earn a return on investment over eight months, rather than during just a six-month fishing season. The longliner is a heavy capital investment for individual inshore fishermen. This type of vessel was first introduced to the Newfoundland fisheries in the 1960s to extend inshore fishing operations seasonally and spatially. Since a fisherman must go into debt to purchase a longliner, stable levels of income are necessary to cover

debt repayment. With a longliner a fisherman is able to take better advantage of fish-stock concentrations and market opportunities. Along the northeast coast of Newfoundland, from 1977 to 1980, fishermen received good incomes from the herring fishery and from sealing. Many invested in larger, more expensive vessels. Severe restrictions followed the collapse of the herring fishery in 1981, and sealing was abandoned after 1982. Many longliner enterprises have experienced serious financial difficulties as a result. Furthermore, the groundfish fishery in Newfoundland is currently suffering from depressed markets. Thus, although northern cod-stock availability has been improving since the imposition of the 200-mile national fishery-management jurisdiction in 1977, little benefit has accrued to fishermen because prices have been weak.

The relative importance of longliner sealing activity is shown in Table 15.11. Sealing income contributed up to 20% of total income earned by sealing longliners in Newfoundland between 1979 and 1983. Table 15.12 indicates that sealing income for fishermen using longliners was particularly important in Areas "A" and "B".³

Aside from primary fishing activities along the northeast coast of Newfoundland, the second leading type of employment is fish processing. In the communities of Twillingate and La Scie (see Figure 14.2, Chapter 14), major fish plants provide seasonal employment for 400 people. The main source of supply for these plants is the local longliner fleet, and the communities are dependent on the economic health of the fleet. Hence, although it made little contribution directly to secondary economic activity in these Newfoundland study areas, sealing activity was important for its contribution to maintaining a strong, financially viable longliner fleet.

In smaller communities, longliner fleets can play a major role. In the village of Wild Cove, on the Baie Verte peninsula, for example, a fleet of five longliners has been supplying a small "feeder" fish plant which in turn has provided seasonal employment for more than 35 people. Wild Cove is a community of 40 families, and this longliner fleet is vital to its existence.

3. For area key, see Figure 15.1 (Appendix 15.3).

Table 15.11
Newfoundland Longliner Sealing Income from Pelt Sales
as a Proportion of Total Vessel Income

Year	Longliners Reporting ^a (no.)	Longliner Sealing Income (\$)	Share of Total Vessel Income (%)
1979	84	375,030	8.5
1980	138	1,100,905	18.5
1981	145	1,479,748	19.7
1982	127	884,473	12.1
1983	85	251,175	5.2

Source: DFO, special tabulation.

a. See note (a), Table 15.4 (Appendix 15.3).

Area A: Cape Norman to Cape St. John

The major centres for sealing in this area are around St. Anthony on the northern peninsula and on the Baie Verte peninsula. (See Figure 15.1 in Appendix 15.3, and Figure 14.2.) The community of Fleur-de-Lys has been the sealing centre for all ports on the Baie Verte peninsula. Table 15.13 sets out the number of longliners and the relative importance of sealing income to total vessel income for Area A.

To put this in perspective, according to DFO data, longliners that participated in the seal hunt accounted for about one-third of all longliners in Area A, as shown in Table 15.14. In 1981, sealing contributed 31.6% of the total income of longliners in Area A that participated in the seal hunt. This figure was almost 12% higher than the provincial average for longliners during the same period.

In Tables 15.15 to 15.17, the performance of sealing longliner enterprises in Area A is compared with that of the provincial longliner fleet as a whole. These data indicate that during the last four years of significant sealing activity by longliners, the area accounted for between 30% and 40% of Newfoundland longliner sealing income. In two of the three years, the

Table 15.12
Longliner Sealing Income in Relation to Total Vessel Income
by Fisheries Statistical Area, Newfoundland, 1980-1982

Area	Sealing Income (\$)	Total Vessel Income (\$)	Percentage of Total
1980			
A	431,519	1,579,635	27.3
B	507,805	2,143,041	23.7
M	49,691	663,873	7.5
N	90,698	568,313	15.9
1981			
A	602,265	1,903,190	31.6
B	493,406	1,851,012	26.7
M	68,415	769,694	8.9
N	184,292	1,500,293	12.3
1982			
A	313,144	2,218,175	14.1
B	497,602	2,650,979	18.8
M	7,952	166,057	4.8
N	23,349	956,190	2.4

Source: DFO, special tabulation.

- a. The data represent gross earnings from the sale of pelts only; meat sales would add 15-20%, on the average, to these figures.

area's average is significantly higher than the provincial average. In 1981, for example, Area A's average sealing income per longliner was 40% higher than the provincial average. Average individual earnings of \$2,500-\$3,000 per season from sealing also are recorded in a significant number of instances.

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Table 15.13
Longliner Sealing Income from Pelt Sales as a
Proportion of Total Vessel Income: Area A

Year	Longliners Reporting (no.)	Sealing Income (\$)	Share of Total Vessel Income (%)
1979	19	119,245	12.8
1980	40	406,121	27.3
1981	42	602,256	31.6
1982	44	313,108	14.1

Source: DFO, special tabulation.

Table 15.14
Longliner Participation: Area A

Year	Sealing Longliners (no.)	Total Longliners (no.)	Percentage of Total
1980	40	121	33
1981	42	137	31
1982	44	149	30

Source: Gardner Pinfold Consulting Economists Limited (1986).

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Table 15.15
Longliner Dependence on Sealing: Area A Compared with Province

Year	Number of Longliners Reporting		Income from Sealing (\$)		Comparison (%)	
	Area A (1)	Nfld. (2)	Area A (3)	Nfld. (4)	1/2	3/4
1979	19	84	119,245	375,030	23	32
1980	40	138	406,121	1,100,905	29	37
1981	42	145	602,256	1,479,748	29	41
1982	44	127	313,108	884,473	35	35

Source: Computed from DFO data by Gardner Pinfold Consulting Economists Limited (1986).

Table 15.16
Average Income per Longliner from Pelt Sales:
Area A Compared with Province

Year	Area A	Newfoundland
(\$)	(\$)	(\$)
1980	10,153	7,977
1981	14,339	10,205
1982	7,116	6,964

Source: DFO, special tabulation.

Table 15.17
Average Income per Longliner and per Sealer from Pelt Sales,
for Vessels Earning at Least \$5,000: Area A and Province

Year	Area A Longliners Reporting (no.)	Area A Sealers Engaged (no.)	Average Income per Longliner (\$)	Average Income per Sealer (\$)	Provincial Average per Longliner (\$)	Provincial Average per Sealer (\$)
1980	25	110	14,945	2,655	13,154	2,338
1981	25	110	18,221	3,240	17,913	3,184
1982	18	80	14,785	2,628	13,655	2,428

Source: Derived from DFO data by Gardner Pinfold Consulting Economists Limited (1986).

*The Benefits and Costs of the Seal Hunt**Area B: Cape St. John to Cape Freels*

This area encompasses Notre Dame Bay, New World Island, Fogo Island and Hamilton Sound. (See Figure 15.1 in Appendix 15.3 and Figure 14.2.) The major longliner sealing activity is centred on New World Island, particularly around the community of Twillingate. Nearly 20% of the total Newfoundland longliner fleet was located in Area B during the 1980–1982 period. As the following DFO vessel data show (Table 15.18), sealing was a significant activity in Area B, although sealing vessels constituted a smaller proportion (18%–23%) of all vessels in Area B than in Area A (30%–33%).

Table 15.18
Longliner Participation: Area B

Year	Sealing Longliners (no.)	Total Longliners (no.)	Percentage of Total
1980	61	271	23
1981	47	265	18
1982	55	264	21

Source: Gardner Pinfold Consulting Economists (1986).

Table 15.19 sets out the number of longliners and the relative importance of sealing income to total vessel income. In 1980 and 1981, sealing income accounted for approximately 25% of total income earned by the vessels. Over the four-year period, the number of vessels involved ranged from 35 in 1979 to a high of 61 in 1980. Within a given area, the number of longliners participating in the hunt may vary considerably from year to year. If ice conditions are bad, older vessels or vessels not ice strengthened may be withheld from the hunt. Alternatively, if the seal resource is poorly situated, some vessel captains may decide not to participate, anticipating that the high operating cost of their vessels will not be covered by a poor seal harvest.

The number of longliners in Area B and their sealing income is compared with the corresponding provincial figures in Table 15.20.

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Table 15.19
Longliner Sealing Income from Pelt Sales as a
Proportion of Total Vessel Income: Area B

Year	Longliners Reporting (no.)	Sealing Income (\$)	Share of Total Vessel Income (%)
1979	35	119,245	12.8
1980	61	507,805	24.0
1981	47	493,406	26.6
1982	47	497,602	18.6

Source: DFO, special tabulation.

Table 15.20
Longliner Dependence on Sealing: Area B Compared with Province

Year	Number of Longliners Reporting		Income from Sealing (\$)		Comparison (%)	
	Area B (1)	Nfld. (2)	Area B (3)	Nfld. (4)	1/2	3/4
1979	35	84	119,245	375,030	42	32
1980	61	138	507,805	1,100,905	44	46
1981	47	145	493,406	1,479,748	32	33
1982	55	127	497,602	884,473	43	56

Source: Computed from DFO data by Gardner Pinfold Consulting Economists Limited (1986).

In three of the four years, this area accounted for between 42% and 44% of the number of longliners participating in the seal hunt. These vessels earned between 32% and 56% of the total sealing income earned by provincial longliners from 1979 to 1982.

Table 15.21 shows that, from 1980 to 1982, average income per vessel in Area B exceeded the provincial average for longliner income from sealing.

Table 15.21
Average Income per Longliner from Pelt Sales: Area B Compared with Province

Year	Area B (\$)	Newfoundland (\$)
1980	8,325	7,977
1981	10,498	10,205
1982	9,047	6,964

Source: DFO, special tabulation.

Information for vessels earning over \$5,000 per season is set out in Table 15.22.

Table 15.22
Average Income per Longliner and per Sealer from Pelt Sales, for Vessels Earning at Least \$5,000: Area B and Province

Year	Area B Longliners Reporting (no.)	Area B Sealers Engaged (no.)	Average Income per Longliner (\$)	Average Income per Sealer (\$)	Provincial Average per Longliner (\$)	Provincial Average per Sealer (\$)
1980	28	125	15,959	2,837	13,154	2,338
1981	25	112	18,221	3,239	17,913	3,184
1982	34	155	13,464	2,393	13,655	2,428

Source: Derived from DFO data by Gardner Pinfold Consulting Economists Limited (1986).

North Shore, Quebec

On the north shore of Quebec, sealing activity has been a significant source of family income. Of the approximately 200 families in the Harrington Harbour area, up to one-third derived some income from sealing and related activities. Average total household earnings have been estimated at \$7,000 (Evans et al., 1985). Leonard Robertson of La Tabatière estimated

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that earnings in good years averaged \$4,000 each for the six shareholders of his seal-netting crew. His last major seal-net fishery was in 1980, although he has taken a few seals annually since then, primarily for food. Robertson stated:

It's bad with no market. During the last three to four years of the fishery, you'd make \$20 for each skin, and \$2,000 for two weeks of work was good. There wasn't much expense involved, either. Now we can't afford to operate the fishery (Blanchard, 1985b).

Sealing income was earned by a relatively small portion of the lower north shore population. The sealers were predominantly inshore fishermen during the fishing season. As in the other sealing areas, income from the seal hunt, although not large, provided capital for the maintenance of summer fishing equipment.

For a few individuals along the middle and lower north shore, seals provide other opportunities to earn cash income. For example, fishermen are paid for each seal tag turned in to DFO. The Department also pays bounties on grey seals, and in 1983, paid out \$11,415 to north shore residents. Occasionally, it hires fishermen to provide special collections and, since 1969, those fishermen engaged from the Tadoussac region have earned from \$5,000 to \$10,000 annually as a group for collecting harp seal samples.

Magdalen Islands

Magdalens' sealers and the Islands in general derived four major benefits from the hunt. First, the hunt provided income primarily used to maintain or buy fishing equipment at a very convenient time of year. Secondly, the income from sealing supplemented the fishing industry and therefore may ultimately have helped to provide employment in fish-processing plants on the islands. To the extent that the seal hunt has drawn tourists and other people to the Magdalens, it generated a third income benefit. Finally, the seal hunt maintained a tradition which has existed since the settlement of the islands.

As in Newfoundland, individual sealers had the opportunity to earn a significant income in roughly two to three weeks. For many Magdalen Islanders, this work came at a time of the year when the most likely alter-

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native was dependence on unemployment insurance. The seal hunt also offered a rare opportunity for the vessels to earn income during the winter freeze-up.

Some 50% of the total population (14,500) of the Magdalen Islands is dependent on earnings from fishing and related activities. The seal-hunt earnings have always been an important component of fishing income. Sealers' estimated annual average earnings from the hunt ranged from \$1,000 to \$3,000, depending on the size of boat used, catches and prices. Total individual gross earnings from all fishing activities are estimated to average \$13,000-\$14,000; lobster fishermen may earn incomes of over \$25,000 (Chambre de commerce des Îles-de-la-Madeleine, 1985). Although seals are still taken for domestic household use, limited commercial (restaurant) use, and local craft production, sealers have not exerted the same effort to harvest seals since the EC ban was imposed on imports of juvenile harp and hooded sealskins. In a Radio-Canada interview of April 1985, Madelinot sealers expressed their sense of loss at non-participation:

Here, in the month of March, at five o'clock in the morning, all the fishermen - sealers are fishermen - were up, getting ready to go sealing. Everybody was working, while today, they come, they go . . . Now, in the Islands, at eight or nine o'clock, people still sleep; they wait for their unemployment insurance check. They don't work any more. There is nothing for them now, in the Islands (Willie Lebel).

It's strange, we were used to seal on large vessels, as big as sixty feet long . . . school of seals, every year, and this year, it's impossible to go (Reynald Vigneault).

Our parents were doing it, and our grand-parents also; we grew up with it. They showed us how. All of a sudden, no more sales and we are forced to stop. We don't know any more . . . we have to keep going . . . We went this year, three or four times. We went for the meat, but now, it's over. Everybody has meat (Serge Solomon).

Normally, at this time of the year, we would be sealing, but . . . not enough money for spring; we always need money for the boat. There are always some paint jobs to do, some traps to repair (Ghislain Cyr). (Translation)

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