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**PART IV**

**Economic, Social and  
Cultural Issues**

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**PART IV c**

**Sealing Issues in  
Other Countries**

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# Chapter 19

## Sealing in Norway and Greenland

A number of countries besides Canada have sealing industries. Because of historic ties between Canada and Norway in relation to sealing, a review of Norwegian policies is particularly relevant to the Report of the Royal Commission. Greenland's policies and practices, too, have a direct bearing on the Canadian sealing industry. This chapter, then, presents an analysis of the sealing industry in both Norway and Greenland, although more emphasis is given to the Norwegian experience.

The chapter is based on a report prepared for the Royal Commission (Osberg, 1986), abbreviated where appropriate to reduce its length. The international aspects of managing seal populations are discussed later in Chapter 28.

### Norway

#### Salient Features of Norway

##### Geography and Climate

Norway is a northern country of approximately 4.12 million people and 307,000 square kilometres of land area. The population is well educated and highly homogeneous. The major urban areas of Oslo (population 643,000), Bergen (population 181,000), Trondheim (population 128,000) and Stavanger (population 91,000) form a quadrilateral in southern Norway, within which the vast bulk of the Norwegian population live. The area north of Trondheim is very sparsely populated. The indigenous people of this area, the Same, currently number about 20,000 (Norway, 1974, p. 31). Norway is unique among European countries by virtue of its low population density (an average of 13.4 persons per square kilometre). Some 11% of Norwegians live in settlements of less than 2,000 people and a further 30% in rural areas (see Norway, 1983, Tables 1, 2, 7, 8, 14, 372, 450).

Although a visitor from Canada to Norway will find obvious parallels in the vegetation and climate of the two countries, there are also significant differences. Canada is much larger and less homogeneous. The level of urbanization is considerably higher in Canada, and the climate on the whole is considerably harsher. Although Norway lies at a much more northerly latitude than most of the populated areas of Canada, the Gulf Stream causes its weather to be both milder and less variable than Canada's. Although the Canadian pattern of "urban development" is an east/west strip along the American border, while the Norwegian pattern of development is north/south, the effects of the Gulf Stream ensure that even the most northerly areas of Norway have winter weather that is relatively mild by Canadian standards.

The physical and social geography of Norway has the following implications for the sealing industry:

- The influence of the Gulf Stream and the relatively mild winter climate of Norway mean that the Norwegian coast is free of ice throughout the year. Therefore, although fishermen may chance to catch seals in nets, there is no "landsmen's" hunt for seals as it is known in Canada. There is no pack ice on which congregating species of seal, such as the harp or hooded seal, can gather to whelp, and there is no ice which landsmen can use in order to gain access to the seals. The Norwegian seal hunt is, and always has been, exclusively a large-vessel activity, in which Norwegians travel considerable distances from their homes (to the Barents Sea, Jan Mayen Island and Newfoundland).
- The importance of fishing to the Norwegian economy and the rural orientation of Norwegian society mean that many Norwegians are personally familiar with activities such as fishing and seal hunting. The environmental ethic is that such activities should be conducted responsibly (i.e., they should not pose a long-term threat to species survival) and should not be wasteful. There is little disagreement that such activities are both necessary and desirable.
- The political response to declining industries and to regional disparities is undoubtedly accentuated by the greater sense of community that is possible within a small and homogeneous population.

Most Norwegians consider the region of north Norway a marginal area of their country. Unemployment rates, at 10% in the winter months, are high by Norwegian norms. The average assessed income of taxpayers in north Norway is some 8% below the Norwegian average. For many years

subsidy programs have attempted to mitigate regional disparities between north and south Norway, but a trend to depopulation continues in the north (Hansen, 1985).

The parallels between north Norway and Atlantic Canada seem particularly strong when one recognizes that both areas comprise approximately the same percentage (about 10%) of the total national population. North Norway is composed of three distinct counties: Nordland has a population of 245,000 and a land area of 36,300 square kilometres, Tromsø has a population of 448,000 and a land area of 25,100 square kilometres, while Finnmark has a population of 77,000 and a land area of 46,500 square kilometres. The settlement pattern in these northern counties is dispersed, and the counties share many similarities, but just as Halifax and mainland Nova Scotia present a very different series of development problems from those faced by north Newfoundland and Labrador, similarly one cannot assume that the development problems faced by communities in Tromsø and Nordland are identical with those faced in Finnmark. Indeed, in many ways, it is the municipalities of Finnmark which may be most relevantly compared with the communities of northern Newfoundland and Labrador.

### **Economic History, pre-1945**

One of the central facts about Norwegian economic development is its rapidity. Norwegian industrial development did not really commence until after 1890; before that date Norway was a relatively backward and extremely poor country. As Libeerman (1970, p. 34) comments, "Nineteenth century Norway with over half of its gainfully employed men engaged in farming, fishing and forestry activities conducted largely on the basis of non-mechanized, labour-intensive primitive techniques, belonged indeed to the pre-industrial agricultural era."

Although the exact pattern of land tenure and social custom varied from valley to valley, communal landholding and co-operative labour survived in Norway into the late 1800s, in contrast to its disappearance from the English scene well over a century earlier. As Libeerman (1970, p. 57) notes, "behind a land tenure system where common ownership plays a large role, there always exists a strong tradition of extended mutual help between farmers and of group work between the various members of the particular rural community." Perhaps equally important for the social institutions of modern-day Norway was the departure, in 1814, of the hereditary aristocracy with the other trappings of Danish rule. There is no tradition in

Norway of a class of aristocratic or absentee landlords – agricultural land, by law, can be inherited only by someone who intends to farm it productively.

In 19th century Norway the major social problem was not the depopulation of rural areas but their overpopulation. With a short, cool growing season, largely inhospitable terrain and primitive agricultural methods, Norway experienced throughout the 19th century an expanding population base and limited agricultural resources. By the late 1800s emigration was the only realistic option for many Norwegians. In the period 1856–1873, 111,000 Norwegians emigrated to North America; a further wave of 250,000 emigrated between 1879 and 1893, and a final wave of over 200,000 emigrated between 1900 and 1910 (Libeerman, 1970, p. 44; Norway, 1983, p. 6).

The high rate of natural increase ensured that Norway's total population continued to grow, but the social effects of mass emigration were pervasive. Economic historian Libeerman argues that both the poorest of Norwegian society, the so-called "husmaend", and the more enterprising and younger Norwegians were represented in the flow of migration, largely to the United States and, subsequently, to Canada. Return migrants, the so-called "Americans", also had pervasive effects on Norwegian rural society, returning as they did with money, new ideas and an impatience with traditional methods of production. Additionally, migration between Norway and North America was an important factor in the establishment of a Norwegian merchant marine.

Norwegian industrial expansion really began in the early 1900s, with the development of hydro-electric power and associated industrial complexes in the period 1900–1910. The combination of rapid urbanization, industrialization and absentee ownership, plus a substantial deflation induced by the central bank (see Hodne, 1983, p. 33–39) gave rise, by the late 1920s, to very severe labour conflicts. The economic and social crisis of the time produced, however, both a series of constraints on the operation of foreign capital and a historic agreement between the labour organization and the Norwegian Employers' Federation. In 1935, "the two antagonists in effect formally recognized each others' legitimate interests and powers, and agreed on a code of behaviour that henceforth became binding for both" (Hodne, 1983, p. 96). Since that time, the class politics and industrial conflict of the 1920s have been largely replaced by a combination of regulation, interest-group bargaining and social welfare legislation within a broad "social democratic" consensus. In some respects, Norway and Sweden have similar industrial-relations institutions, but in Norway, the German occu-

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pation of 1940–1945 has had an important additional influence in increasing national sentiment and social cohesion.

The pre-1945 experience has implanted some features in Norwegian society that help to explain its policy response to the problems of the sealing industry:

- The social conservatism and “community orientation” of Norwegian society has very deep historical roots. The desire to maintain existing communities, where at all possible, represents a widely shared value that gives development assistance to marginal communities an extremely strong political base.
- Within a homogeneous, egalitarian population, consensus on policy goals is relatively easy to achieve. Given such policy consensus, the Norwegian use of the market mechanism can be described in the words, “The market is a good servant but a poor master.” While domestic market prices act as incentive mechanisms and international market prices act as checks on domestic efficiency, Norwegian society does not endorse the view that profit and loss should be the deciding factor in the regional and social organization of Norway. An unprofitable industry such as the inshore fishery or uplands agriculture or, indeed, sealing may be maintained for an indefinite period for social reasons.

### **Economic History, post-1945**

Throughout the post-war period, Norwegian governments have followed the classic programs of pragmatic social democracy, marked by an increasing share of government and public service in gross domestic product. Norwegian economic institutions demonstrate a high degree of centralized collective bargaining and negotiation. Agreements between the central labour organization and the Norwegian Employers’ Federation set the basic rate of increase of money wages; negotiations between the fishermen’s union and associations of the fish processors set fish prices so as to ensure an income approximately equivalent to average industrial earnings; and farmers bargain collectively with the Ministry of Agriculture over the subsidy scheme, with the same norm in mind.

As a member of the Organisation for Economic Co-operation and Development, (OECD) and the European Free Trade Association (EFTA), Norway has followed a relatively liberal policy with respect to foreign trade. However, there has been little tendency in Norwegian society to “trust the

market" completely as an allocative device for economic activity. In part distrust may stem from the fact that a "market solution" for the Norwegian economy would all too obviously eliminate the marginal farms and isolated villages from which so many Norwegians come. "The dualism between the modern and the traditional culture runs deeper and stronger in Norway and neighbouring states in Europe" (Hodne, 1983, p. 227). A continued emphasis on regional balance is perhaps the major way in which Norway differs from other Western nations in its policy goals.

In common with other developed economies, Norway has witnessed a shift in employment from primary to tertiary industries. Of particular relevance to the decline of Norway's sealing industry has been the country's extremely low rate of unemployment. Between 1960 and 1973, for example, the average annual registered unemployment rate was 0.96% (Norway, 1974, p. 90). More recently, unemployment rates have risen somewhat: over the period 1979-1983 they ranged from 2% to 3% (Norway, 1983, p. 38). In the specific occupational categories "fishermen, whalers and sealers", there were 123 registered unemployed persons in 1970, representing some 0.35% of the 34,600 employed in those industries in 1970 (Norway, 1974, p. 48, 97).

In addition, if we consider employment in sealing as competing largely with employment in the merchant marine or in the fishing industry, the predominant tendency in post-war Norway has been toward a reduction and upgrading of employment. Total employment in ocean and coastal transportation in Norway shrank by more than 30,000 man-years of employment over the period 1960-1983.

The decline in employment over the decade of the 1970s as a whole can be attributed to the decreased manning requirements of modern ocean vessels. Almost all the employment loss in the Norwegian merchant fleet has been in the category of basic seamen who make up engine and deck crews. The great majority of those Norwegians who continue to be employed in the merchant fleet are now in the "managerial" category.

In the fishing industry a similar trend towards more specialization has been evident. Over the period 1948-1980, as Table 19.1 demonstrates, the number of full-time fishermen in Norway has increased by only some 2,700, but as a proportion of total employment in the fisheries, it has increased from 19.5% to 55.8%. The most dramatic change in the Norwegian fisheries has been the almost complete elimination of "occupation pluralism". The proportion of those who depend largely on the fishing industry, but maintain an alternative occupation such as agriculture, has shrunk from 60.5% of Norwegian fishermen to 16%. This trend is encouraged by the



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structure of government subsidization of the Norwegian fisheries. Again, the picture is one of an increasingly "professional" work force, in an economy marked by a general shortage of labour. In this context one would not expect the loss of a few hundred semi-skilled jobs to arouse a great deal of concern.

**Table 19.1**  
**Trend in Dependence on the Fisheries, 1948–1980**

Year	Sole Occupation		Main Occupation		Secondary Occupation		Total	
	(no.)	(%)	(no.)	(%)	(no.)	(%)	(no.)	(%)
1948	16,700	19.5	51,700	60.5	17,100	20.0	85,500	100
1960	21,400	35.1	23,800	39.1	15,700	25.8	60,900	100
1971	20,726	50.1	10,093	24.4	10,562	25.5	41,381	100
1975	18,342	52.0	7,045	20.0	9,874	28.0	35,261	100
1980	19,425	55.8	5,715	16.4	9,649	27.8	34,789	100

Source: Norges Fiskerilag (1984).

## Sealing and "Marginal" Communities in Norway

### Direct Employment Impact

In general, it can be said that personal contacts, reputation and tradition are essential aspects of Norwegian society. Particularly in the sealing industry, long tradition has dictated that sealing vessels originate in either Tromsø or Ålesund, and the crews typically are drawn from particular villages in these areas. As the Interdepartmental Committee on Norwegian Sealing (IDCNS) reported in 1981:

*Sealing has a certain importance for the local communities where the sealers come from. Vessels that are equipped in Tromsø get most of their crews from Balsfjord and Karlsøy. People in these areas have participated in sealing for generations, and the income from sealing has enabled small farmers to acquire equipment*

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*making it possible to operate the farm profitably. The sealing season coincides with a slack period in the operation of a farm.*

*The part of the crew coming from Karlsøy are chiefly fishermen the rest of the year. Otherwise, men with various occupations take the opportunity to hire on as crew members.*

*In the county of Sunnmøre, the municipalities of Ørsta, Hareid and Sande are most involved. Most of the crew members are full-time fishermen, but also there are a number of small farmers that utilize the sealing industry to pick up some extra cash income.*

By all accounts, the success of the captain in getting crew for his sealing venture depended on his reputation for finding seals and ensuring good incomes and reasonable working conditions for his crew. Recruitment into the industry was by personal contacts, and most crew members were repeat sailors well known to their captains. Any new recruits were "recommended" by existing crews.

Of eight currently licensed sealing vessels, four are from Tromsø, three from Ålesund, and one other is from the Lofoten Islands (Kjonnoy, 1985). Tromsø is the centre of regional government for north Norway and employment there has benefited from the general increase in public services and public sector employment in Norway. Overall, the economy of the Ålesund region is rather diversified in employment opportunities, with viable shipyards, local shipping, and shipping equipment and furniture manufacturers. In addition, Ålesund is the fishing centre for northwest Norway, with a heavy concentration of the long-distance fishing fleet. Some 60% of large purse-seiners over 90 feet in length are from Tromsø and Ålesund (Kjonnoy, 1985).

Since there have never been any "landsmen" in Norway, the direct employment impact of seal harvesting on marginal communities has been solely the employment created by sealing vessels. As Table 19.2 shows, the crews engaged by these vessels numbered 1,213 in 1964, but only 155 in 1982. However, since the sealing season is so short, the decline in employment looks much less serious when expressed in terms of man-years (i.e., from about 150 man-years to about 20, a loss of 130 man-years of employment).

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**Table 19.2**  
**Norwegian Sealing, 1962-1983**

Year	Expeditions (no.)	Crew (no.)	Seal Harvest			Returns	
			Harps (no.)	Total (no.)	Value (Nkr '000)	per Participant <sup>a</sup> (Nkr)	(Cdn.\$)
1962	64	1,116	191,677	238,830	16,749	15,008	-
1963	63	1,163	166,361	196,566	23,557	20,255	-
1964	73	1,213	209,221	253,537	37,476	30,895	12,252
1965	61	1,120	97,765	140,118	22,923	20,467	7,783
1966	51	975	188,952	248,744	32,363	33,193	12,246
1967	45	919	220,122	275,404	26,320	28,640	10,113
1968	40	635	124,700	140,645	10,397	16,373	5,594
1969	41	760	135,038	175,438	16,760	22,052	7,300
1970	39	689	146,258	188,960	21,701	31,496	9,417
1971	34	531	119,086	163,289	21,736	40,934	11,542
1972	43	525	81,292	114,955	16,300	31,047	8,164
1973	35	468	82,466	115,931	16,700	35,683	8,719
1974	30	409	77,664	113,932	18,981	46,400	10,364
1975	28	384	75,930	112,274	17,738	46,193	9,246
1976	26	352	69,644	85,090	12,247	34,793	6,378
1977	22	295	56,682	78,154	11,740	39,797	6,692
1978	19	253	35,537	57,906	9,528	37,660	5,895
1979	18	247	46,599	75,088	14,272	57,781	8,570
1980	15	204	45,289	60,746	11,796	57,823	7,733
1981	14	170	51,629	68,745	13,604	80,023	8,419
1982	12	155	59,836	68,211	13,527	87,270	9,226
1983	6	72	21,407	21,493	3,144	43,666	4,263

Source: Norway (1968-1984).

- a. Return per crew member calculated at 45% of catch value, inflated to 1983 equivalent with reference to Consumer Price Index and converted to Cdn.\$ at 1985 exchange rate, i.e., 7 Nkr = Cdn.\$1.

Sealing, like long-distance fishing or ocean shipping, is a way of using local labour on a distant work site, a way in which jobs can be "imported" into isolated and remote communities. Historically, many Norwegians have earned their living as seamen, returning to their local communities after their voyages. This "export of labour/import of jobs" has undoubtedly helped to maintain many isolated and marginal communities. Relative to employment declines in the fishing industry or the merchant marine, the decline in sealing has been rather trivial, amounting to about 0.05% of the employment decline in the merchant marine. The employment losses in these other industries were easily absorbed by an economy with 1%-2% aggregate unemployment and a rapidly growing service sector. Perhaps it is because the direct employment losses resulting from the decline in seal harvesting were so small, both absolutely and relative to those in other sectors, that so few Norwegians are aware of them.

### **Indirect Impact**

It is the indirect impact of sealing on "marginal" communities through its effect on fish catches that may be most important. North Norway consists of the regions of Nordland, Tromsø and Finnmark, which together contain 11.6% of Norway's population, or roughly the same percentage share of Canada's population accounted for by Atlantic Canada. As noted earlier, the Tromsø region cannot be considered a "marginal" area, just as much of Nova Scotia does not consist of "marginal" communities. The closest parallels to the north shore of Newfoundland and the sealing communities of the Gulf of St. Lawrence and Labrador are to be found in the region of Finnmark. This region, with a total population of 77,394 persons in 1982, has an economic base which is overwhelmingly dependent on the commercial fisheries. Unemployment (at 10% in winter months) is high by Norwegian norms. Settlement is scattered along the coast in small communities where the employment opportunities, exclusive of government services and retail employment, are almost entirely related to the fisheries.

Since 1978, the fisheries in the eastern part of this region have been greatly affected by seals. To quote Øritsland (1985a, p. 16):

*Contrary to their usual migration patterns, large numbers of harp seals have followed the capelin spawning migration all the way into the fiords of Finnmark county in Northern Norway in each of the years from 1978 to 1984. Immature seals and pregnant females have*

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*appeared in February, the females disappearing again in early March, while immatures have stayed on the coast to be joined by adult males in mid- and late-March. From mid-April to mid-May adult females have again dominated.*

*At the same season (February–May) an immigration of cod feeding on capelin forms the basis for an annual gill-net fishery in eastern Finnmark. This is the most important fishery through the year for local fishermen in the area. There is evidence that more than ten thousand harp seals drowned in gill nets in Finnmark in each of the seasons 1979, 1980 and 1981. The cost of gear damage was estimated to be between half a million and one million Nkr and the value of lost catches assessed at about half a million Nkr in 1979 and 1980. Since then the Norwegian government has paid damage to the fishermen by a compensation for each seal landed. However, no compensation can be paid for changes in the behaviour of the cod which has made the fish less accessible to the fishermen.*

*The stomach contents found in harp seals drowned in gill-nets in Finnmark consist mainly of capelin. After spawning, the seals also feed on capelin spawn. Cod, shrimp and herring also have been identified in the stomachs of these seals. However, these and other recorded findings do not represent the food selection of harp seals in the Barents Sea through the year. Until further data are available the diet of harp seals in the area can only be guessed at.*

The presence of seals and the simultaneous absence of fish, plus the knowledge that seals eat fish, have led many Norwegians to conclude that it is the seals which have destroyed the fishery in question.

It is apparently impossible to say with scientific certainty that it is an increase in the population of harp seals that has caused the "seal invasion" in Finnmark and thereby depressed fish catches. An alternative hypothesis is that both the presence of seals and the absence of fish may have another, common cause. Hanneson (1985) stated that there was a similar seal invasion during the period 1901–1903, and that water temperatures in

the area may have changed. But the subtleties of such ecological explanations do not impress many Norwegians. Norwegian estimates are that the current herd of approximately one million harp seals would eat approximately 2.5 million tonnes of fish per annum (Øritsland, 1985a, p. 17). In addition to eating fish, seal populations can be observed directly to cause extensive damage to fishing gear and can be presumed to diminish fish catches by scaring fish away from their normal habitats. It is, therefore, accepted "common sense" in Norway that the decline of the Finnmark cod fishery can be traced to the expanding population of harp seals, in turn a result of declining sealing activity.

To summarize, the direct employment impact of sealing on "marginal" communities in Norway is, and has been for many years, minimal. However, the perceived indirect impact of sealing on marginal communities is quite considerable, since it is widely believed that the expanding seal population has damaged the fishing industry with severe consequences for fishermen in marginal communities. As Norway, Ministry of Fisheries (1982) stated, "Even if the actual impact of seals on exploited stocks of fish cannot be accurately assessed, it seems evident that [seals] are competitors to man in his endeavours to harvest the resources of the sea."

For marginal communities in Finnmark, the following points sum up the Norwegian approach:

- consensus on the social necessity of maintaining the economic base of isolated communities in Finnmark;
- common recognition of the importance of the fisheries to Finnmark;
- consensus that the decline of the Finnmark fisheries since 1978 is the result of the expanding harp seal population.

## **Socio-Economic Aspects of the Sealing Industry**

### **The Norwegian Experience**

In the 20-year period 1964–1983, employment in the Norwegian sealing industry fell from 1,213 to 72. (See Table 19.2.) The decline in the industry during the 1970s can perhaps be explained partly with reference to the introduction of quotas on seal catches in 1971, and the declaration by Canada of a 200-mile exclusive economic zone in 1977, with the consequent

diminution of Norwegian catch quotas in Canadian waters. The decline in employment in Norwegian sealing, however, has been rather steady; even in the 1960s the industry shrank considerably, by over 50% between 1964 and 1971. The steadiness of this decline, prior to the emergence of constraints on the total catch or on the marketing of seal products, represents a bit of a puzzle.

As Table 19.2 shows, the returns to labour in Norwegian sealing have been highly variable, although even the worst years have not provided bad earnings for six to eight weeks' work – certainly considerably better returns than those received by Newfoundland sealers. Information provided to the Royal Commission (based primarily on interviews with C. Rieber, 1985, and T. Øritsland, 1985b) by those familiar with the industry indicates that a variety of factors are responsible for the greater returns to Norwegian sealers. Norwegian vessels have used a different strategy from that of Newfoundland ships for the seal hunt itself: smaller vessels with more powerful engines that can penetrate more deeply into the ice, closer to the main herds. Norwegian vessels carried much smaller crews, on average, than those from Newfoundland, thus allowing for a greater catch per man (see Wright, 1984, p. 48). The crew on Norwegian vessels received higher shares of the value of the catch. More extensive training of sealers and a higher percentage of experienced sealers aboard Norwegian vessels meant that quality control in skinning and initial processing of seal pelts was probably superior to that aboard Newfoundland vessels.

The result was that crews aboard Norwegian vessels received, in 1983 terms, an average of 57,532 Nkr per man over the 1972–1982 period. At exchange rates prevailing in 1985, this is equivalent to Cdn. \$8,218. From 1964 to 1971, prior to the introduction of catch limits, average returns per man were higher: some 66,719 Nkr at 1983 values, which is about Cdn. \$9,531 at 1985 exchange rates. In addition, if one can judge from the descriptions of hunt participants, working conditions aboard Norwegian vessels were substantially superior to those aboard Newfoundland vessels. For example, Norwegian boats are said to have bunked their crews one or two per cabin while the Newfoundland norm was four (Wright, 1984). It is said by those close to the Norwegian sealing industry that there was never a problem in locating labour for sealing expeditions. The combination of high pay (relative to Newfoundland), good working conditions and tradition perhaps explains why.

In large measure, employment in Norwegian sealing contracted simply because the size of the sealing fleet shrank. The IDCNS (1981) described the Norwegian sealing fleet as follows:

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*The fleet can be divided into 3 groups, the largest steel vessels of 400–600 gross tons with licenses for the Newfoundland ground; the medium-sized mostly wooden vessels of 100–300 gross tons for the West Ice; and vessels under 100 gr. tons for the East Ice. The total number of vessels in 1980 is estimated to be 20 divided according to licenses:*

	<i>Steel Vessel</i>	<i>Wooden Vessel</i>
<i>Newfoundland</i>	11	0
<i>West Ice</i>	3	6
<i>East Ice</i>	0	0

*With respect to the age and condition of the vessels, it could be said that the Newfoundland fleet is still in reasonably good condition and there has been a certain renewal with 5–6 vessels in the last 10–12 years. There have been relatively few shipwrecks among these vessels and the average age is estimated to be 15–20 years. The West Ice and East Ice vessels have been more vulnerable with many lost. Also in recent years some vessels have been condemned and renewal has not occurred in many years, except for one new vessel delivered in 1979. There has been a gradual decline in the numbers from 58 in 1957 to 10 today.*

*A sealing expedition lasts 1–2 months and that means that the vessel must either have alternative opportunities the rest of the year or tie up. Some of the vessels have additional licenses for purse seine or trawl, some have occasionally had charters as expedition vessels to polar areas and others again are in coast-guard service. Data from 1975 show that on the average sealing comprises 46.2% of the gross income. Due to the relatively low costs for sealing equipment the share of the net income from sealing is somewhat higher than for fishing. On the other hand, there are relatively large expenses for repairs after each sealing trip since it is expensive to repair the ice damage often incurred.*



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Since 1969 there has been a considerable decline in the number of vessels through shipwrecks, transfers and sales. The decline has been smallest among the vessels for the Newfoundland ground, which are all steel vessels. The largest decline has been among the older wooden vessels, either by shipwreck or through retirement because of high maintenance costs. Some vessels have received scrapping grants.

The non-replacement of sealing vessels can be easily explained in economic terms. To quote IDCNS again (1981):

*At Newfoundland the average catch per vessel has declined from 8,000–13,000 seals per vessel in the 1960's to 5000–9000 since 1971. This is associated with the establishment of quotas, but also [indicates] that participation has been somewhat excessive. Vessel owners contacted by the committee say that a catch of 10,000 animals will give a reasonable return, but even with a participation at Newfoundland of three vessels, all of them cannot achieve this number with present quotas.*

*In the West Ice the average catch per vessel has had the opposite movement with 1000–3000 animals until 1970 and 2000–3300 in the 1970's. The owners assume that 3000–3500 seals per vessel will give a reasonable result and this estimate seems to be reasonable considering the number of vessels expected to participate and the quotas presently in effect.*

*The Norwegian quotas are divided equally between participating vessels both in Newfoundland and in the West Ice. In the East Ice where the vessels have been small and of various sizes, the Ministry of Fisheries has found it convenient to divide the quota according to vessel tonnage. In general, it can be said that in consideration of market prices and the cost level at the present time, it is dubious that the results of the hunt will give basis for amortizing new investments in vessels and the interest for new investments has therefore been minimal. (Emphasis added.)*

In addition, there has been a general increase in productivity in the industry as smaller and more efficient vessels have sailed with fewer crew members. Table 19.2 shows, for example, that during the years 1981–1983, the average crew size of Norwegian sealing expeditions was 12.4 men, while during the period 1962–1964, the average crew size per expedition was 17.5 men.

Regulatory constraints have played a role in reducing profitability. In 1964–1965, no sealing was permitted in the Barents Sea, and in 1967 female seals were protected on the West Ice. After 1971, quotas on the Newfoundland hunt began to be an increasingly important factor for Norwegian sealers. Prior to 1971, however, the major factor in the decline of Norwegian sealing was undoubtedly the relative unprofitability, given the high wages of Norwegian sealers, of investing in new sealing vessels to replace the older wooden vessels removed from the industry as a result of shipwreck and condemnation.

### **Norway and Canada Compared**

The Canadian seal hunt can be divided into four distinct social categories: the aboriginal hunt carried out by the Inuit of the Arctic; the landsmen hunt of northern Newfoundland, the Magdalen Islands and the north shore of Quebec; the longliner hunt at the Front and in the Gulf; and the large-vessel commercial hunt at the Front and in the Gulf. These hunts vary in commercial orientation and social significance to the participants. Wenzel (1985) has described the social significance of the seal hunt to Inuit communities, while Kimber (1985) and Sergeant (undated) have described the effects of the hunt on the landsmen of Newfoundland and the Quebec north shore. The aboriginal and landsmen hunts of Canada have nothing in common, however, with Norwegian sealing, save the problem of depressed international market prices for sealskins. The only points of comparison of social and economic effects refer to the large-vessel hunt of Newfoundland.

In terms of social significance, Wright (1984) has ably documented the "rite of passage" and "adventure" which the large-vessel hunt of Newfoundland has offered to its participants. In Norway, sealing apparently performed, in the past, similar social functions (Jentoft, 1985), but their significance has died a natural death as employment in the industry has shrunk.

The major point of comparison, therefore, is the economic impact of sealing. If, during the 1960s and 1970s, Norway had had unemployment

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rates even remotely comparable with those in Newfoundland today, one might say that the loss of 1,100 jobs – even if this figure amounted to only about 115 man-years of employment – would have had serious social and economic consequences. But, as already indicated, unemployment in Norway, until recent years, has not been a national problem. In addition, the local labour markets primarily affected by sealing, namely Tromsø and Ålesund, have been reasonably buoyant. The town of Tromsø has grown quite rapidly, primarily because of the general expansion of public sector employment in Norway in the last two decades and also because of its status as a regional centre for north Norway. From 1960 to 1980, its population increased from 21,091 to 36,268. The town of Ålesund experienced less rapid population growth over this period, its population rising from 23,436 to 25,085 persons, but the labour market in the surrounding areas has been quite diversified and has offered a range of employment opportunities. It would be rash, therefore, to infer that the decline of the Norwegian sealing industry was directly responsible either for creating or for exacerbating unemployment. Given the availability of alternative employment, the socio-economic effects of sealing in Norway, in terms of direct employment creation, appear to be approximately nil.

In 1983, Norwegian exports of fish and fish products totaled some 7.4 billion Nkr. and comprised some 13% of all goods exported, apart from ships, crude oil and natural gas. About 50,000 people were employed in the fishing and fish-processing industries, amounting to approximately 3% of all those in regular employment. In north Norway the importance of the fishing industry is considerably greater, totalling approximately 15% of all paid employment directly connected with this industry. In addition, there is a large, but unquantified, employment multiplier deriving from the production of gear and other inputs for the fishing industry, shipbuilding and ship repair, and the transport and marketing of fish products. The fishing industry is of great social and economic consequence to Norway, and the possibility that it will be adversely affected by an expansion of the harp seal population is taken very seriously.

Similarly, the fishing industry of Atlantic Canada is extremely important to the economy of that region. Hence, although the employment circumstances of Norway and Canada are very different, with consequent differences in the importance of the decline of the sealing industry as that industry affects employment, the potential economic impact on the fishing industry is directly comparable.

Not enough is known about the impacts of seals on fisheries, in either Canada or Norway. (See Chapters 24, 25, 26, 29.) The Norwegian

decision to maintain a sealing industry is basically a "judgment call" that recognizes the social consensus to preserve the livelihood of communities in Finnmark.

## Policy Responses to the Decline of the Sealing Industry in Norway

### The Seal Hunt

The most important Norwegian policy response to the decline in the Norwegian sealing industry has been to ensure, by subsidy, the continued existence of the industry. During the 1960s and 1970s, the Norwegian sealing fleet shrank dramatically. However, nine vessels retain licences for sealing (eight full licences, one partial licence). The Norwegian authorities are not prepared to see the sealing fleet disappear entirely. A subsidy program, therefore, has been initiated, and 5 million Nkr per year are paid to compensate the owners of sealing vessels which do not participate in the annual seal hunt and to subsidize the returns of the five or six vessels that still participate in that activity (Øritsland, 1985b).

In past years, a subsidy was paid on the seal blubber, but this payment has recently been discontinued. Currently (Davies, 1985), the budget (4.8 million Nkr in 1985) for subsidizing the sealing industry is set after discussions between the Sealing Board and the Ministry of Fisheries. (Sealing subsidies of 4.8 million Nkr are a relatively insignificant proportion of total Norwegian subsidies to the fishing industry, which amounted to some 1.4 billion Nkr in 1985.) The subsidy includes a grant for scientific research (500,000 Nkr for tagging on the West Ice) and a budgeted outlay of 4.2 million Nkr on the harvest of pelts on the East Ice (plus an additional 150,000 Nkr for laid-up vessels). The subsidy for pelts is paid to each vessel on a pro-rata basis, that is, on the percentage of the quota of skins which each ship takes. Since quotas are not transferable between vessels, and some vessels do not fill their quota, the budgeted subsidy is never entirely spent. However, a sum of 4.2 million Nkr and a quota of 19,000 skins implies, in effect, a subsidy of 221 Nkr (roughly Cdn. \$31) per skin (Market and Industry Analysts, 1986, p. 26-29).

The subsidy scheme for sealing is institutionally very similar to other subsidy schemes. The decision to maintain the industry is implemented by means of a subsidy, the aggregate size of which is set by collective negotiations between the producer association and the government. The sub-

sidy is paid per unit of output so that producers who are technically more efficient receive higher profits and relatively inefficient producers leave the industry. As the size of the current subsidy per sealskin may indicate, however, it is not uncommon for an industry to depend almost entirely on subsidies, and such a situation can persist for many years.

At current levels of hunting effort, Norwegian sealing will have no significant effect on the harp seal population. If it becomes clear that an expanding population of harp seals is adversely affecting the fisheries, it may be seen as desirable to limit the numbers of harp seals. Subsidizing the remnants of the Norwegian sealing industry can be explained, at least in part, by a concern that complete cessation of the industry would be an irreversible event. Sealing in Norway draws its labour force from very specific communities which have a long tradition of participation in the seal hunt. If the hunt were to die out completely, this tradition of participation might also die, and recruitment of labour for sealing would become more difficult. The hunt itself involves the killing, skinning and initial preparation of the pelt. The conditions are severe and dangerous, and an entirely new labour force might be reluctant to engage in the harvest of harp seals. The skills involved in skinning and the preparation of pelts are becoming increasingly rare, and to re-establish the industry after a period of lapse could prove a problem.

The economics of the sealing industry also depend upon the continued existence of processing capacity, market channels and a final market for pelts. As one might expect, the grading, tanning, dyeing and sewing of seal pelts present somewhat different technical problems from those encountered in the processing of other animal species' pelts. Processing knowledge is highly specific to the industry, and in particular to the firm of G.C. Rieber and Company. Rieber has been able to pay a consistently superior price for seal pelts because it has been able to realize consistently superior returns in product markets (Øritsland, 1985b). This advantage in processing depends, in turn, on the accumulated expertise of a core group of employees. It would take some time to recreate this technological capacity if the industry were to cease operations entirely.

Subsidies to maintain a core capacity in the sealing industry, therefore, can be seen as an "insurance policy", which guards against the risk of loss of a major national asset, the fishing industry. If there is conclusive evidence, in future, of a significant impact of harp seals on fish catches, harvesting rather than culling would be a policy option. To cull the population of harp seals (that is, simply to kill harp seals for population control without making use either of their meat or their pelts) would create

problems of pollution, be wasteful and involve considerable expense without providing any offsetting revenue. Thus for ecological, economic and ethical reasons, the preferred method of controlling the harp seal population may be a harvest rather than a cull.

As circumstances now stand, there is a great range of opinion concerning the effect of the harp seal population on fish catches. Many Norwegians are firmly convinced, however, of the link between increased harp seal numbers and decreased fish catches. In conversations with "ordinary" Norwegians, one often has only to mention the sealing issue to hear the firm assertion that "the seals have eaten all the fish in Finnmark". Some Norwegian fisheries officials use such phrases as "an ecological catastrophe" to describe the consequences of allowing an unchecked expansion of the harp seal population (Osberg, 1986).

Official documents are much more guarded in their pronouncements. The IDCNS (1981) report states (p. 34), "We cannot give simple valid answers to these questions" (of the future impact of seals on north Atlantic fish stocks). The energy requirements of seals under wild conditions, the species of fish they feed on (and the interrelation of those species), the mortality of fish in addition to fish eaten by seals, the age and size distribution of fish killed by seals, and the percentage of remaining fish that would be caught by fishermen: all these important variables are extremely difficult to evaluate. (See Chapter 24.) In addition, changes in fishing techniques have altered in the past, and likely will alter in the future, the type of fish stocks for which humans and seals compete. There is, therefore, great hesitation on the part of seal experts to be as firm in their opinions about the impact of seals on fish catches as is the Norwegian "man in the street".

The best appreciation of the Norwegian policy stance may be gained by quoting directly from the summary and conclusions of IDCNS (1981).

*The relationship between the seal stocks and utilizable fish resources has recently created increasing interest. When this relationship is to be more closely evaluated, two factors are especially important:*

- *The seal stocks under discussion [harp and hooded seals] have been reduced considerably in numbers in relation to earlier stock levels.*

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- *While the exploitation of the seal stocks has been under way, fish catches in the same ocean areas have increased. The trend towards overexploitation of some fish stocks is also noticeable. In future years the stocks can be faced with the following:*
  - *Increasing conflicts with fisheries interests with respect to competition for certain, in part overexploited, fish stocks.*
  - *Increasing problems with respect to rebuilding of the stocks towards earlier levels.*

*The data base for evaluating these factors more closely is insufficient. This applies not the least to the actual role of the seal stocks as competitors for fish.*

*It is known that seals consume considerable quantities of fish and also that fish resources have been reduced considerably due to intensive fishing. The possibility that a depleted stock of seals can increase in numbers up to their historic highs is therefore assumed to be impossible under current ecological conditions. This should not be a goal in itself, according to the opinion of the majority; the goal must be that seal stocks are kept at a level corresponding to their nutritional base. The continuing migration of harp seals to the Finnmark coast seems to confirm that the White Sea stocks are increasing and that the food supply for the seals has become insufficient so that the seals in part break their normal migration pattern.*

*The majority agrees that one must know more about the real food consumption of the harp seal, but this will probably require research efforts over a long period, and it will not be responsible to wait for these research results before a stand is taken on the question of management. (Emphasis added.)*

### **Marginal Communities**

Norwegian policy towards "marginal" communities and, in particular, towards north Norway and the areas of east Finnmark affected by the

recent "seal invasion" is wide ranging and comprehensive. Such policies do not represent a response solely to a decline of the sealing industry. Rather, Norwegian regional policies reflect widespread consensus that the depopulation of north Norway is simply unthinkable. Part of the Norwegian social contract is a commitment to maintain, if at all possible, local communities. Norwegian regional policy is complex and only tangentially related to sealing.

Concern for the regional implications of changes in fisheries employment is often cited (Holm, 1985) as the underlying basis for the Norwegian policy of subsidizing fish catches, and for the policy of restricting fishing licences to owner-operators. Transportation subsidies in Norway are pervasive and are heavily slanted towards north Norway. For instance, informal estimates by the Ministry of Community and Labour Affairs indicated that somewhat over a quarter of transportation subsidies in total and roughly 40% of non-rail transport subsidies are directly targeted on north Norway (Jensen and Movald, 1985). The decentralization of government departments and educational institutions is extensive. Capital subsidies, grants and favourable credit terms are available for investment in north Norway, as are subsidies for municipal infrastructure.

While subsidies to maintain employment and population levels are common in north Norway, there is no explicit subsidy for wages. Employers in this area are eligible for a reduction in employer contributions to national insurance (from 15% to 8%), which amounts to a rather small and indirect subsidy to employment. More explicit wage subsidies, it is feared, would stigmatize subsidized wages as welfare, undermine the social solidarity of small and isolated communities, and create long-term problems of dependency on transfer payments (Solomon, 1985).

## Transferability of Norwegian Policy to the Canadian Context

### Policy for the Sealing Industry

To simplify somewhat, Canadian policy choices with respect to the sealing industry are abandonment, continuation of some level of sealing within the present industry structure, or a "Canadianized" industry with final processing located in Canada. The economic arguments for continuation of the seal hunt depend on the assessment made of the importance of sealing for the fishing industry, and the direct employment and income creation attributable to the hunt. There is probably no real replacement for



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the sealing industry, since, although it creates relatively few man-years of employment in total, its employment effects are spread among a relatively large number of people over a relatively short period in which there are few potential alternative uses for workers' time. Furthermore, the comparative advantage of coastal communities in Labrador and northern Newfoundland (i.e., what such communities can produce more cheaply than others) appears to be restricted to "fish and seals". As a consequence, there is considerable discussion, particularly in Newfoundland, of the possibility of maintaining a scaled-down sealing industry with local processing of pelts. The Norwegian government has clearly decided that it should maintain at least the core of a processing industry for seal pelts, and the issue for this Report is whether such a policy is potentially transferable to a Canadian context.

The sealing industry is small enough in absolute size that minor indivisibilities in capital equipment become important parts of its cost structure. To process sealskins in Newfoundland, for example, a de-blubbering plant is required such as the one operated by Carino Company Ltd. at Dildo, Newfoundland. The capital investment in such a plant is not particularly large (less than \$2 million) but its capacity (200,000 pelts per year) is substantially in excess of any reasonable estimate of pelt production required in the immediate future. When, as in 1984, the numbers of seal pelts processed is only 27,000, the fixed costs of such an operation become very significant. G.C. Rieber and Company, of Bergen in Norway, estimates the cost of de-blubbering 25,000 pelts at \$12 per pelt, while the cost of de-blubbering and initial preparation of 80,000 pelts would be about \$7 per pelt. On this basis, the fixed cost of a de-blubbering plant would be in the area of \$180,000-\$200,000 and the marginal cost per pelt in the vicinity of \$4.75. (Figures from G.C. Rieber letter of June 1984, quoted by Osberg, 1986.)

No cost data are publicly available on the various stages of final processing currently performed in the Rieber firm's operation at Bergen. Those familiar with the industry, however, emphasize the role played by highly specific, technological expertise. The grading and tanning of seal pelts is not quite the same as the grading and tanning of the pelts of other animals, and a good deal of expertise has been accumulated by that firm. In addition, final processing must have close ties with the fashion industry, adapting quickly to the vagaries of that industry.

*Due to the close contact [with customers], the Norwegian skin processing industry is heavily involved in developing models, and foreign buyers of skins have at any time an overview over the availability of the various types of*

*skins. The Norwegian processing industry is very elastic and can on short notice change dressing and tanning methods so that they cover individual requirements of buyers. This is especially required with respect to dyed sealskins since fashions change rapidly. The sealskins used for trim must follow textile fashions (IDCNS, 1981.)*

Undoubtedly, one could in time duplicate this expertise independently, but it is likely that access could be obtained more economically by co-operation.

A necessary condition for the establishment of a Canadian seal-processing industry would be a considerable degree of government support. The process of developing new markets would be a slow one, and subsidies would be required in the development phase of the Canadian seal-processing industry. (See Chapter 18.)

### **Policies for Marginal Communities**

Whether Norway's policies with respect to marginal communities lend themselves to the Canadian context is debatable. There are many differences between Canadian and Norwegian society, not least in the broad consensus by which subsidies to marginal communities and regions are supported in Norway. This commitment to maintain communities in north Norway and in the marginal farming regions of south Norway is integrally connected with the Norwegian way of life. In conversations with a large number of Norwegians in business, government and academic, for instance, Osberg (1986) found universal recognition that subsidies to north Norway amounted to a great deal of money. Only two people, neither of whom was a native Norwegian, were willing to argue that such subsidies were misplaced and ought to be reduced. In contrast with Canada, the geographic mobility of labour is *not* viewed as an inherently "good thing" in Norway.

Local preference is pervasive in Norway, and by "local" Norwegians usually mean municipalities, of which there are 454 in a nation of 4.4 million people. As a matter of course, Norwegians have for generations accepted the principle that the title to agricultural land can pass only to someone who intends to reside in the region and farm the land. Seaside properties in south Norway are worth far more as seasonal cottages for Oslo residents than as year-round homes for local inhabitants, but Norwegians accept the proposition that local residents should have legal preference in house sales (Aasberg, 1985). The pervasiveness of an ethic exalting local

preference and community maintenance creates a significant difference between the Canadian and Norwegian "way of doing business".

For example, a general commitment to local development and the maintenance of communities carries the corollary that individuals in those communities can plan on having the option of living where they grew up. The stability of the population in these communities implies that personal and familial relationships are of very long standing, and that little remains unobserved, especially in rural areas. Family and personal reputations are therefore extremely important in Norwegian society. In such a context, Norwegian commercial banks do not emphasize real security for loans; rather, Norwegian banks "bank the person". Given the detailed information that is available on loan applicants in a closely knit and cohesive community, and the social opprobrium that default on a bank loan would incur, Norwegian banks understandably operate with very low loan-loss ratios and with a high degree of decentralization of decision making. Each local branch of even the largest commercial banks has a "board of directors" composed of local community leaders, and one aspect of competition among the major commercial banks relates to whom they can attract, in each area, to their local board (Vollelv, 1985; Stubberud, 1985; Aasberg, 1985).

The specific policy tools of Norwegian regional policy, such as transport subsidies, small business loans, industrial parks and development officers, are not unique – indeed the list of their policy initiatives is very similar to that of Canada. But the implementation of a regional policy package depends crucially on the informal information flows, tacit co-ordination and implicit bargaining that are part of each policy initiative. There are substantial differences between Canada and Norway in these aspects. In addition, in Norway there is a clear normative ideal – that of the "owner-operator" – towards the maintenance of which much policy is aimed. An example of the possibilities, and of the differences in institutional structure which surround development initiatives is provided by the fish-farming issue.

#### **Aquaculture**

Norwegian success in the farming of trout and, especially, of salmon has become relatively well known. In 1984, the primary value of fish caught by the Norwegian fishing industry was 4.05 billion Nkr, while the primary value of fish cultivated by Norwegian fish farmers was approximately 1 billion Nkr. In 1984, some 26,000 tonnes of fish were produced by Norwegian fish farms, 85% (22,000 tonnes) of which were salmon and the remainder trout. The growth of this industry in recent years has been nothing short

of phenomenal, and there is keen demand for the limited number of licences that Norwegian authorities make available each year. Based on the predicted output of current licensees, production of Norwegian farmed salmon is anticipated to amount to between 50,000 and 55,000 tonnes in 1987 (Kjonnoy, 1985; see also Norway, 1968-1984, Table 177).

The profitability of fish farming has been well documented. Nonetheless, there has been a deliberate policy in Norway to issue licences for fish farms rather slowly, and to favour areas of north Norway where other employment opportunities are in relatively short supply. In addition, it has been deliberate policy to maintain an industrial structure of "small holders" in fish farming. Licences are issued only for a size of farm that can be run with an estimated two man-years of employment creation, plus occasional assistance at harvesting time. Only owner-operators receive licences for fish farming in Norway, although in a recent move the government has allowed up to 49% equity participation by outside capital interests.

Fish farming cannot be thought of as a panacea to "solve" the unemployment problems of marginal communities in north Norway or of those communities affected by the demise of the sealing industry. In the first place, fish farming is relatively capital intensive and creates few jobs. Fisheries officials estimate that the current Norwegian industry generates some 2,000 man-years of employment in fish farms and perhaps as much again in handling and transportation of the final product. Since, in order to obtain a maximum price per kilogram of fish, Norwegian farmed salmon is exported either fresh or with a minimum of processing, little processing employment is generated. The farming of fish creates stable, year-round employment for a relatively small number of workers. Sealing (by landmen) entails a very short period of employment for a relatively large number of workers. Encouraging the growth of aquaculture could provide only a partial response to the employment problems created by the demise of the sealing industry in Canada. (See Chapter 17.)

At first glance it may appear odd that Norwegian authorities have attempted to push the aquaculture industry towards sites in north Norway that are far from potential markets for fresh fish. Transportation costs, even subsidized costs from the north of Norway, are considerable. Although regional balance was the motivation for the licensing policy, there may be another rationale to consider. Aquaculture is, in essence, a way of converting fish with a low market value to fish with a high market value. Since the costs of feed are said to represent approximately 50% of the operating costs of fish farms, the long-run economics of fish farming probably imply that aqua-

culture will be successful in locations where the opportunity costs of feed are low (Hannesson, 1985).

Since fish farming is a young industry, rather rapid innovation and productivity improvement can be expected in the next few years. Labour productivity, in particular, is likely to increase over time, and as the industry expands, specialized equipment is sure to be developed and produced at costs that are lower than those of today's custom-built installations. The biological efficiency of the conversion of feed to marketable fish product is also likely to improve (indeed, the Norwegians have already made some progress in salmon breeding), but this is inevitably a slow process. Productivity improvements in non-feed costs imply, however, that feed costs of fish farms will increasingly dominate the production costs of such farms. Clearly, the opportunity cost of the feed for fish farms is reduced if it originates as a by-product of other fish-processing activity. Alternatively, fishing regions whose distance from markets implies that the catching of low-value species is unremunerative may find a niche in the aquaculture industry of the future.

Feasible markets for the product of fish farms are an aspect only tenuously related to distance. Already the production of Norwegian fish farms is being flown over Newfoundland for sale in New York and other markets in the United States. Timeliness, regularity and speed of communication are far more important in maintaining a dependable supply of high-quality fresh product than is distance.

The example of aquaculture therefore illustrates the problems and potentials involved in transplanting development initiatives. The technology and its success in north Norway offer an exciting vision of prosperity – indeed, in the longer term one has to think seriously about the viability of the traditional “hunter-gatherer” type of fishery. However, success in Norway does not mean success in eastern Canada. Much colder water temperatures and winter ice, among other factors, weigh against aquaculture in Newfoundland. Chapter 17 presents a more detailed review of the prospects for aquaculture as a partial substitute for the Canadian sealing industry.

## **Greenland**

With the gradual decline of the Norwegian sealing industry and the recent sudden collapse of the Canadian sealing industry, Greenland has become by far the largest single source of sealskins for international trade.

Although the Greenland authorities take some pains to distinguish the aboriginal hunt for adult seals in Greenland from the commercial hunt for seal pups in Canada, the international market for all varieties of seal products has been shattered by the recent anti-sealing campaigns (see Dixon, 1984, p. 65). The commercial sale of seal pelts from the Greenland seal hunt, therefore, continues to survive only as a result of massive subsidization (estimated to amount to 11 million Dkr in 1984).

Greenland is the largest island in the world, more than 2,000,000 square kilometres in area, but it has a total human population of only about 52,000. Most of Greenland's inhabitants reside in the southern and western regions, in settlements whose economic base is the coastal fishery for cod and deep sea shrimp. It is only in the northern and eastern regions that the original aboriginal hunt is the basis for human existence. Although hunting techniques obviously have changed with the introduction of rifles and, more recently, of outboard motors, seals remain the primary prey species.

In 1983, some 93,000 seals were killed in Greenland. Overwhelmingly, this is a subsistence-based hunt in which the seal meat is used for consumption both by humans and by their dogs, which are required to pull dog sleds. In the areas dependent on hunting, fur pelts are the only possible tradeable goods. Given the requirement to purchase hunting equipment, such as ammunition and fuel for outboard motors, it is evident that the sale of seal pelts is just as vital for continued human survival as the seal meat consumed directly by humans. As Table 19.3 indicates, only the northern and eastern regions of Greenland depend entirely on hunting activity. These regions have a total population of some 8,770 inhabitants. In the rest of Greenland hunting is a supplementary activity which, although important, is not the centre of continued existence:

*Approximately 700 to 800 people are actively engaged in the traditional Greenland industries of sealing and other forms of hunting. It has been estimated that these activities provide a livelihood for approximately 2,500 people and represent the economic basis of about one quarter of the total population. Sealing and hunting are carried out all over Greenland but are of greatest importance to the people of eastern and northern Greenland (Denmark, 1983, p. 8).*

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**Table 19.3**  
**The Sealing Industry in Greenland**

District	Population 1 Jan. 1983	Economic Base	Average Seal Catch 1964-1966
Thule	795	hunting only	4,500
Scorebysund	509	hunting only	4,600
Ammassalik	2,754	mainly hunting	8,300
Upernavik & Uummannaq	4,713	mainly hunting	35,000
Central West Disko Bay area	11,869	fishing, hunting	21,600
South West Sisimiut <sup>a</sup> to Paamiut <sup>b</sup>	21,742	coastal fishery	3,500
South Narsaq, Qagortoq <sup>c</sup> , Nanortalik	8,192	fishing, sheep farming	2,600
Nomads and others	1,329	-	-
<b>Total</b>	<b>51,903</b>		<b>80,100</b>

*Source:* Greenland (1983, Table 3, p. 134); Kapel and Petersen (1982).

a. Formerly Holsteinsborg.

b. Formerly Frederikshåb.

c. Formerly Julianehåb.

The actual catches of seals in Greenland have fluctuated considerably in recent years. Approximately one-third of the Greenland seal catch does not enter international commerce but the Royal Greenland Trading Company, in recent years, has bought about 60,000 skins annually from aboriginal hunters. In the current state of international markets, the economic value of sealskins in the Greenland economy is set entirely according to the willingness of Danish authorities to subsidize the acquisition and stockpiling of seal pelts. The estimated cost of subsidizing the purchase of

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seal pelts, as already mentioned, is some 11 million Dkr, or 200 Dkr per skin. Relative to the cost of attempting to establish other industries in northern Greenland or the cost in social services to support Inuit communities dependent on the seal hunt, it can be argued that the subsidization of seal-pelt purchases makes considerable economic sense. (See Table 19.4.)

**Table 19.4**  
**Cash Returns to Greenland Sealers, 1976-1983**

Year	Sealskins <sup>b</sup>	Sales <sup>a</sup> (Dkr '000)		Percent Variation (in real terms) <sup>d</sup>	
		Meat & Blubber	Total		Current
1976	9,550	379	9,929	5,739	
1977	7,913	478	8,391	4,537	-21
1978	8,342	560	8,902	4,385	-3
1979	10,051	621	10,672	4,587	+5
1980	9,276	1,061	10,337	4,219	-8
1981	7,797	1,206	9,033	3,238	-23
1982	8,723	773	9,496	2,986	-8
1983	8,454	1,022	9,476	2,654	-11
Average, 1976-1983	8,860	936	9,796	-	-
Cdn. \$ '000 (1983)	1,053	127	1,180		

*Sources:* Denmark, Ministry for Greenland and Royal Greenland Trade Department (RGTD), as reported by Market and Industry Analysts (1986).

- a. Purchases by RGTD and private traders.
- b. Receipts include bonus.
- c. Values deflated by Consumer Price Index (1971 = 100).
- d. Change from previous year.



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While the seal harvest in Greenland has suffered from the adverse publicity generated by the "whitecoat" hunt in Canada, the decline of the Canadian seal industry can be expected to have a favourable effect on the size of the Greenland seal harvest. Harp seals are a migratory species and frequent Greenland waters. Kapel (1985, p.12) has noted the historic data on the interdependency between Newfoundland and Greenland seal catches:

*Just before World War II the catch of harp seals at Newfoundland was at the level 100,000–200,000 annually, or somewhat less than in the first decades of the 20th century . . . During the war catches almost ceased at Newfoundland. At the same time the catch of harp seal in Greenland reached a high level. Just after the war the catch of harp seal at Newfoundland increased to a very high level in the 1950s and 1960s (about 250,000–350,000). During that period catches in Greenland were reduced to about one third of their previous level. Since 1972 catches of harp seals at Newfoundland have been reduced by quota regulation to a level of 125,000–175,000 per year, and since the early 1970s catches in Greenland have increased markedly . . . In conclusion the indications of long-term relations between the catches at the breeding and molting patches and the catch levels for harp and hooded seals in Greenland appear evident.*

As long as the Danish authorities are willing to provide a cash market for seal pelts, there is no reason why the Greenland seal harvest should be expected to decline. Indeed, given the increased availability of harp seals that can be expected as a consequence of the decline of the Canadian sealing industry, the number of seal pelts offered for sale may be expected to increase. The further increase in the Greenland seal harvest can be expected to be rather modest, however, since the hunt for seals in Greenland is based primarily on the food needs of specific communities. Kapel and Petersen (1982) argue convincingly that the traditional hunting communities of Greenland hunt only enough of the prey species to satisfy their own subsistence needs. Since skins are generated as a by-product of the subsistence hunt for meat, one would expect only a gradual increase in the supply of skins as the food needs of the local population in northern and eastern Greenland increase.

The marketing problems faced by the Royal Greenland Trading Company are very likely to persist. The Greenland Home Rule Authority assumed full control of fisheries, including sealing, in January 1985, and since that time has been financially responsible for subsidizing sealing.

## Conclusions

Much of the Canadian discussion of the domestic sealing industry has focused on the impact of the decline in sealing on the incomes and employment prospects of the sealers of Newfoundland, Labrador, the Quebec north shore and the Magdalen Islands. Given the very high unemployment rates of this region (29.5% in March 1985) and the lack of other options to earn income during the sealing season, this is an understandable focus. But the chief lessons of the experience of other sealing nations is that there may be other, and very strong, reasons to support the continuance of sealing.

In Greenland, the prime consideration in policy making has been to maintain a market for sealskins in order to protect the traditional way of life of outlying Inuit communities. The costs, in financial terms, of such a policy are small, whereas the costs, in social terms, of simply allowing the hunting economy of traditional Inuit communities to collapse would be very severe for the people affected.

In Norway, finding alternative employment for ex-sealers has simply not been a problem. The Norwegian sealing industry has contracted dramatically in the last 20 years, but for much of that period the national unemployment rate was less than 1%. Norwegian authorities have, nonetheless, decided to maintain by subsidy a core capacity in the industry, because of their concern for the possible long-term consequences for the fisheries of an increase in the harp seal population. Fishing is of special importance for the more isolated and marginal northern regions of Norway, where there are very few other employment opportunities. The concern in Norway has not been the past and present loss of a relatively small number of sealing jobs; rather, it is the potential future loss of many thousands of jobs in the fishing, fish-processing and supplier industries.

Maintaining a core capacity in the Norwegian sealing industry can be seen as a form of insurance against the possibility that future events will show a clear and direct link between expanding seal populations and declining fish catches. At this point in time, the scientific evidence is not strong enough to say with reasonable certainty that such a link definitely

exists. However, in the social and political context of Norway, a widespread popular consensus exists in favour of the maintenance of the sealing industry.

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## Photo Credits

### Chapter 6

1. Harbour seal.  
F. Bruemmer.
2. Northern fur seals.  
F. Bruemmer.

### Chapter 7

1. Send-off of the sealing fleet.  
Provincial Archives of Newfoundland and Labrador.
2. Discharging seals from *SS Eagle*.  
Provincial Archives of Newfoundland and Labrador.

### Chapter 13

1. Igloo at night (circa 1960).  
SSC – Photo Centre Library – ASC.
2. Conditioning sealskin by chewing it (1951).  
W. Doucette / Public Archives of Canada / PA-145968.
3. Seal hunter and sled.  
SSC – Photo Centre Library – ASC.
4. Naalak Nappaaluk (seal hunter) with Charlie Arngak.  
Makivik Corporation.
5. Inuit hunting camp (circa 1940).  
Public Archives of Canada / PA-42047.
6. Inuit hunter and catch.  
Arctic Biological Station, Ste-Anne-de-Bellevue.
7. Cleaning sealskins.  
SSC – Photo Centre Library – ASC.

## Chapter 14

1. Sealing vessel near the Front.  
Public Archives of Canada / PA 128771.
2. Deblubbering sealskins, St. John's (circa 1920).  
Provincial Archives of Newfoundland and Labrador.

## Chapter 15

1. Discharging sealskins, St. John's.  
Atlantic Guardian / Public Archives of Canada / PA 145967.
2. Crew's quarters on sealing vessel.  
Provincial Archives of Newfoundland and Labrador.
3. "Copying" at the Front.  
R. Greendale.
4. Landsman sealer, Magdalen Islands.  
F. Plante.

## Chapter 17

1. Seal watching.  
Atlantic Marine Wildlife Tours / E. Lewis.

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