

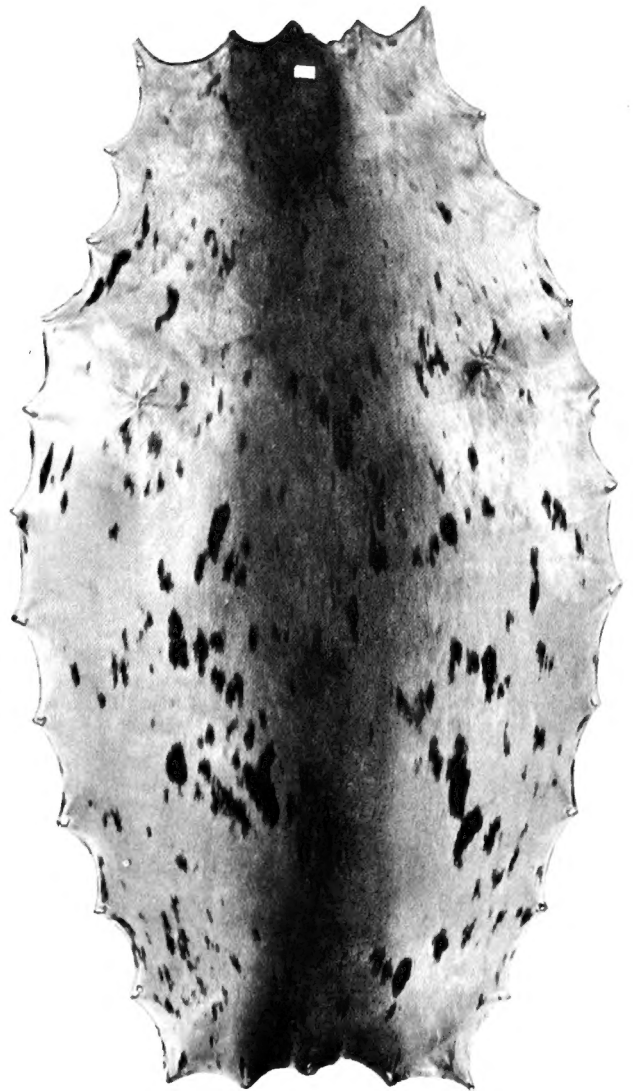
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International Trade in Harp and Hooded Seals

by Jon Barzdo

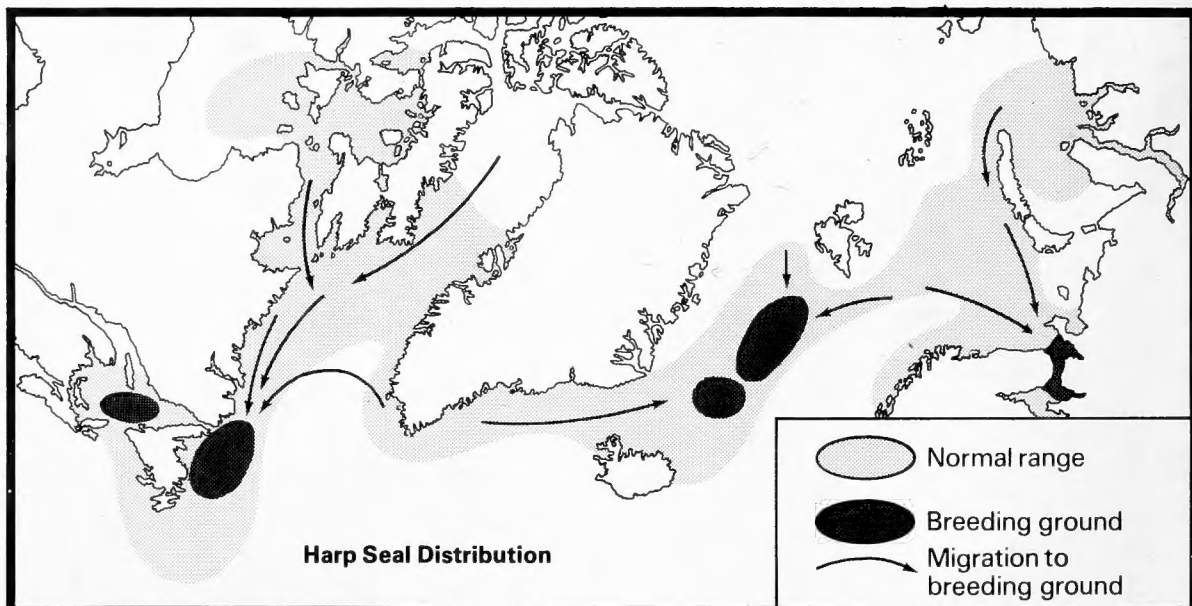


ADULT HARP SEAL PELT

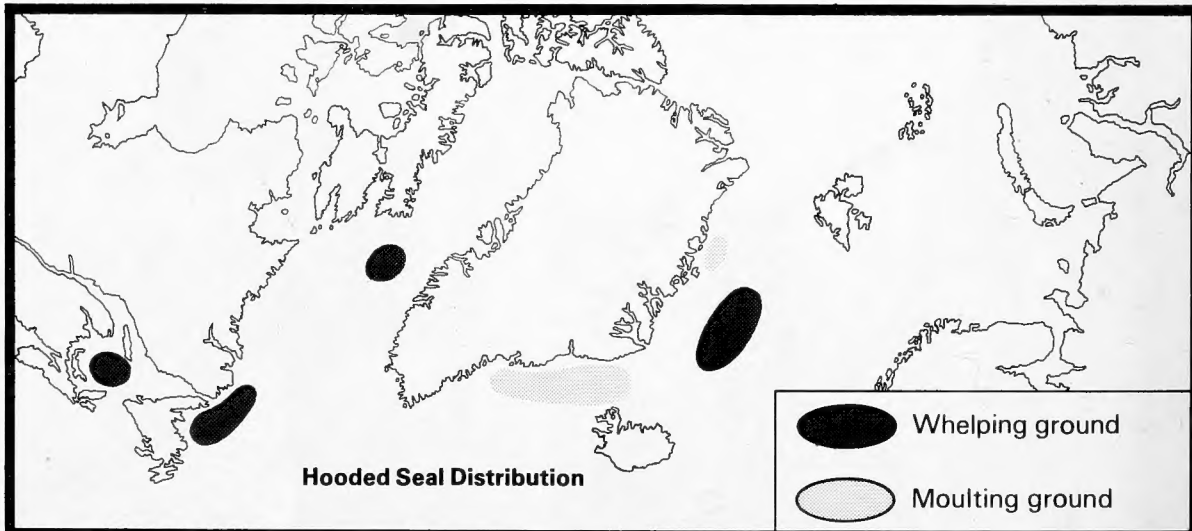


YOUNG HARP SEAL PELT

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Distribution and whelping grounds of harp seals, from Nansen, F.1924. *Blant Fel og Bjørn*. Jacob Dybwads Sorlag. (In English as *Hunting and Adventure in the Arctic*. Duffield and Co., New York, 1925.)



Known areas of whelping and moulting hooded seals, from Sergent, D.E. 1974. A rediscovered whelping population of hooded seals *Cystophora cristata* Erxleben and its possible relationship to other populations. *Polar Forschung* 44:1, 1-7.

Glossary

Beater	A young harp seal, less than one year old, which has completed its first moult to a soft spotted grey coat at 3-4 weeks	Hooded Seal	Bladdernosed seal - the hair seal <i>Cystophora cristata</i> Erxleben
Bedlamer	A juvenile harp seal; 1-5 years old; has a spotted coat and develops the saddle (or harp) pattern on its back as it approaches sexual maturity	KGH	Den Kongelige Grønlandske Handel; Royal Greenland Trade Department
Blueback	A new-born hooded seal with blue 'fast' fur, having shed its first coat before birth	Landed value	Price paid to the sealer (esp. for pelt and blubber) = first hand value
CAS	Canadian dollars (in tables and figures \$ means CAS).	Nkr	Norwegian kroner
Dkr	Danish kroner	Processed sealskins	Seal fur skins (of seals and sealions), dressed or dressed and tanned
DM	Deutschmarks	Ragged-jacket	A young harp seal in its first moult, from whitecoat to beater
Fmk	Finnish marks	Ringed seal	Jar seal - the hair seal <i>Pusa hispida</i> Schreber
Harp seal	Saddleback seal - the hair seal <i>Pagophilus groenlandicus</i> Erxleben	Sculp	Sealskin with the blubber attached
		Whitecoat	A new-born harp seal up to about 7-10 days, before losing its soft white fur; also, new-born Caspian seal

International Trade in Harp and Hooded Seals

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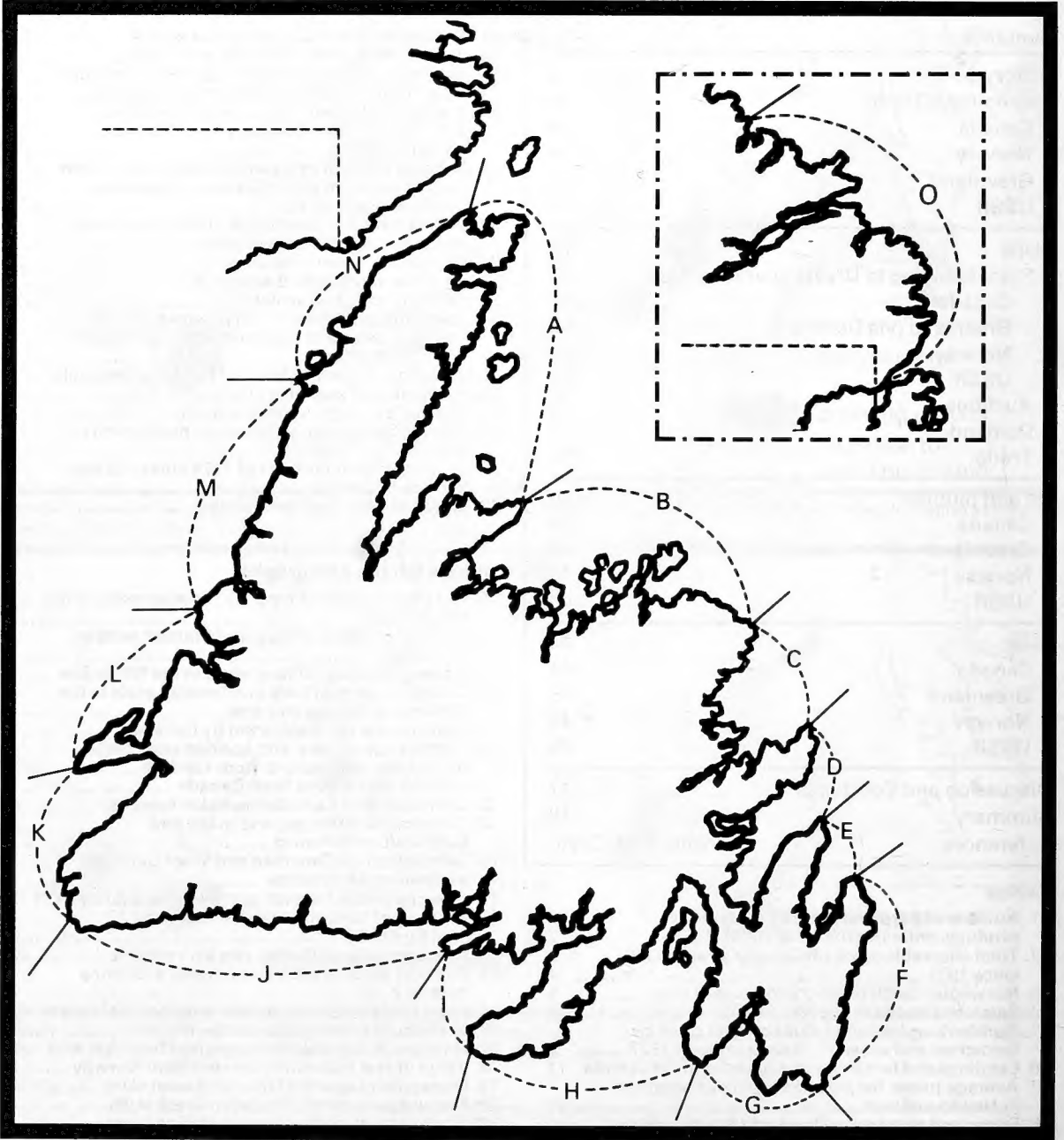
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Newfoundland Sea Fisheries



- A. Cape Norman inclusive to Cape St. John exclusive.
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 - D. Cape Bonavista inclusive to Grate's Point exclusive.
 - E. Grate's Point inclusive to Cape St. Francis exclusive.
 - F. Cape St. Francis inclusive to Cape Race exclusive.
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 - H. Cape St. Mary's inclusive to Point Crewe exclusive.
 - I. Point Crewe inclusive to Pass Island inclusive.
 - J. Pass Island exclusive to Cape Ray inclusive.
 - K. Cape Ray exclusive to Cape St. George exclusive.
 - L. Cape St. George inclusive to Cape St. Gregory exclusive.
 - M. Cape St. Gregory inclusive to Point Riche inclusive.
 - N. Point Riche exclusive to Cape Norman exclusive.
 - O. Point St. Charles inclusive to Hopedale inclusive.
- (Key to Table 5, p8)

Table 1. Number of harp and hooded seals whose products enter international trade

Taken by		Canada	Norway	Greenland	Soviet Union	Total
Annual average over past 4-8 years (see under country)	<i>harp</i>	109,440	80,341	2,248	Poss. 10,000 Very few, most used in USSR	202,029
	<i>hooded</i>	2,483	31,217	1,378		35,078
1977	<i>harp</i>	118,706	56,682	2,804	—	178,192
	<i>hooded</i>	6,063	21,438	3,066	—	30,567

International Trade in Harp and Hooded Seals

Jon Barzdo

Many studies have been made of harp and hooded seals, *Pagophilus groenlandicus* and *Cystophora cristata*, but little attention has been given to their importance in international trade. To find how important this trade is in maintaining the annual harvest, the Fauna and Flora Preservation Society created this project. The four points to be investigated were: numbers involved in world trade, how the skins and other products are used,

their value at each stage in the trade, and the form and locations of the final markets. The investigation involved enquiries among fur and leather dealers and other traders; collecting statistics on seal kills, and on imports and exports; visiting auctions, dealers, Government departments, scientists and conservation bodies in Canada, Demark, Norway and the UK; and reviewing relevant published and unpublished material.

Harp and hooded seals are unrelated members of the hair seal family Phocidae, inhabiting the drifting pack ice of the North Atlantic. Every year a large harvest is taken by Canada, Greenland, Norway and the USSR for the skin, blubber and meat. Any other products are either derived from these or are of secondary importance. Information about the trade is usually guarded and difficult to obtain. Some of the data here have been obtained by deduction and some are anecdotal, but some data are not available at all. In 1972 the Canadian Committee on Seals and Sealing (COSS) encountered this problem during its enquiries into economics of the harp seal fishery: 'The industry', says one report, 'because of its diversity, has not been able to provide the Committee with sufficient information to establish the significance of the industry'.

Conservation and animal welfare groups have many misconceptions about the industry, and wrong information has been given out in all good faith. For example, some organisations believed, mistakenly, that all skins from the Canadian harvest went to Norway, and T. Hughes, Executive Vice-President of the Ontario Humane Society and Secretary of COSS, believed, also mistakenly, that all products from the Canadian harvest were exported.⁴⁸ Even among the dealers there is much disagreement on facts.

History

Products

When hair seals were first exploited commercially it was entirely for the oil rendered from their blubber, and until as recently as 1951 oil remained the most valuable product. Since then the skin has become the most important. The earliest recorded value of seal products was in 1738, when Fogo produced £770 worth and Twillingate £440 worth of seal oil.²⁷ The earliest record of trade in the oil was in 1749¹⁰ when, according to England, seal oil valued at £1006 was exported from Newfoundland; in 1767 the figure was £8832, in 1768 £12,664, and in 1773, £26,388. He also notes that, 'save in the case of the "cat", or still-born, harp seal (their pelts) are usually valueless as fur, the hair not being "fast"'. The great value of the sculps, or pelts, is due to the thick layer of pure white fat, and to the extremely high-grade leather manufactured from the skin'. As far back as 1892 whitecoat skins were dyed either black, for Hussar and Fusilier busbies and fur edging on robes, or brown for other furs. Skins from adult hooded seals were sold for leather; those from second-year animals were mostly dyed black or brown and used in shoe trimmings, gloves and muffs, as well as military caps and busbies. The oil was used for lighting (e.g. in lighthouses) as well as for dressing jute.²¹ In the 18th century the staple winter diet of Newfoundlanders was dried cod with seal oil and

cranberries, a mixture called 'pipsey'.⁶ They also ate seal meat and fed it to their sled dogs, and used the oil in lamps; any surplus was sold. In the 19th century the blubber of adult harp seals was rendered to a clear, tasteless, odourless oil that was used in soap, ointments, perfumes, industrial lubricants and, to a small extent, in lamps as an alternative to kerosene.⁶

The major use of skins was for leather. Hair seal skin was used to make 'morocco'; genuine morocco was made from goatskin, but seal was superior to goat and always sold under its own name.²⁵

Canada

Newfoundlanders have killed seals from the time of the earliest settlers, and the industry developed rapidly. Exports increased from 81,000 skins in 1805 to 281,000 in 1819, reaching a peak of 687,000 in 1831,³⁴ after which they fluctuated greatly, with levels as high as 631,000 in 1840, 686,000 in 1844 and 458,000 in 1879. Seals were shot, a method that was both destructive of the pelt and wasteful, since only about a quarter of the animals killed were recovered.⁸ From 1880 to 1910 ship landings on average fell little, although there was great variation from year to year, caused, then as now, by ice conditions and weather. But since 1910 the catch has gradually fallen, reaching low levels during both world wars and in the 1931-2 depression, and falling even lower with each recovery.^{8, 34} In 1966 Templeman wrote, 'In recent years the ratio of bedlamer and adult harps to whitecoats in the catch has increased. In 1930-9 when the vessel fishery was almost entirely from Newfoundland, bedlamers and adults made up 17 per cent of the harp seal landings, and in sealing by other than Newfoundland ships, bedlamers and harps made up 29 per cent.'³⁴ He gives the ratios for the Newfoundland vessel catch:

	1895-1913	1914-1931	1932-1961
Harp and hooded seals killed	5m	2.7m	2.5m
hooded seals	6.3%	3.7%	1.9%
of which percentage			
mature hoods	28%	33%	35%
mature harps as % of harps			
taken	3.1%	3.5%	6.3%
mature harps and			
bedlamers together	8.6%	10.8%	20.4%

During the 1920s and 1930s efforts slackened, but gained a little in the 1940s before dying down in the face of competition from superior Norwegian technology. Canadian companies of Norwegian origin took over, employing Nova Scotian and Newfoundland officers and crew.³³ In the 1960s, hunting from aircraft developed in the Gulf of St Lawrence, but is now banned there.

Table 2. Total allowable catch off Canada's east coast since 1971

	Harp	Hooded
1971	245,000	no quota
1972	150,000	no quota
1973	150,000	no quota
1974	150,000	15,000
1975	150,000	15,100
1976	127,000	15,000
1977	170,000	15,000
1978	180,000	15,000

(Source: C. E. Button, Environment Canada, Ottawa.)³⁹

In 1977, 118,706 harp and 6,063 hooded seals entered international trade through Canada.

Greenland

Archaeological finds indicate that seals have been the most important prey of Greenland Eskimos for 4000 years. But a change in climate has led the seals to move northwards so that most people in south-west Greenland have had to adjust to a settled life as 'fishermen, workers and office employees'.⁷ At the beginning of the 20th century the seal catch of all species in the south was 25,000-45,000 a year. By the 1960s it had fallen to about 5000. In the north, the peak was in 1910 with a catch of 75,000 seals, which declined to about 50,000 in 1960. Most of the seals taken are ringed seal *Pusa hispida*. After about 1925 hunting declined as harp seals became scarcer and cod more numerous, and Greenland changed from a seal-hunting to a cod-fishing economy.³³ The commercial kill of harp and hooded seals in Greenland is not comparable in size with that off the Canadian coast, simply because these species do not breed in Greenland. Hunting these seals fills regional and seasonal gaps, but they are not the hunters' main objective. Over the past 20 years the ringed seal kill appears to have increased and that of harp seals decreased, although the level of harp seals in 1977-8 was unusually high, judging from the number of skins at auction. The hooded seal kill, after a gradual decrease starting about 1920, increased sharply in the mid-1960s, especially in southern Greenland.¹⁴

Norway

In the late 18th and early 19th centuries most northern European nations took part in the sealing at Jan Mayen, but by the 1880s the kill was in the hands of Norwegians. Early in the present century a drop in the uncontrolled catches there led the Norwegians to start sealing in the White Sea, but in 1946 they were excluded by the USSR; however, they are now again operating there with the Soviet Union in a seal control programme. In the 1930s they had already started sealing in Newfoundland waters and, by 1976, about half their sealing income was derived from the kill.³³

USSR

Shore-based hunting for seals has been practised historically by Russians on Nova Zemlya and the White Sea and Murman coasts, and ship-based hunting was developed by ice-breaking vessels in the White Sea in the 1920s. Russian vessels operated in Jan Mayen in the 1950s and in Newfoundland only in the early 1960s. With the subsequent decline in operations, catches now come mostly from state farms around the White Sea.³³

International Trade

Except for subsistence hunting by coastal communities most harp and hooded seals caught are taken for trade.

Some coastal communities also engage in trade, but the amount is so insignificant compared with the commercial catches that the catch figures produced by Canada, Norway, Denmark (for Greenland) and the Soviet Union quite reliably reflect the numbers of seals in trade.

Canada

Between 1962 and 1971 Eskimos in the 12 villages where kills of harp seals had been recorded took fewer than 1800. No hooded seals were recorded, although they are said to be killed occasionally. Smith and Taylor point out that, in harp seal hunting, the porpoising of pursued animals makes them a difficult target and wounding loss must be quite high.⁶³

Table 4 (p8) shows that from 1970 to 1977 between 77,000 and 145,000 animals of the two species had been taken each year by Canadians in the north-west Atlantic, an average of about 120,000 a year. We can take this as the number of skins contributed to international trade by Canada. The proportion of hooded seals, as shown below, is very small:

1970	1.9%	1974	0.2%
1971	0.3%	1975	4.5%
1972	0.5%	1976	3.1%
1973	0.8%	1977	4.8%

(source: official Canadian statistics)

From 1975 to 1977 the proportion of hooded seals in the catch was comparatively high, but, according to official Canadian statistics, the average proportion since 1970 was only two per cent of the total catch. The considerable attention paid by scientists and politicians to the harp and hooded seals on Canada's east coast has been heavily influenced by pressure from conservation and animal welfare groups. Sergeant considered the value of the hunt at \$5m,³¹ relatively low for the amount of scientific work involved in trying to perfect the systems model. Tom Hughes, Secretary of Canada's Committee on Seals and Sealing, thought that without the 'campaign of extreme groups' the hunt might have died out for economic reasons, but that now the sealers had the united support of the Newfoundland people.¹⁹ The Canadian Government's management objectives are not entirely clear. Mac Mercer, of Fisheries and Environment Canada, stated that it was not intended to obtain the maximum sustainable yield.¹⁸ Canada's policy paper on fisheries gives as one objective 'total allowable catches (TACs) and annual catch quotas based on economic and social requirements (including the requirements for stability), rather than on the biological-yield capability of a fish stock or stocks' (my italics).² (In Canada, as in many other countries, sealing is treated as a fishery for management purposes.)

Norway

Norwegians take seals in three areas: Newfoundland, West Ice (Jan Mayen) and East Ice (White Sea). In Canadian waters they are allotted part of the Canadian TAC. Whitecoats and beaters represent by far the largest proportion, whitecoats being slightly more abundant than beaters in the catch, except in 1977, probably because bad weather forced the late arrival of sealers at the ice. The Norwegian kill in Canada diminished from 113,382 in 1971 to 41,674 in 1977 and only 22,488 in 1978, in which the proportion of hooded seals ranged from 9.7 per cent in 1973 to 18.5 per cent in 1972 (14.5 per cent in 1977: 28 per cent in 1978). Between 1971 and 1977 the average proportion represented by hooded seals is 14.4 per cent.

The Norwegian kill at Jan Mayen is dominated by hooded seals. Young of the year make up the bulk of the take, with more bluebacks than beaters and whitecoats, except in 1976 and 1977. Total catch between 1971 and

1977 ranged from 19,117 in 1976 to 41,391 in 1971 (average 33,757 animals) and the proportion represented by hooded seals from 36 per cent in 1976 to 84 per cent in 1975 (average 61.5 per cent). Management policy is to keep the catch in the Jan Mayen area below, but close to, the estimated sustainable yield.³⁶ Øritsland (1976) states that it has been possible gradually to reduce the catching effort without arbitrary withdrawal of licences while maintaining a reasonably high economic yield, and that 'participation now has reached a level where an increasing economic yield per unit can be expected as stocks are being rebuilt through the next few decades'.³⁶

White Sea kills include very few hooded seals, as individuals in this area are generally stragglers. The greatest take of hooded seals from 1971 to 1977 was 18 in 1977 - 8 bluebacks and 10 adults. Of the harp seals, whitecoats are now rarely taken and only in small numbers, the largest kill in the seven years being 57 in 1973. Animals over one year old represent much the largest proportion of harp seals landed, with an average kill of 5587 per year (range 1570-8692) as against 4464 beaters (range 2255-6900). Management is by agreement with the USSR, which feels that Norway is not taking enough animals at the moment.³⁵ Three Norwegian boats operated in the East Ice in 1977, taking a total of 6230 seals of both species (0.2 per cent hooded).

Øritsland writes (in lit.), 'The general objective of Norway's seal management has been, and still is, to restrict the hunt enough to allow separate seal stocks to rebuild up to the level of maximum sustainable yield . . . However, with the recent rapid increase of the harp seal stocks in the White and Barents seas (annual rate about five per cent), we are considering whether this really is wise'.³²

In considering the Norwegian statistics we should note that they refer only to skins landed, so that catches that are lost are not included: for example, the catches of the

Flemsøy, which on April 21 1977 went down in the West Ice with approximately 1070 harp seal pup skins and 900 hooded seal skins, and of *Venus*, which on May 4 1977 was lost in the East Ice with approximately 1800 harp seal skins, were not recorded in the 1977 statistics.⁶²

Greenland

Greenland has no catch of seals comparable with those in Canada and Norway. Some skins enter commerce, but the hunters still live in a largely subsistence culture. Hunting communities rely on the cash from the seal trade to purchase their rifles, fuel and motor boats. Ringed seals are the primary catch; the meat and offal are eaten and the skins used for clothing, dog traces, rugs, tents and footwear,⁵⁰ and presumably this applies to the other seal species caught. Harp seals are the second most important in Greenland, with an annual catch of 5000-10,000 animals taken in June and July during their migration northwards along the coast.¹⁴ Harp seals do not breed in Greenland, and so there are no whitecoats. There is no quota on the catch for harp or hooded seals, but an allowance of 10,000 in the TAC for the north-west Atlantic, allows for the aboriginal and subsistence catches. In Greenland hooded seals are at their most abundant in the spring, *en route* from their Newfoundland breeding grounds to the Denmark Strait moulting area; between 2000 and 3000 are taken, mostly between April and August, almost half from southern Greenland.

Den Kongelige Grønlandske Handel (Royal Greenland Trade Department or KGH) is the only agency in Greenland through which seal products may enter commercial trade,⁴⁶ and so their skin sales reflect the size of the catch. They have bought skins from the east coast since colonisation began at the turn of the century. Between 1970 and 1977 harp seal skins sold at KGH sales in Copenhagen averaged 2248 a year (range 0-4124), and hooded seal skins 1373 a year (range 291-3066).

Table 3. Norwegian catch of harp and hooded seals

	1971	1972	1973	1974	1975	1976	1977	Total
<i>Newfoundland</i>								
Total	113 382	65 478	64 545	65 381	70 387	53 201	41 674	474 048
HARP total	98 639	53 300	58 290	55 585	60 161	44 683	35 624	406 282
Whitecoats	68 756	30 967	37 701	20 512	36 638	24 111	11 139	229 824
Beater	18 348	20 947	6 977	16 745	14 980	19 071	23 580	120 648
1 yr +	11 535	1 386	13 612	18 328	8 543	1 501	905	55 810
HOOD total	14 743	12 178	6 255	9 796	10 226	8 518	6 050	67 766
Blueback	7 934	6 661	4 405	5 876	5 072	4 421	4 292	38 661
1 yr +	6 809	5 517	1 850	3 920	5 154	4 097	1 758	29 105
<i>West Ice</i>								
Total	41 391	35 398	38 307	41 097	30 778	19 117	30 216	236 304
HARP total	11 977	15 182	11 858	14 702	4 822	12 214	14 846	85 601
Whitecoats	9 641	13 318	3 702	9 638	752	4 410	11 924	53 385
Beaters	1 670	1 782	8 156	4 990	2 990	2 503	1 381	23 472
1 yr +	666	82	—	74	1 080	5 301	1 541	8 744
HOOD total	29 414	20 216	26 449	26 395	25 956	6 903	15 370	150 703
Blueback	19 476	16 052	22 455	16 595	18 273	4 632	11 626	109 109
1 yr +	9 938	4 164	3 994	9 800	7 683	2 271	3 744	41 594
<i>East Ice</i>								
Total	8 470	12 447	12 278	7 381	10 954	12 753	6 230	70 513
HARP total	8 470	12 438	12 268	7 377	10 947	12 747	6 212	70 459
Whitecoats	—	—	57	—	—	—	37	94
Beaters	6 900	4 229	5 600	2 323	2 255	6 552	3 392	31 251
1 yr +	1 570	8 209	6 611	5 054	8 692	6 195	2 783	39 114
HOOD total	—	9	10	4	7	6	18	54
Blueback	—	4	3	3	4	3	8	25
1 yr +	—	5	7	1	3	3	10	29
<i>Total</i>								
HOOD	44 157	32 403	32 714	36 195	36 189	15 427	21 438	218 523
HARP	119 086	80 920	82 466	77 664	75 930	69 644	56 682	562 392
BOTH	163 243	113 323	115 180	113 859	112 119	85 071	78 120	780 915

Not all hunting areas count harp and hooded seals in their takes. The principal areas are:

SE Greenland (Angmagssalik district): of 8000 seals caught annually, c. 5 per cent hooded seals; harp seals unimportant.

NW Greenland (Upernavik and Umanak districts): of 35,000 seals taken (almost half Greenland's seal catch), c. 7 per cent harp seals; few hooded seals.

Central W Greenland: of about 2200 seals caught, up to 25 per cent harp seals.

S Greenland (Marssaq, Julianhab and Manortalik districts): of 2000-3000 seals caught, c. 46 per cent hooded seals.

SW Greenland (Frederikshab, Godthab, Sukkertoppen and Molsteinborg districts): of 2000-3000 seals caught, c. 21 per cent harp seals; c. 4 per cent hooded.¹⁴

Kapel considers that the average take in Greenland 1972-1976 was 7000 harp, 3000 hooded, and 70,000 ringed. 5810 harp and hooded seal skins were sold for Greenlanders by KGH in 1977.¹⁵

USSR

Although Sergeant states that the Soviet catch rose to 400,000 between the wars,³² Popov gives the highest average combined annual catch of harp seals in the White Sea by Norway and the USSR as 353,000 for 1925-1929, with a fluctuation of 146,000-192,000 between 1947 and 1951.²³ As the population decreased, limits were imposed. From 1935 the limit for sealing vessels was 100,000, and from 1963 60,000, with a ban on breeding females. From 1965 to 1969 sealing from vessels was banned and a limit of 20,000 pups set for local people. Killing of adults in the breeding season is now forbidden and the catch limit for locals is 30,000 pups.²³ A treaty with Norway also permits a Norwegian vessel catch outside the White Sea.³³ Of the Russian quota, 6000 whitecoats are clubbed on the ice, and the remaining 24,000, in the ragged-jacket stage, are flown by helicopter to enclosures on shore, where they moult before being killed.^{11 22} They require no feeding and the advantages are that pelt quality is controlled, that slaughter is easier and more humane, and that the chance of seals dispersing before capture is reduced.³³ The USSR East Ice catch of harp seals is given as:⁶²

1975	29,500
1976	29,548
1977	35,495

An experimental catch by the USSR off Newfoundland in 1961 seems to have been the full extent of Soviet operation in Canadian waters.

In the West Ice 8-10 Soviet vessels sealed from 1955 to 1966. The annual catch of hooded seals was over 25,000 animals, mainly pups,²³ and of harp seals about 4000.³⁶ Then two ships returned to the West Ice in 1975 to take an agreed catch of 1800 harp seal pups and 3600 hoods, and in 1976 to take their quota of 1500 harp seal pups and 5500 hoods, including 1000 adult males.³⁶ It is not clear how many of the skins taken are used by the coastal communities. Any skins entering international trade in Russia would have to do so through Sojuzpushnina, the Government fur agency, which holds two auctions each year in Leningrad. Almost all the hair seals produced are sold internally; some 10,000 Caspian whitecoats (therefore not harp seals) are exported annually.⁵² Many of the whitecoats, whether from the White Sea or the Caspian, are dyed; since they are mixed together in the sales it is impossible, without inside information (which Sojuzpushnina has not provided), to say where they come from.

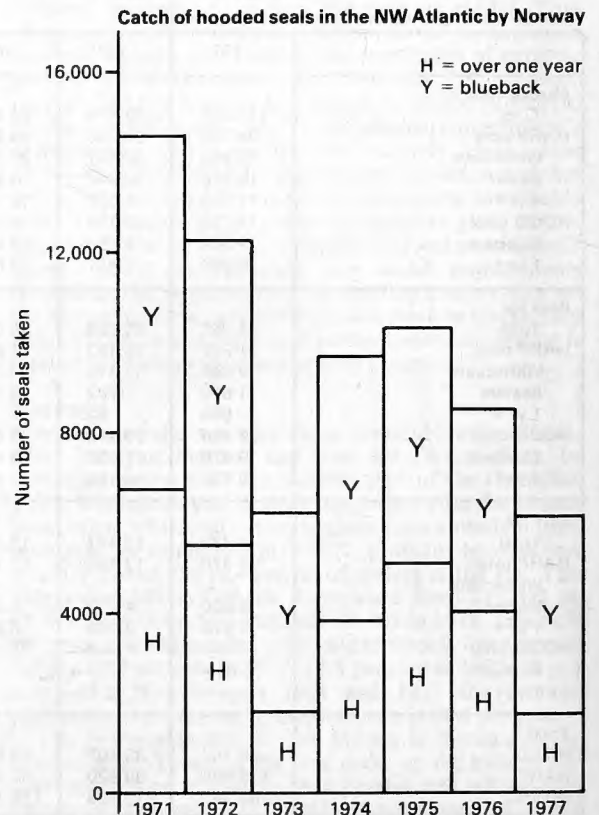
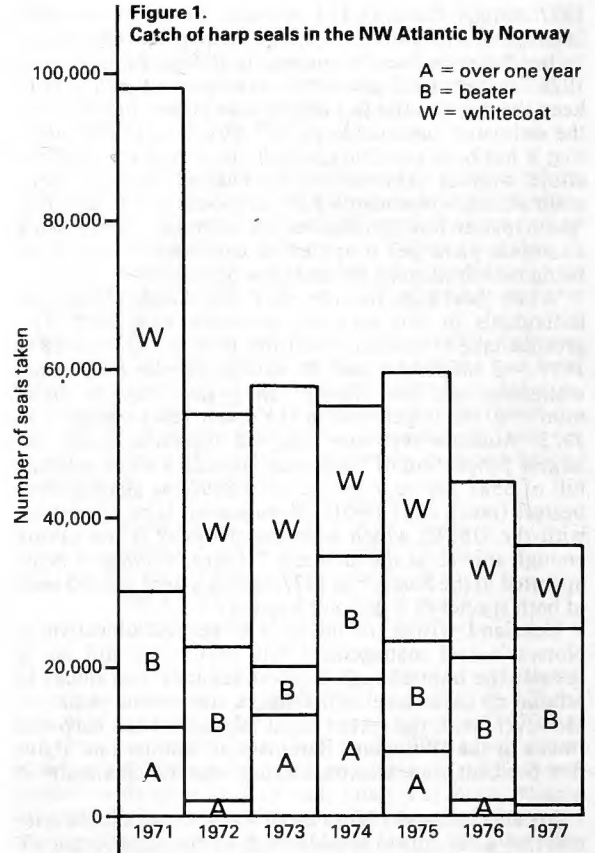


Figure 2.
Catch of harp seals by Norway at Jan Mayen

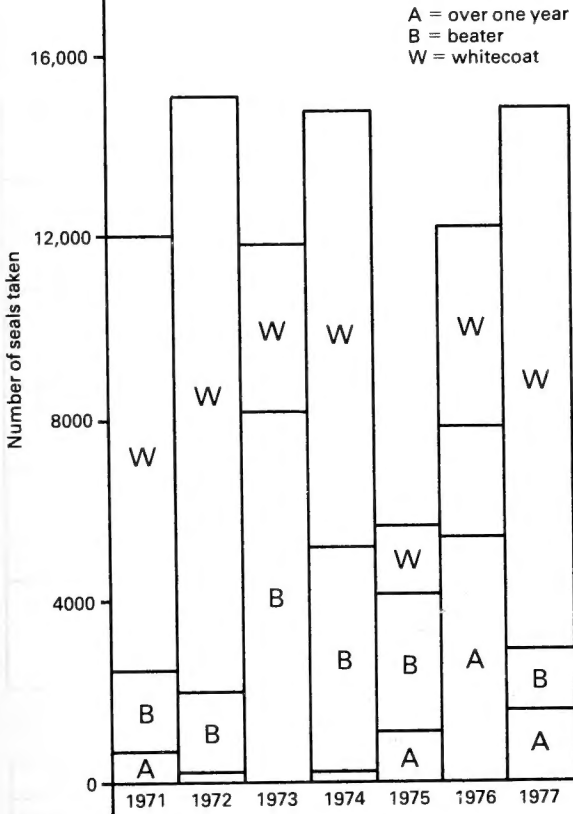
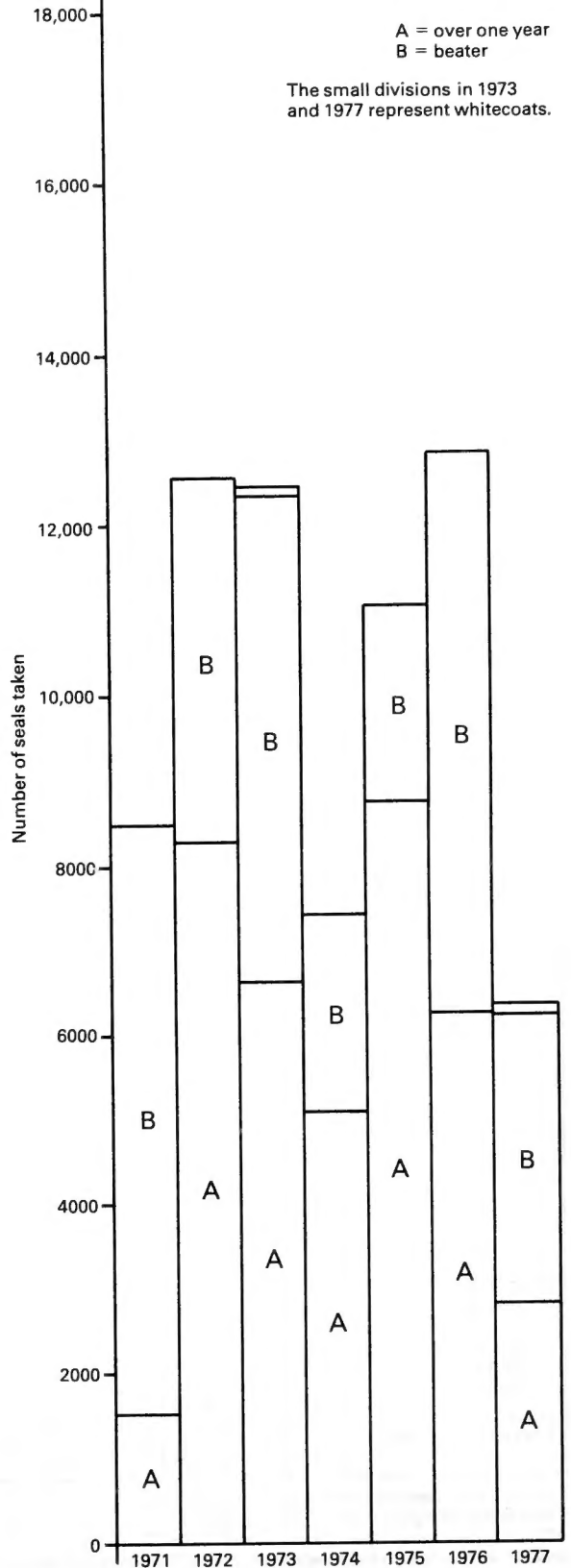


Figure 3.
Catch of harp seals by Norway in the White Sea.



Catch of hooded seals by Norway at Jan Mayen

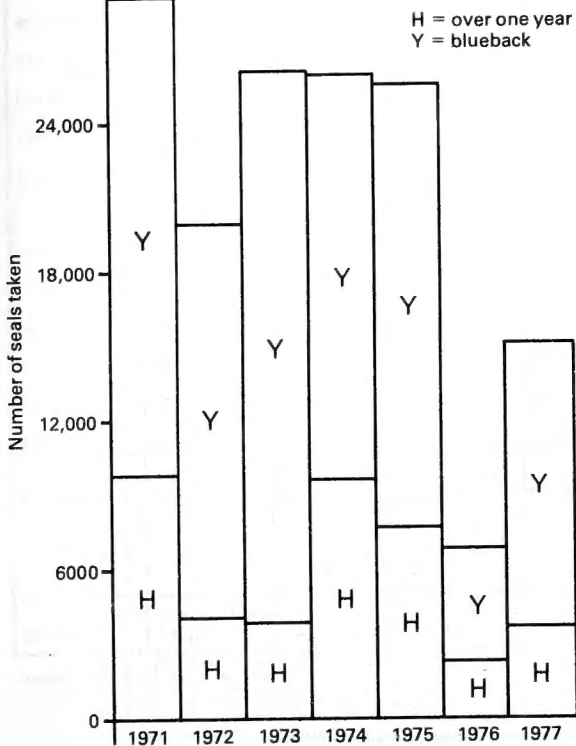


Table 4. Harp and hooded seal catch by Canada in the NW Atlantic

	1970	1971	1972	1973	1974	1975	1976	1977
FRONT								
<i>Harp</i>								
Total	64 320	59 474	69 770	67 253	71 742	97 417	99 629	100 763
Young (whitecoat and beater)	53 363	52 691	59 895	56 938	61 263	81 585	77 324	36 560 (w) 41 222 (b)
Immature (bedlamer)	5 936	3 236	7 617	7 334	8 583	12 735	18 064	19 189
Adult	5 021	3 547	2 258	2 981	1 896	3 097	4 241	3 792
<i>Hooded</i>								
Total	2 456	410	414	621	199	5 366	3 794	5 980
Young	1 653	213	261	494	114	2 565	2 060	4 616
Adult	803	197	153	127	85	2 801	1 734	1 364
GULF								
<i>Harp</i>								
Total	77 975	73 186	6 813	12 258	20 308	16 785	19 890	17 943
Young (whitecoat and beater)	72 512	71 084	5 001	10 677	16 305	7 435	11 598	11 741 (w) 4 095 (b)
Immature (bedlamer)	2 282	1 037	465	293	179	4 145	838	1 421
Adult	3 181	1 065	1 347	1 288	3 824	5 205	7 454	686
<i>Hooded</i>								
Total	413	22	8	7	4	19	73	83
Young	405	19	6	7	1	9	59	79
Adult	8	3	2	0	3	10	14	4
TOTAL								
Harp	142 295	132 660	76 583	79 511	92 050	114 202	119 519	118 706
Hooded	2 869	432	422	628	203	5 385	3 867	6 063
Both	145 164	133 092	77 005	80 139	92 253	119 587	123 386	124 769

Table 5. Numbers and landed values of total catch by landsmen and vessels — Newfoundland 1977

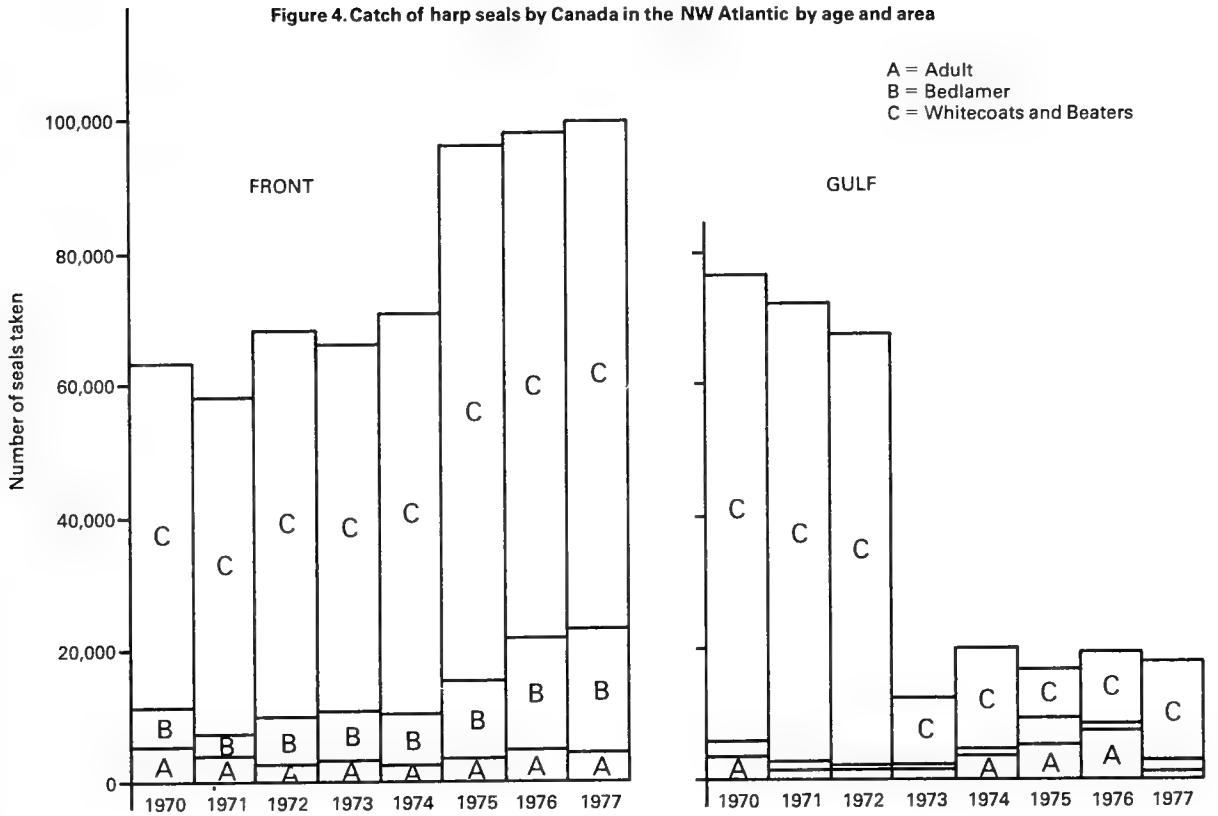
Area landed	Whitecoats		Beaters		Bedlamers		Old Harps		Young Hoods		Old Hoods		Other		Total	
	No.	Value \$	No.	Value \$	No.	Value \$	No.	Value \$	No.	Value \$	No.	Value \$	No.	Value \$	No.	Value \$
A	605		10 734		6 245		1 257		381		87		95		19 404	
		5 568		265 113		113 870		23 716		11 035		2 172		674		422 148
B	850		17 049		11 298		1 990		474		105		67		31 833	
		7 650		402 527		206 726		35 576		16 075		2 271		317		671 142
C	—		2 462		780		52		86		7		17		3 404	
				55 577		14 568		936		3 247		224		85		74 637
D	—		209		—		2		—		—		—		211	
				4 791		—		36		—		—		—	4 827	
E	—		38		—		—		—		—		—		38	
				875		—		—		—		—		—	875	
F, G, H, I	—		—		—		—		—		—		—		—	
J	—		10		—		—		—		—		—		10	
				224		—		—		—		—		—	224	
K	—		—		—		—		—		—		—		—	
L	—		—		—		—		—		—		4		4	
				—		—		—		—		—	60		60	
M	58		437		305		37		5		—		4		846	
		522		7 089		3 238		578		110		—	4		20	
N	65		524		214		82		54		2		4		945	
		585		8 790		2 236		1 100		1 835		80	20		14 646	
O	50		221		285		331		—		—	2 300	20		3 187	
		450		3 173		4 190		3 335		—		—	80 567		91 715	
Total by landsmen ¹	1 628		31 684		19 127		3 751		1 000		201		2 491		59 882	
		14 775		748 159		344 828		65 277		32 302		4 747		81 743		1 291 831
Catch by vessels 150 gross tons and over ²	18 434		6 444		737		347		2 115		742		—		28 819	
		197 859		136 640		9 804		5 437		90 560		24 277	—	—	464 577	
TOTALS	20 062		38 128		19 864		4 098		3 115		943		2 491		88 701	
		212 634		884 799		354 632		70 714		122 862		29 024		81 743		1 756 408

¹ Includes seals taken by vessels under 150 gross tons.

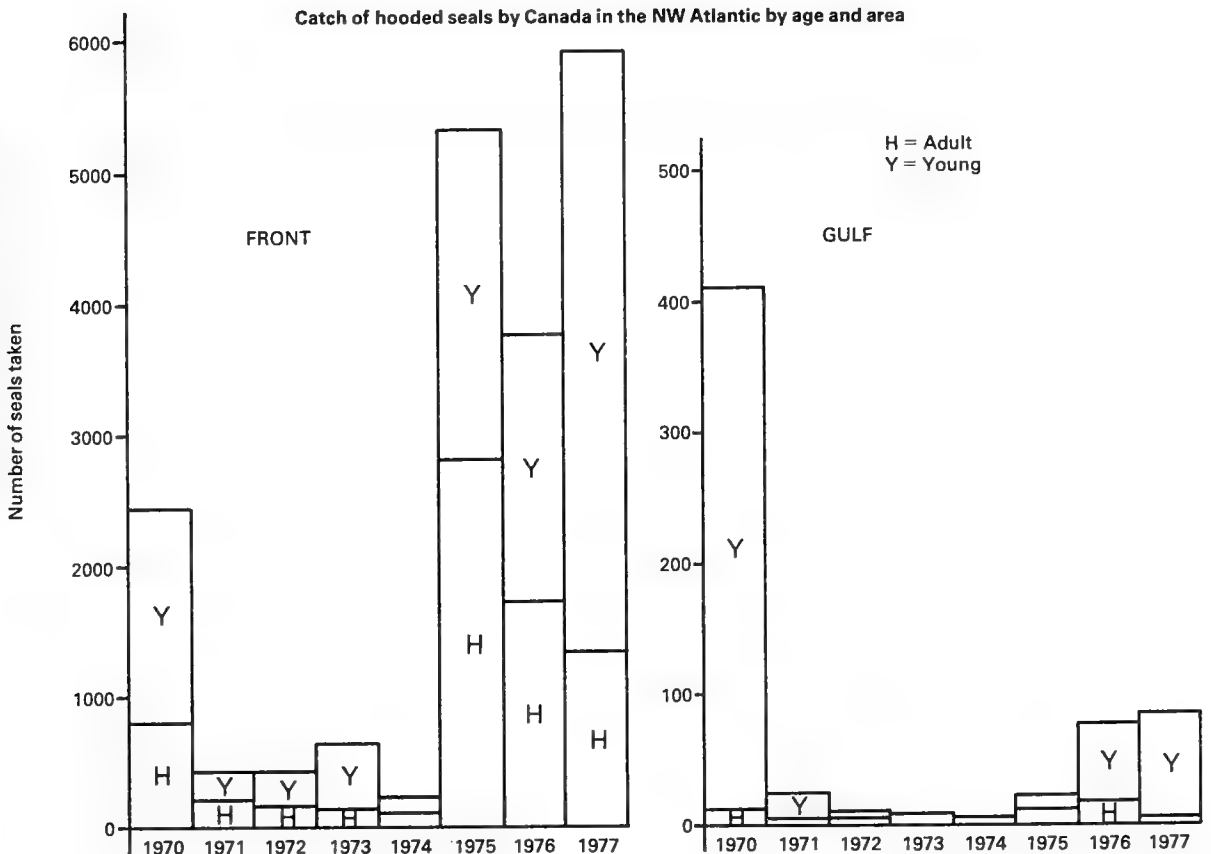
(See map, p. 2, for lettered areas)

² Vessels over 150 gross tons landed at Dildo.

Figure 4. Catch of harp seals by Canada in the NW Atlantic by age and area



Catch of hooded seals by Canada in the NW Atlantic by age and area



Skins

Skinning is done by turning the seal on its back and cutting from anterior to posterior down the front. The skin, with the blubber (together called the sculp), is separated from the rest of the animal; removing the flippers makes the process easier. Many skins have been lost at this stage, either on the ice after being collected in 'pans' - 40,000 were lost on the ice in 1935⁸ - or when ships are lost or sunk - over 3000 were lost on Norwegian vessels in 1977. Many pelts are also damaged at this stage by careless handling. Carino Co. of Canada, for example, which noted shipments containing about 60 ice-burned skins,²⁰ issued a memorandum reminding sealers that 'prices are half or less for shotgun damaged skins' and that 'some collectors and also fishermen use rusty trucks which also causes damage to skins'. The Royal Greenland Trade Department issues a guide on the correct treatment of skins.

Wherever the sculps are taken, the blubber must be removed fairly quickly from the rest of the pelt to prevent the oil staining the fur. Skins for the international trade, after simple preparation or dressing and tanning, are mixed with others of the same type from other countries. Thus, once a pelt has been exported or put on sale by a furrier its origins are virtually impossible to determine (except with KGH skins).

From Catching to Dressing or Auction

Canada

The Companies. In Canada only two companies buy sculps from sealers and separate the blubber from the skin: Carino Co. Ltd, East End P.O. Box 6146, St John's, Newfoundland, and Karlsen Shipping Co. Ltd, 2089 Upper Water St, Halifax, Nova Scotia. Their processing plants are respectively at Dildo, Newfoundland, and Blandford, Nova Scotia. In the past these processors have used agents who buy from the sealers and sell to the plant; now they encourage sealers to deal directly with the plant, although there are still middle-men such as S. T. Jones and Son of Little Bay Island, Newfoundland, who truck pelts to the plants for other sealers and who also can seal meat.

Value to Sealers. The skins are separated into about 40 grades, according to type, size, colour and quality,⁵⁶ and each sealer is paid according to the grade plus the value of the blubber; this combination is the 'landed value' or 'first-hand value'. From 1970 to 1977 there was no clear trend in the real value of pelt to sealer, although for 1975-77 it was downwards.

For 1976 the total estimated value of the Canadian seal hunt to each sealer and the return to each person against pelts was \$212.12 for landsmen, \$1031.83 for small-vessel sealers and \$1357.73 for large-vessel sealers.⁹ The total 1977 landed value was \$1,975,833. Carino Co. appears generally to pay higher prices for each type than Karlsen, except in the case of whitecoats. The average price paid for each grade varies according to catcher type. In 1977 the range of averages was:²⁴

whitecoats	\$ 9.20 - \$12.44
ragged jackets	\$ 7.34 - \$15.71
beaters	\$ 9.44 - \$25.25
bedlamers	\$ 7.07 - \$17.94
old harps	\$ 6.58 - \$17.73
young hoods	\$25.00 - \$40.30
old hoods	\$28.21 - \$29.15

If the type of catcher is ignored, in 1977 on average the lowest price paid was for ragged jackets and the highest overall average for young hooded seals.

Share to Each Company. Carino Co. has the greatest share of Canadian skins with, in 1977:²⁴

89%	of 20,558 whitecoats
13.5%	of 30,565 ragged jackets
83%	of 42,493 beaters
99.1%	of 20,525 bedlamers
98%	of 4419 old harps
66.1%	of 4661 young hoods
69%	of 1369 old hoods'

Price's total of 124,590 is just 179 skins short of the official Canadian catch figures.²⁴ In 1977 Carino received pelts from Newfoundland vessels, landsmen on the Front and much of the Quebec north shore catch. Karlsen received the take from Magdalen Island, Cape Breton north shore and the other vessels. Both companies have vessels registered in their own names, but Karlsen also has Mayhaven Shipping Ltd, registered owner of the *Arctic Endeavour*.⁵⁶ Others of the seven companies owning sealing ships in Canada may be connected in a similar way.

Export. The 'fast hair' skins of whitecoats, beaters, bedlamers, old harps and young hoods are wet-salted and packed in barrels or containers, destined for Norway.²⁴ The 'loose hair' skins of moulting whitecoats, ragged jackets, bedlamers and old harps, with old hooded seal and damaged skins, are dry-salted and cured after grading and bundled for shipment to European markets.

As usual, all the Carino Co. skins in 1977 went to the G.C. Rieber Co. in Bergen, Norway.

Carino Co. record their 1977 skins from	
shore catch as:	56,356 ²⁰
Price gives:	58,078 ²⁴
and Newfoundland Fisheries Service gives:	58,080
Price (unpubl.) gives the Carino quantity	
from ships as:	28,810
and Newfoundland Fisheries Service gives:	28,813

Many reviewers, including Price, state that the Karlsen Shipping Co. in Canada supplies skins to the Karlsen tanneries in Ålesund and Tromsø, Norway.²⁴ In fact the Norwegian company has no tannery. Before the US Marine Mammal Protection Act, the Karlsen production was marketed in and through the US by Bergner International Corporation of New York, but the Act put an end to that by prohibiting the sale of marine mammals in the US unless they are specifically excepted; harp and hooded seals are not. The Karlsen skins are therefore marketed predominantly by McMillan and Moore of London. The skins are tanned and dressed in Canada, Germany and Finland, and sold in Canada and around the world.

Assuming the Carino share of skins in 1977 to be 86,888 (from Price²⁴), then the Karlsen Shipping Co. share, by deduction from total catch, is 39,251. The Canadian export of sealskins to West Germany in 1977 was 24,737, leaving 14,514 skins not accounted for if the German consignment consists entirely of harp and hooded seal skins which, at an average value per skin of \$32, they could well be.

However, although Norway is by far the most important recipient of sealskins from Canada, the second most important between 1970 and 1978 was the UK, with Belgium/Luxembourg third, West Germany fourth and Finland a distant fifth. In 1977 Finland was the second largest importer, UK third and Germany fourth. Although the sealskins exported to Finland have been in the right price range for harp and hooded seals in previous years, the value per skin in 1977 was only \$2.82 and thus not likely to be from these species. This leaves Norway

and West Germany as definite importers, with Sweden, Belgium/Luxembourg and UK as possibilities. A total Canadian export of 152,632 skins in the right price range compares with 124,769 harp and hooded seals taken. The difference probably consists of ringed seals, some of which are sold at auction in Montreal by Hudson's Bay Co; unsold skins are shipped to the auction rooms of Hudson's Bay and Annings Ltd in London, re-mixed and eventually sold. The same applies to other species.⁴¹

In each of the these eight years Canadian raw sealskin exports exceeded catches of harp and hooded seals by between one and 87 per cent (average: 41.75 per cent). Exports in that period varied from 81,188 to 198,219, with 1977 producing the largest number for the whole period, but the export fluctuations bear only a vague resemblance to the catch fluctuations.

However, Canadian export figures are almost invariably lower than the recorded imports of the importing country. For example, Canadian export figures fall short of recorded Norwegian imports by between 580 skins in 1976 and 40,453 in 1970. The 580 figure is comparatively unimportant, but the 40,453 is difficult to reconcile. West German import figures exceeded Canadian export figures by 7222 skins in 1975 and 31,454 skins in 1977. Thus West Germany might easily have imported all the harp and hooded seal skins that did not go to Norway, if the statistics are accepted. Exports to Norway have fluctuated but remained over 28 per cent of Canada's total, reaching 56 per cent in 1974. Before 1974, West Germany was a small consumer of Canadian skins, but imports have increased rapidly and now account for 17 per cent of Canada's sealskin export from 1975 to 1977 (using Canadian statistics). The percentage to the UK fell from over 34 per cent in 1970 to 15.5 per cent in 1977; the UK share had previously dropped as low as 18.6 per cent in 1972, when Belgium/Luxembourg imported 65,652 skins. Since then the Belgium/Luxembourg import has remained below 6000, which may or may not include harp and hooded seals. Canada's export to USA crashed with the introduction of the US Marine Mammal Protection Act in 1972 and then gradually rose to over 900 skins in 1976 (0 in 1977). Canadian statistics indicate that Finland's import rose from zero before 1973 to 45,000 skins in 1977, but they were of such low value that their composition is dubious. These conclusions are all derived from Canadian export statistics, but German statistics show that imports from Canada have risen more quickly, and much higher, than the Canadian statistics show. Figures for other countries do not show the Canadian statistics to be particularly high or low, but merely disagree. (See Tables 12 and 34 and Figure 10.)

Value to Processors. Assuming that the inaccuracies are consistent – and comparison with German average values indicates that they are (Table 34) – changes in skin values can be calculated from the Canadian figures. For every country except France, the cost of skins, after a big drop in 1974, rose to a peak in 1975, and then declined again. (The peak for France occurred in 1976 at \$109, which cannot relate to skins of harp or hooded seals.) The fall in real (inflation-corrected) values from 1975 to 1977 is \$5.69 (21 per cent) for sealskins to UK, \$6.40 (18 per cent) for skins to West Germany and \$7.96 (26 per cent) for skins to Norway. The fall of the all-countries average is \$11.73 (39.64 per cent). Canada's sealskin exports to West Germany are consistently of a higher average value than to Norway and therefore likely to be of the higher-grade types such as young hooded seals (bluebacks) and beaters. In 1977 the average value at point of export was \$25.51 for skins to Norway, \$32.34 to West Germany and \$20.58 overall.

The recent fall in skin prices has caused great concern in

Canada, especially among Eskimo communities, who sell mostly ringed seal, usually to the Hudson's Bay Co. in Montreal. One article in a north Canadian newspaper explains that Eskimos use seals for waterproof boots, mitts and parkas and for food, and that in the 1976-77 season 'some 48,000 sealskins provided \$895,000 to 30 Arctic communities'.⁴ It sympathised that 'market prices for sealskins have declined at least 66 per cent in recent months', and blamed the anti-sealing groups for the drop in world prices.

Profits to the Processor. The figures above show the increased value per skin from sealer to point of export – i.e. gross profit was, on average, approximately \$8.48 each for skins going to Norway and \$15.31 for those going to West Germany. The average increase for all countries is \$3.55, but that takes into account many skins that are less expensive than harp and hooded seals and is therefore not a good guide. Carino Co. gives the cost of production of each skin as \$3.86.²⁰ (Data are not available for the Karlsen Shipping Co. plant.) In 1977 all Carino's skins were exported to Norway,⁵⁵ and so their net profit was probably in the region of \$4.62 per skin.

Table 6. Landings and landed values of seal pelts in Canada

Year	Catch		Value, \$ (Dunn 1977)	Av. value per pelt, \$ (Dunn 1977)	Corrected value to 1975 = 100%, \$
	(Dunn 1977)	(Env. Canada)			
1968	107 148	104 583	672 337	6.27	
1969	173 689	172 298	1 278 211	7.36	
1970	148 337	145 164	1 309 035	8.82	15.12
1971	134 610	133 092	1 144 898	8.51	14.42
1972	78 335	77 005	820 574	10.48	16.58
1973	68 209	80 139	756 457	11.09	14.46
1974	94 105	92 253	1 157 393	12.30	13.13
1975	122 919	119 587	2 458 681	20.00	20.00
1976	127 147	123 386	2 028 000	15.95	15.29
1977		124 769		(17.00)	(14.75)

N.B. 1977 value calculated from figures of W. S. Price (unpub.)

Table 7. Average prices for seal pelts received by fishermen in Newfoundland

Year	Price per pelt (\$)
1955	1.07
1956	0.83
1957	1.90
1958	3.01
1959	1.78
1960	3.08
1961	3.22
1962	3.80
1963	4.28
1964	18.85
1965	11.29
1966	10.66
1967	8.68
1968	4.28
1969	6.93
1970	8.18
1971	8.15
1972	10.42
1973	10.25
1974	14.04
1975	20.87
1976	15.82

Source: Annual Statistical Review of Canadian Fisheries, 1955–1976, Volume 9, July 1977, Fisheries and Environment, Canada.

Table 9. Number and value of harp and hooded sealskins obtained by Carino Co in 1977

Type of seal	Shorecatch		Lady Johnson II		Carino		Arctic Explorer	
	No.	Val. incl. oil \$	No.	Value \$	No.	Value \$	No.	Value \$
Whitecoats	310	2 850	5 721	65 305	5 842	55 341	6 871	77 214
Beaters	31 685	601 100	637	17 384	1 303	34 137	1 680	40 430
Bedlamers	19 592	351 600	1	23	741	9 861	3	69
Old Harps	3 972	70 400	4	100	339	5 256	19	475
Young Hoodeds	1 000	30 800	595	26 392	726	30 824	766	32 799
Old Hoodeds	203	5 900	176	6 042	196	6 352	371	8 569
Ragged Jackets	1 318	14 500	816	12 860	1 190	18 724	816	12 756
Total	58 080	1 077 150	7 950	128 106	10 337	160 495	10 526	175 657

N.B. All other skins in commerce go to Karlsen Shipping Co Ltd.

Source: Reports of Carino Co Ltd to Dept of Fisheries and Forestry, Economics Branch—Fisheries Service, Newfoundland Region

Figure 6. Comparison of number of harp and hooded seals taken by Canada (shaded) with export of all sealskins from Canada (unshaded and shaded) Canadian statistics

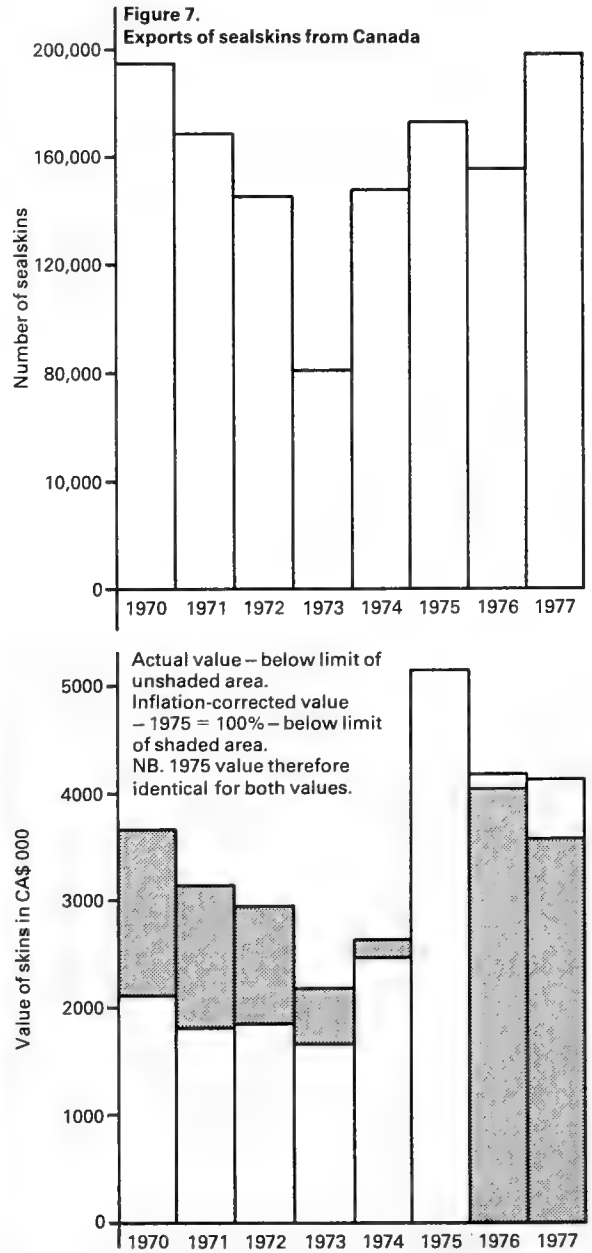
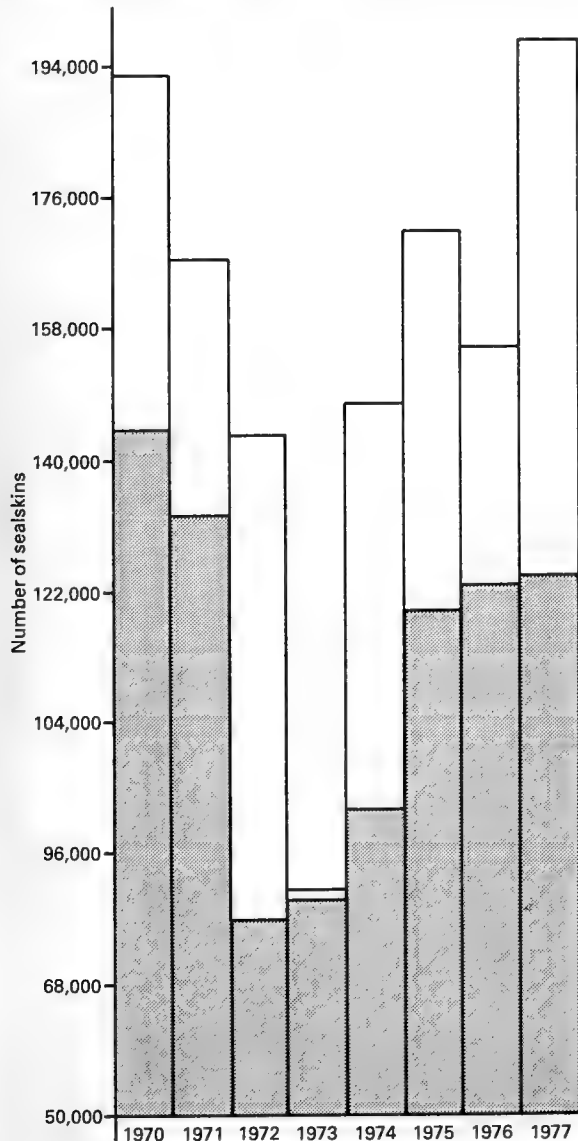
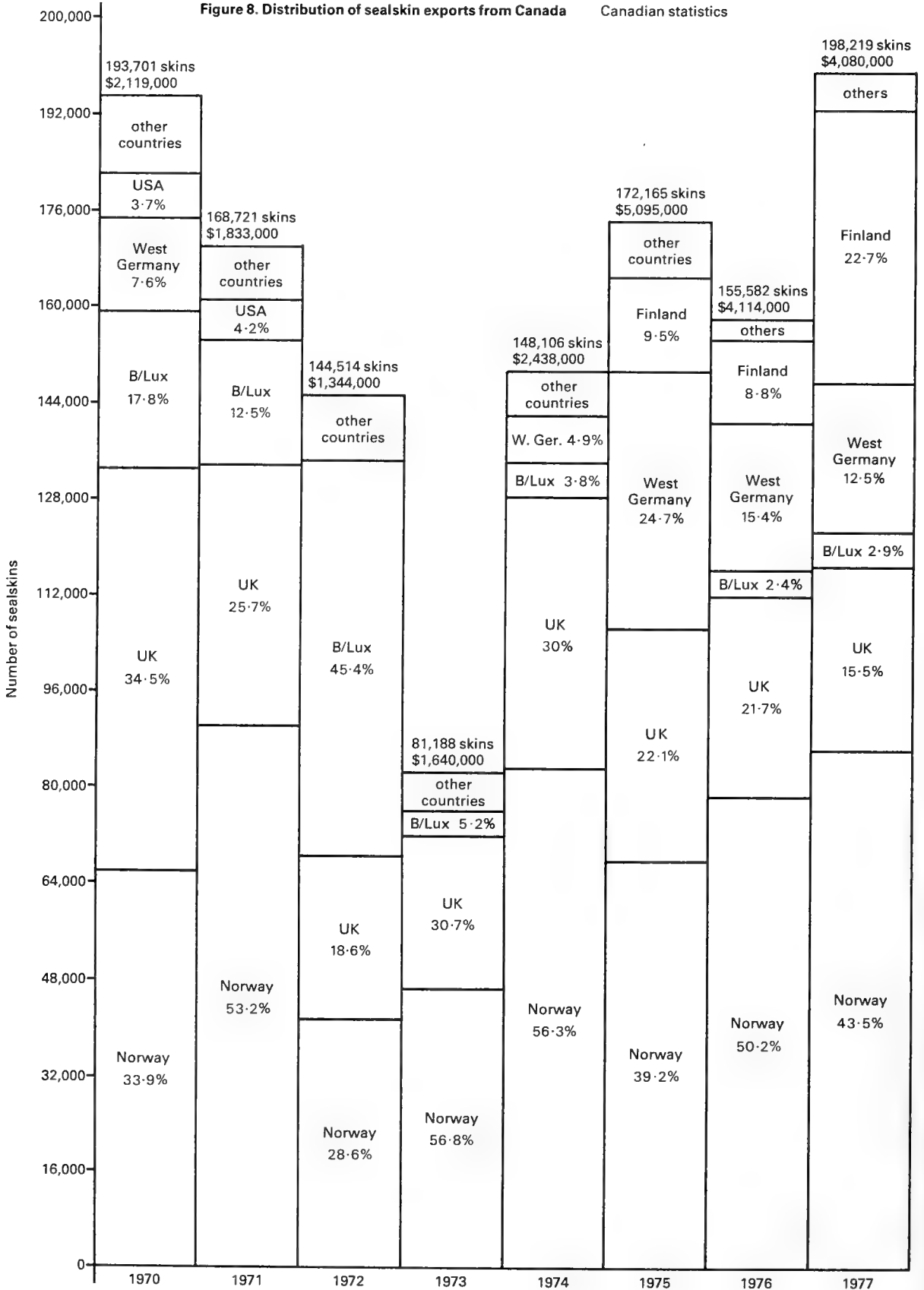


Figure 8. Distribution of sealskin exports from Canada Canadian statistics



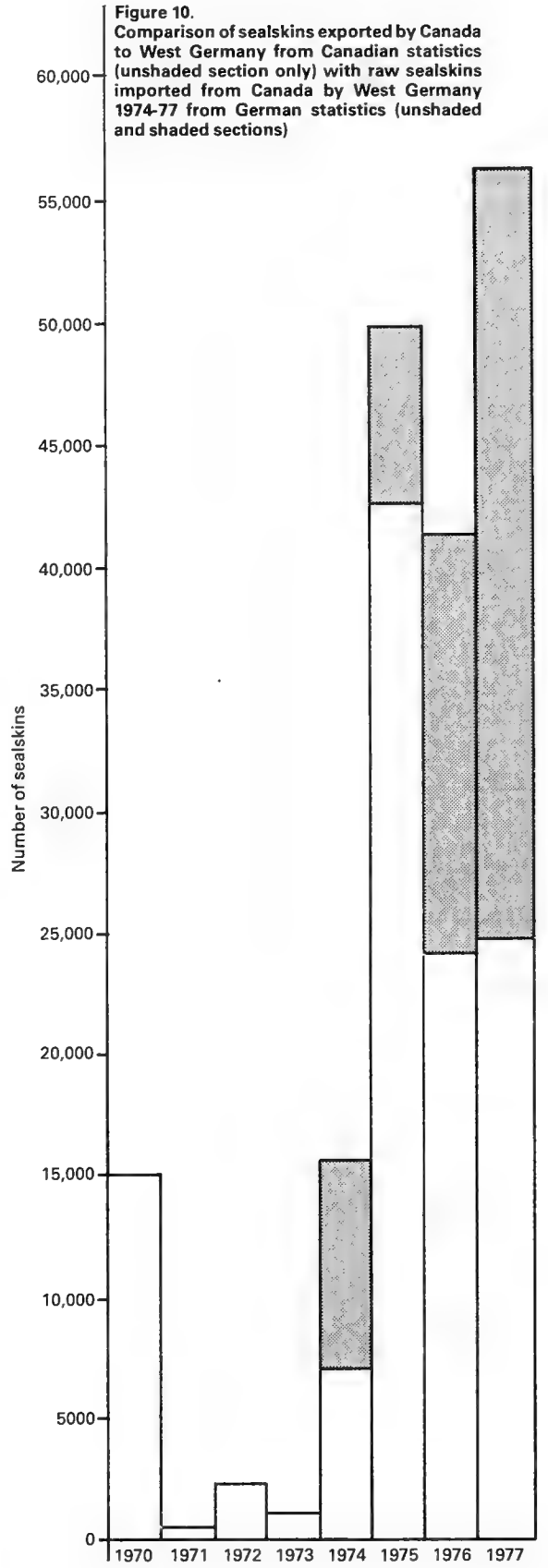
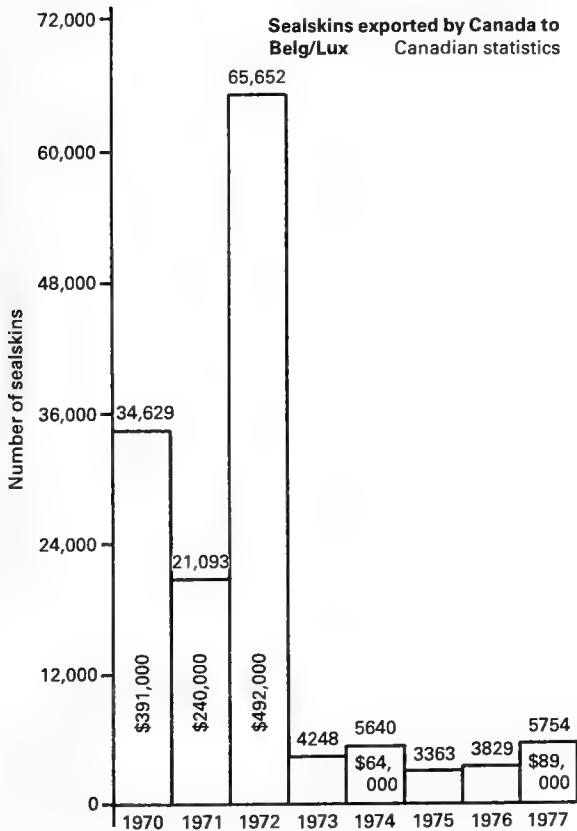
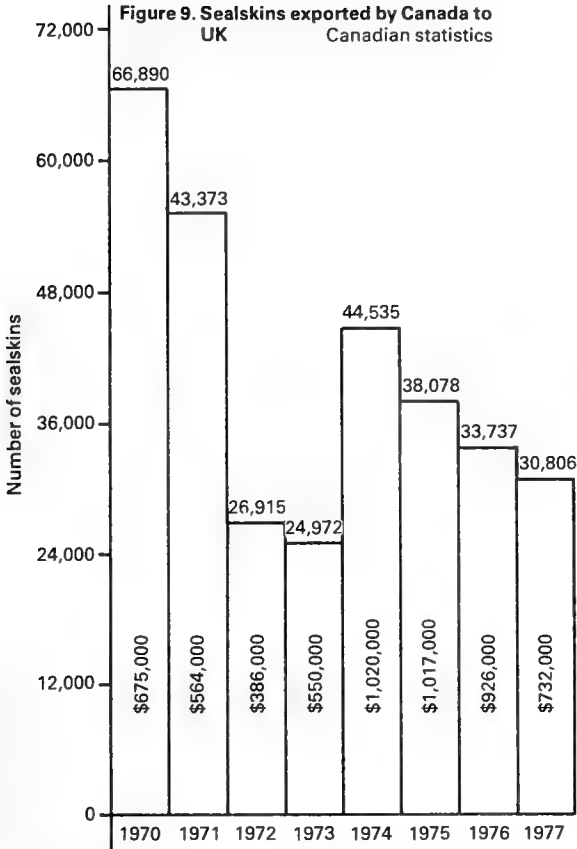


Table 10. Canadian exports of raw sealskins Number of skins/value in CA\$000

To	1970	1971	1972	1973	1974	1975	1976	1977	All years' total
Austria	102 2	62 2		95 4			74 7		333 15
Belgium and Luxembourg	34 629 391	21 093 240	65 652 492	4 248 39	5 640 64	3 363 50	3 829 49	5 754 89	144 208 1 414
Denmark			40 1						40 1
Finland					3 613 54	16 313 364	13 770 213	45 000 127	78 696 758
France	2 047 34	997 16	4 046 35	1 254 39	1 549 47	115 4	73 8	230 9	10 311 192
W. Germany	14 835 172	553 8	2 331 45	1 034 26	7 239 194	42 580 1 468	24 063 761	24 737 800	117 372 3 474
Italy				4	1		146 13	67 6	218 19
Japan				66 3	10 1		6		82 4
Norway	65 646 695	89 832 908	41 348 769	46 156 883	83 474 993	67 607 2 035	78 172 2 009	86 240 2 200	558 475 10 492
Puerto Rico	1 290 5	5 235 52							6 525 57
St Pierre et Miquelon			2						2
Spain				2			18 2		20 2
Sweden	1 012 22	398 4	4 035 107	3 184 92	1 793 42	3 779 138	588 21	5 095 102	19 884 528
Switzerland			81 8	133 3	186 20		173 15	290 15	863 61
United Kingdom	66 890 675	43 373 564	26 915 386	24 972 550	44 535 1 020	38 078 1 017	33 737 926	30 806 732	309 306 5 870
USA	7 250 122	7 178 40	64 2	40 2	66 3	330 18	933 91		15 861 278
Total No. Total value	193 701 2 119	168 721 1 833	144 514 1 844	81 188 1 640	148 106 2 438	172 165 5 095	155 582 4 114	198 219 4 080	1 262 196 23 163

Table 11. Inflation-corrected (1975 = 100%) average value per skin of raw sealskins exported by Canada
Prices in Canadian dollars

	1970	1971	1972	1973	1974	1975	1976	1977
<i>Raw skins to all countries</i>								
Average value	10.94	10.86	12.76	20.20	16.46	29.59	26.44	20.58
Corrected for 1975	18.76	18.40	20.19	26.33	17.56	29.59	25.35	17.86
<i>Skins to UK</i>								
Average value	10.09	13.00	14.34	22.02	22.90	26.71	27.44	23.76
Corrected	17.30	22.03	22.69	28.71	24.44	26.71	26.31	20.62
<i>Skins to Finland</i>								
Average value	—	—	—	—	14.94	22.31	15.47	2.82
Corrected	—	—	—	—	15.94	22.31	14.83	2.44
<i>Skins to W. Germany</i>								
Average value	11.59	14.46	19.30	25.14	26.79	34.47	31.62	32.34
Corrected	19.88	24.51	30.53	32.77	28.59	34.47	30.31	28.07
<i>Skins to Norway</i>								
Average value	10.58	10.10	18.59	19.13	11.89	30.10	25.69	25.51
Corrected	18.14	17.12	29.41	24.94	12.69	30.10	24.63	22.14
<i>Skins to France</i>								
Average value	16.61	16.04	8.65	31.10	30.34	34.78	109.59	39.13
Corrected	28.49	27.18	13.68	40.54	32.38	34.78	105.07	33.96

Calculated from official export statistics of Canada.

Table 12. Reliability of Canadian statistics

Comparison of official trade statistics from different countries								
Number of raw sealskins exported by Canada/imported by other countries								
Statistics	1970	1971	1972	1973	1974	1975	1976	1977
<i>Canada to Norway</i>								
Canada	65 646	89 832	41 348	46 156	83 474	67 607	78 172	86 240
Norway	106 099	76 595	45 015	66 045	82 082	68 823	78 752	87 508
<i>Canada to Denmark</i>								
Canada	—	—	40	—	—	—	—	—
Denmark	—	—	—	—	382	—	1 074	—
<i>Canada to West Germany</i>								
Canada	14 835	553	2 331	1 034	7 239	42 580	24 063	24 737
West Germany	NA	NA	NA	NA	15 554	49 802	41 297	56 191
<i>Canada to Finland</i>								
Canada	—	—	—	—	3 613	16 313	13 770	45 000
Finland	6 044	19 868	29 255	6 505	3 293	8 796	13 770	6 334

NA = not available.

Greenland (via Denmark)

The ringed seal is by far the most important species in the Greenland seal fishery; about 70,000 are taken each year. Next is the harp seal, of which some 7000 are taken, followed by the hooded seal at about 3000. In addition many seals are used by the Greenlanders. Christiansen estimates that, in 1965, of about 90,000 seals caught, only 60,000 entered the fur industry, the rest being used by the hunters or sold locally.⁷ I do not know if he includes other skin uses, such as leather manufacture.

The Company. In 1959 the Royal Greenland Trade Department (KGH) changed the system of paying hunters for their skins from a standard price system to a grade system, in which prices reflected the number of defects in a skin and whether it had been washed. In 1967, because the auctioned skins brought much higher prices than the hunters received and KGH was showing a large surplus, another system was introduced: each hunter is given a number which is marked on his skins; on selling his skins in Greenland, with the blubber already removed, he is paid a provisional sum based on the size and quality. If the skins then fetch a higher price at auction, the sealer is given the difference, less his share of administrative costs. But with a drop in the market, the provisional prices paid to the sealers were lowered by 10 per cent from April 1 1968, because they had been higher than the market price.⁷ Ten years later the same thing was happening, so that KGH was subsidising the adversely affected subsistence hunters, but this time the drop in value was blamed on the anti-sealing publicity of animal welfare organisations.⁵⁰ However, the trend may be changing: at the September 1978 KGH auction prices for ringed seals were up to 15 per cent higher than those in May. The auctions are not comparable for harp and hooded seals, as there were no hooded seals in the May auction and no harp seals in the September auction; this is usual.⁴⁶

Value to Sealers. In the mid-1960s the average price paid to sealers was Dkr50-60 per skin. From January 1967, under the new system, sealers received Dkr120 for good-quality large skins, Dkr80 for large skins with two or three defects and Dkr40 for discoloured skins or those with several defects;⁷ in 1968 the overall average price was Dkr54 per skin, and in 1978 the price ranged from Dkr30 to 200. All skin exports from Greenland go through the KGH, which has a long-standing contract with Danish

Fur Sales at the Copenhagen Fur Centre, where the skins are auctioned.

Value to KGH. From 1970 to 1977 KGH sold at its auctions in Copenhagen 17,987 harp seal skins. At the May 1978 auction, 5219 harp seal skins were sold, more than at any previous auction. Of the 11,024 hooded seal skins sold between 1970 and 1977, 2780 (25 per cent) were of bluebacks. The total number of both species sold annually has been increasing each year, erratically in the case of harp seals and more gradually in the case of hooded seals. Average prices achieved for each grade over the period range from Dkr12 (1971) to Dkr412 (1974) for harp seal skins and from Dkr23 (1977) to Dkr354 (1975) for hooded seal skins. Hooded seals are generally more valuable than harps, but the top price for harp skins, at Dkr580 (1975), is Dkr30 higher than the highest paid for hooded (1972) in the eight years.

Exports. West Germany is the most important consumer of skins from the KGH auctions, and Denmark itself uses many skins; East Germany, France and UK are the other leading buyers.⁴⁶ (Table 15 shows distribution of sealskins from Denmark, 1970-1977.) This is largely borne out by the Danish export statistics which show that over the past eight years West Germany has imported three times as many sealskins from Denmark (239,945) as the next largest importer, Norway (73,510). Comparison with West German statistics indicates that the Danish figures may be moderately reliable, although there is a large discrepancy in the 1976 figures (Danish exports, 31,901; German imports 20,781). However, the German figures also show a 1974-1977 import of 11,320 raw sealskins direct from Greenland, at a slightly higher average price than those from Denmark. I have found no explanation for these skins.

From 1970 to 1977, 552,918 raw sealskins were exported from Denmark, but only 335,435 skins were sold by KGH. The difference is partly accounted for by Denmark's imports of raw skins from countries other than Greenland, amounting to 79,956 over the same period. Most of these, in the past, have come from or through West Germany and Iceland, with small amounts from UK, Canada, and Norway. There are several dressers and tanners in Denmark, so that many of the skins imported raw leave the country dressed. But Denmark is itself such a large consumer of sealskins that many processed ones are

imported for manufacture of garments. Between 1970 and 1977 some 520,150 dressed sealskins were imported, compared with 24,205 exported (import surplus of 495,945 skins; an average of 61,993 a year). Most imported dressed skins came from Norway, Sweden and, perhaps unexpectedly, Greenland, but it is impossible to estimate the numbers of each species involved. In 1977 the

average value per sealskin at point of export from Denmark was about Dkr171 for skins in West Germany, Dkr177 to Norway and Dkr118 to France. (The ban on sealskin imports to France, implemented towards the end of 1977, lasted only a few months.) All these are in the right range to be, or to include, harp and hooded seals of any grade.

Table 13. Number of harp and saddle seal skins sold and prices achieved at the Copenhagen auctions of the Royal Greenland Trade Department

Grade	Harp Seal			Saddle Seal						Total	
	3AW	3B	3BW	3C	3W	3AW	3B	3BW	3C		3CW
1970											
Number skins	1 642	37	188	45	196						2 108
Average price, Dkr	196	82	145	44	277						
Top price, Dkr	335	82	160	44	370						
Total received by calculation, Dkr											408 398
1971											
Number skins	1 556		301	30	202						2 089
Average price, Dkr	159		86	12	146						
Top price, Dkr	270		140	12	240						
Total received by calculation, Dkr											303 142
1972											
Number skins	1 597	382	54	46							2 079
Average price, Dkr	243	167	171	56							
Top price, Dkr	375	230	180	56							
Total received by calculation, Dkr											463 675
1973											
No Harps in 1973											
1974											
Number skins	852	555	234	38		238		65		12	1 994
Average price, Dkr	277	226	223	105		412		279		125	
Top price, Dkr	440	350	330	105		490		300		125	
Total received by calculation, Dkr											535 297
1975											
Number skins	3 029		522	368		171	9	13	12		4 124
Average price, Dkr	327		284	122		307	210	250	30		
Top price, Dkr	580		370	150		370	210	250	30		
Total received by calculation, Dkr											1 241 624
1976											
Number skins	1 975		320	251		204		25	14		2 789
Average price, Dkr	288		209	101		329		235	100		
Top price, Dkr	530		230	160		400		260	100		
Total received by calculation, Dkr											735 422
1977											
Number skins	2 316		285	83		114		6			2 804
Average price, Dkr	194		122	22		286		170			
Top price, Dkr	330		140	25		360		170			
Total received by calculation, Dkr											519 524
1970-1977											
Total received (estimated), Dkr											4 207 082
1978											
Number skins	2 314	815	1 528	171		331	55		5		5 219
Average price, Dkr	231	129	178	10		260	75		10		
Top price, Dkr	360	180	330	10		390	160		10		
Total number											23 206

W = washed; Saddle seal = Harps with a defined saddle; Harp seal = Harps without a defined saddle, especially young animals.

Table 14. Number of hooded seal skins sold and prices achieved at the Copenhagen auctions of the Royal Greenland Trade Department

<i>Hooded Seals</i>							
Grade	1W (Bluebacks)	2 + 3C (Bluebacks)	2 (Bluebacks)	2W (Bluebacks)	3	3W	Total
1970							
Number of skins	16			29		246	291
Average price	287			219		302	
Top price	290			250		440	
Amount received (calculated) Dkr							85 235
1971							
Number of skins	48			92		640	780
Average price	268			153		218	
Top price	295			210		410	
Amount received (calculated) Dkr							166 460
1972							
Number of skins	68			105		597	770
Average price	228			156		337	
Top price	230			235		550	
Amount received (calculated) Dkr							233 073
1973							
Number of skins	141			119		763	1 023
Average price	390			242		282	
Top price	440			330		540	
Amount received (calculated) Dkr							298 954
1974							
Number of skins	114		27	101		992	1 236
Average price	328		135	209		306	
Top price	370		135	270		520	
Amount received (calculated) Dkr							303 552
1975							
Number of skins	176		134	227	1 511		2 048
Average price	354		89	226	215		
Top price	380		110	270	480		
Amount received (calculated) Dkr							450 397
1976							
Number of skins	220		88	358	1 146		1 812
Average price	243		96	154	204		
Top price	250		110	190	330		
Amount received (calculated) Dkr							350 824
1977							
Number of skins	114	52	551		2 349		3 066
Average price	295	23	168		124		
Top price	310	40	260		330		
Amount received (calculated) Dkr							418 670
Total number of skins							11 024
Total received (estimated), Dkr.							2 307 165

W = washed.

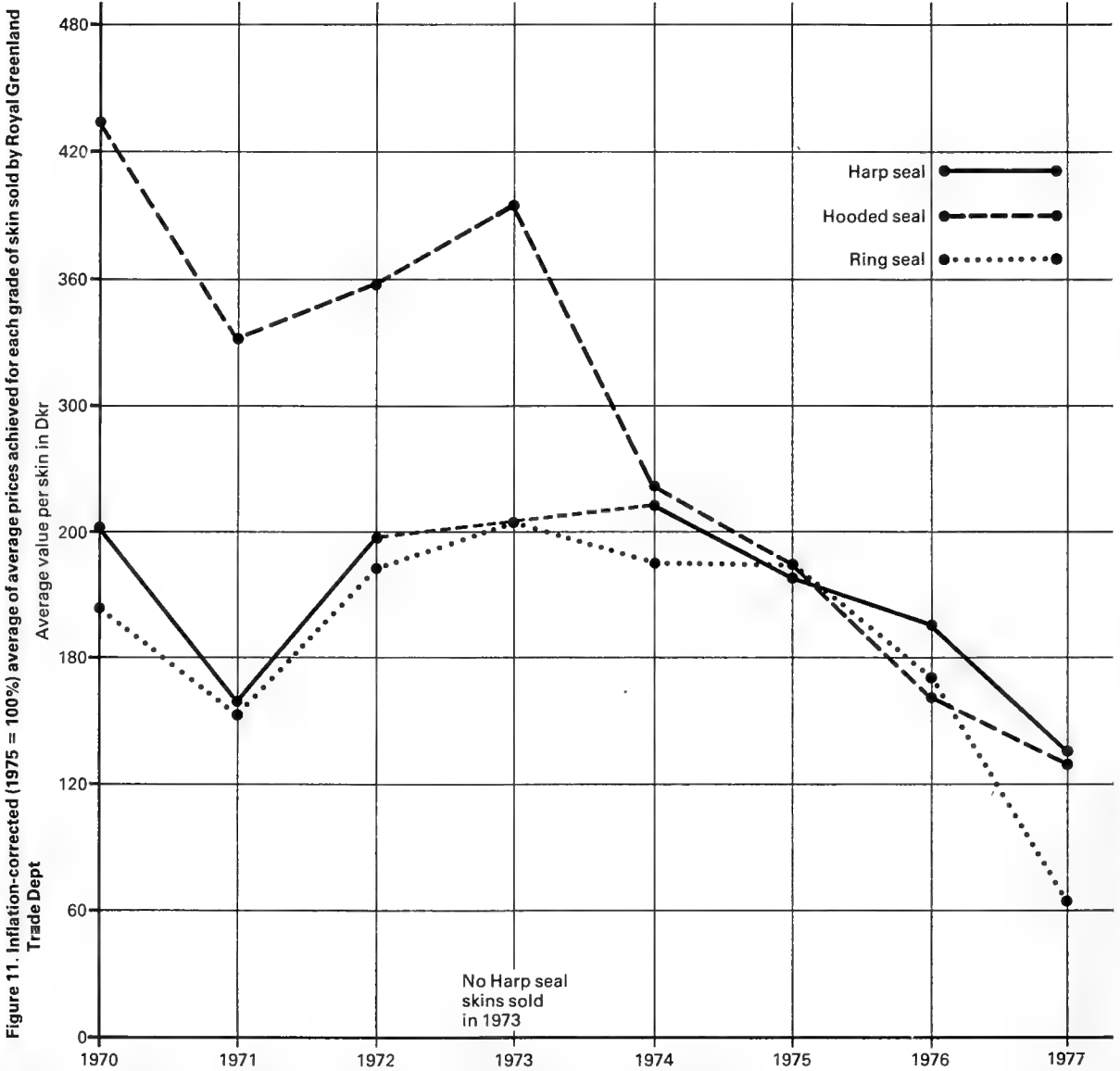
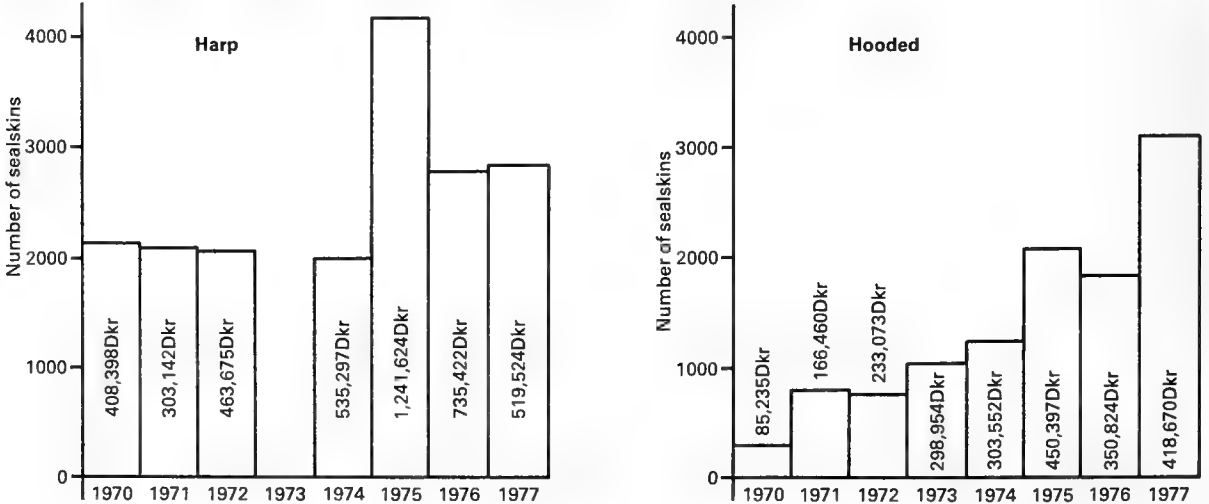


Figure 12. Number of harp and hooded sealskins sold by Royal Greenland Trade Department



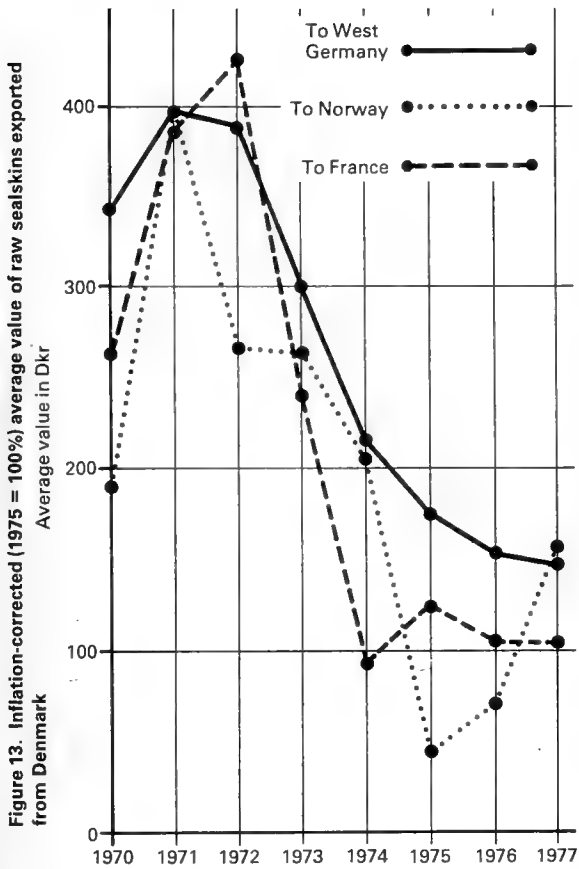


Figure 13. Inflation-corrected (1975 = 100%) average value of raw sealskins exported from Denmark

Table 15. Distribution of sealskins from Denmark

To	Raw skins		Processed skins	
	1970-77 (%)	1977 (%)	1970-77 (%)	1977 (%)
Australia	0.02	-	0.03	0.3
Austria	0.26	0.69	8.79	4.16
Canada	1.43	-	0.46	-
Eire	-	-	0.00	-
Finland	-	-	0.20	-
France	6.36	14.09	-	-
E. Germany	5.32	3.09	0.00	-
W. Germany	43.39	15.51	15.57	20.28
Greenland	12.22	29.86	2.73	0.78
Hong Kong	-	-	0.00	-
Iceland	-	-	1.77	-
India	-	-	0.08	0.75
Italy	0.65	-	4.02	24.98
Japan	0.61	-	1.27	-
Monaco	-	-	3.34	-
Netherlands	0.19	-	-	-
New Zealand	-	-	0.01	0.15
Norway	13.29	19.24	14.26	10.75
Poland	-	-	14.45	14.34
Spain	-	-	0.74	0.98
Sweden	9.07	17.49	26.54	22.89
UK	0.62	-	2.39	-
USA	0.00	-	1.47	-
Total	93.43%	99.97%	98.12%	100.36%*
	of 552 918 skins	of 75 825 skins	of 24 205 skins	of 2 642 skins

Calculated from official export statistics
* Due to rounding up decimals.

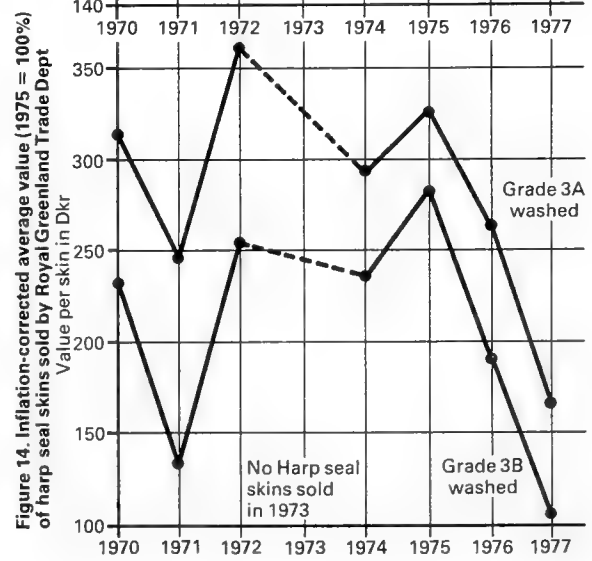
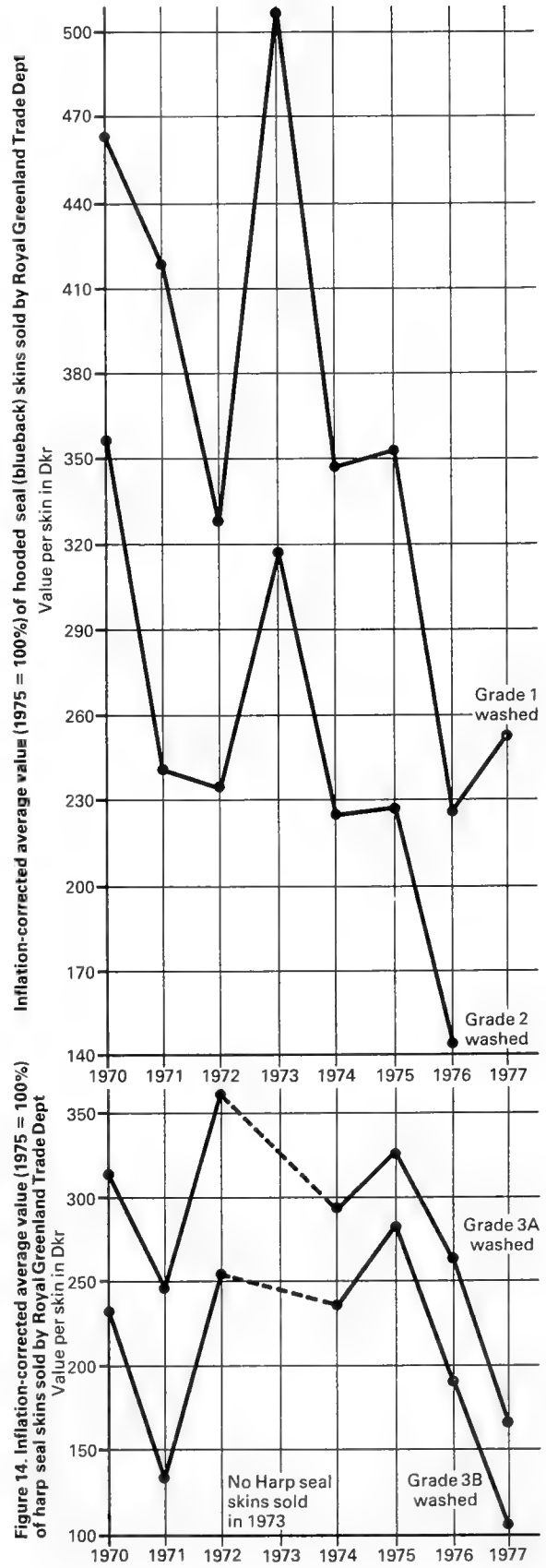


Figure 14. Inflation-corrected average value (1975 = 100%) of harp seal skins sold by Royal Greenland Trade Dept

Norway

Between 1970 and 1977 harp seals represented about 72 per cent of the seals landed in Norway, and hooded seals about 28 per cent. Very few ringed or bearded seals are landed in Norway.

The Sealing Companies. The four principal companies involved in sealing are G.C. Rieber and Co. A/S, Bergen; Brødr Jakobsen Rederi, Tromsø; Martin Karlsen A/S, Brandal, Ålesund; and Age Aarseth, Vartdal, Ålesund. All own ships which go to Newfoundland and to Jan Mayen,³ but all have fewer ships than in the past. The trend today is for skippers to own their ships and sell the catch to the de-blubbering plants, and many skippers have established their own or family companies. Sixteen companies and individuals owned the 21 ships which sealed from Norway in 1977. Chr. Rieber says there are at least 20 skipper-owners.⁵⁵

The De-blubbering Companies. The four de-blubbering plants are owned by G.C. Rieber Co. and Jakobsen Brothers, each with one plant in Tromsø, and Martin Karlsen Co., with two plants in Ålesund. The skins are sorted after being de-blubbered, and the blubber weighed as it is removed. Working through a shipment takes one or two days; the works pays the ship owner, who is then responsible for paying the sealers on his vessel.

Processing. At each plant the skins are salted and simply prepared either for export as raw skins – mainly to Sweden, Finland, Germany, France and UK – or for dressing and tanning by Rieber Co. in Bergen. The other three plants either sell skins abroad or to Rieber, or pay the latter to dress them – or any combination of these three alternatives. Skins from the Rieber Co. in Tromsø are either exported in the raw state or dressed in Bergen. Rieber sorts its pelts into four grades for each type of skin according to the amount of damage. As they have the only sealskin tannery in Norway, it is their grading that counts. They also grade skins according to their colour: *A* natural, *B* slightly yellowed, *C* yellow. Thus there are some 40-50 grades of skin each year. For at least seven years Ålesund and Tromsø were the two principal landing ports, according to information from the Norwegian Directorate of Fisheries. Until recently Martin Karlsen owned only one of the plants at Ålesund, but now owns both, so the 1977 figures for Ålesund landings are a good indication of the number and type of skins they handled. In 1977 39 per cent of Norway's harp and hooded seal catch was landed in Ålesund – 24,180 harp and 6316 hooded seals. Since 1973 most landings have been in Tromsø, where there are two large plants, but no data are available to show the proportion of skins to each.

Value to Sealers. Average first-hand values of sealskin can be calculated from official Norwegian statistics and appear to include the value of the blubber (see Figure 23). The lowest return is from Newfoundland because of the large proportion of whitecoats, approximately 48 per cent, and the very low proportion of hooded seals; some eight per cent are bluebacks, and six per cent hooded seals over one year old. The highest returns are from the West Ice take because of the high proportion of bluebacks killed there – 46 per cent – even though whitecoats account for 23 per cent. The value of the East Ice kill generally lies between the two values, but closer to those of Newfoundland. Catches of both whitecoats and hooded seals are very low in this area, where about 99 per cent of the seals killed are beaters or harp seals over a year old.

Imports for Processing. Norwegian imports of raw sealskins account, on average, for a larger number of animals than are actually taken by Norway. From 1971 to

1977, 876,363 sealskins were imported (average: 125,195 per year), while 780,915 were landed from catches (average: 111,559), but Rieber imports many merely for dressing. For example, Sojuzpushmina in USSR has sent up to 15,000 raw skins a year to Rieber, who, after processing, returns them.

Foreign Trade Statistics. Only Norway indicates species in foreign trade statistics. There are three categories – whitecoats, bluebacks and 'others' – but even cursory inspection of the figures shows that they are misleading. Although whitecoats are recorded as 4.5 per cent and blueback 0.1 per cent of imports, whitecoat imports in 1977, for example, are put at 745; but that year all skins from Carino in Canada were sent to Rieber in Bergen, including over 18,000 whitecoats. Norwegian exports of raw blueback and whitecoat skins are an order of magnitude above the import figures, and comparison with other nations' statistics indicates that they may therefore reflect the true situation more clearly. The raw skin exports are easily covered by Norway's catch alone. Over the eight years they decreased by about the same proportion as the Norwegian seal kill, but more gradually. Imports, on the other hand, changed very little. Differences in average value between raw sealskins imported into Norway and those exported are extraordinary, and show no consistency, except that skin of 'other' seals exported are generally of higher value than those imported. In 1977 export statistics show that raw whitecoats are least valuable, while import statistics show that they are most valuable. This may reflect the grades of each type of imported pelt: imported bluebacks are on average one-third as valuable as exported bluebacks. But it is also possible that Norwegian import statistics are at fault, as many figures are omitted.

Value of Skins to the Dealer. Import statistics show that raw blueback skins rose enormously in real value from 1971 to 1973 and then dropped rapidly in 1977 to below their 1971 value. Imported whitecoats also appear to have dropped in 1973 but have been rising since then, whereas other seals have shown a slight and very gradual decline. But the poor quality of these statistics must be stressed. Extrapolation from Norwegian export statistics gives three distinct (i.e. not overlapping) sets of real value, and all show a decrease over the eight years. For whitecoats and bluebacks this has been fairly steady, but the declining real value of other seals recovered briefly in 1973 and 1974, accompanying a decrease in the number of sealskins exported. Bluebacks, by far the most valuable of the three categories, declined in real value more rapidly than the other two. All show a levelling out in 1977. Average 1977 values of exported raw skins were Nkr70.34 for whitecoats, Nkr334.44 for bluebacks, and Nkr133.04 for other sealskins. The average for all raw sealskins was Nkr110.98.

Distribution of Imports and Exports. During the eight years Norway imported raw whitecoats from Canada, Denmark, West Germany, UK and USA, but the statistics are so poor that they are not worth analysing. France imported the largest proportion of raw whitecoat exports from Norway over the same period. Finland, UK and West Germany, in that order, are the next most important destinations, although in 1977 raw whitecoats were exported only to France and UK – 13,193 skins. The average values per skin were similar, at Nkr71.77 per skin to France and Nkr68.55 per skin to UK. Raw bluebacks have been imported in consignments too small for the country of origin to be specified, except for 937 skins from USSR in 1977, with an average value of Nkr100.32. Exported raw bluebacks in the same year averaged

Nkr334.44 per skin, and all went to West Germany. In fact, over 92 per cent of the raw bluebacks exported from Norway in the eight years went to West Germany. The only other destinations recorded in Norwegian export statistics are Denmark, Netherlands and Sweden. Other raw sealskins come from the major fur-centre countries, such as France and West Germany, and from the countries that take seals. Especially important suppliers are Canada and South Africa; the latter, which supplied about 18 per cent of the seals imported from 1970 to 1977, exports Cape fur seal but neither of the two species under study. Norwegian imports from Canada showed a large reduction between 1970 and 1972 and a recovery since, so that skin imports other than whitecoats and bluebacks were considerably higher in 1977 than in 1970. The next largest number of raw skins in the eight years came from USSR, nearly 78,000. Denmark seems to be the only other important supplier to Norway. In 1977 average value per skin imported from Canada and Denmark was Nkr89.34. Exports of these other raw sealskins from Norway decreased from 59,626 in 1970 to 12,154 in 1977. Although there are 11 recorded importing countries over the period, five are consistently most important: UK, West Germany, France, Sweden, and Denmark, in that order. All have important fur industries, although the Swedish one is smaller than its population and climate would suggest. But skins exported to a country are not necessarily used there; they may be distributed from there, as in the UK, or dressed and used in manufacture for export, as in West Germany. Raw sealskin figures cannot be separated to distinguish harp and hooded seals from others because the weights and values of the many

grades overlap. Comparison of a year's imports with exports will almost certainly indicate nothing significant, because the country's catch will, to some extent, be included in the export figures, and imported skins are often held over in any case. Comparison of figures for an eight-year period is likely to be more significant. Excluding whitecoat and blueback figures, Norway's raw sealskin imports in 1970-1977 were 974,025 skins at Nkr83,297,000; exports were 260,499 at Nkr32,058,000 (values as recorded, i.e. not corrected for inflation). As imports are some 3.7 times greater than exports, a very large number of the imports are obviously consumed within Norway and/or processed before export. It does not seem particularly significant that, while numbers of imports fluctuated only slightly and actually slightly increased, exports from 1970 to 1977 diminished by 80 per cent (68 per cent after 1971). The Norwegian catch - almost entirely of harp and hooded seals - diminished by 53 per cent from 1971 to 1977. Thus decrease in catch may be the factor that has had greatest effect on raw skin exports.

Reliability of Statistics. Except where stated otherwise, the above facts are derived from Norwegian foreign trade statistics. It often happens that the statistics from the exporting and importing countries do not agree. Most significant is the absence in Danish figures of imports from Norway, since Norway specifies exports of 28,044 skins over eight years. Over the four years for which German data is available the difference is 3656 skins, and 6167 over eight years for Finland (the Finnish figures being the larger). Other discrepancies arise because from 1970 to 1976 countries were only specified in the

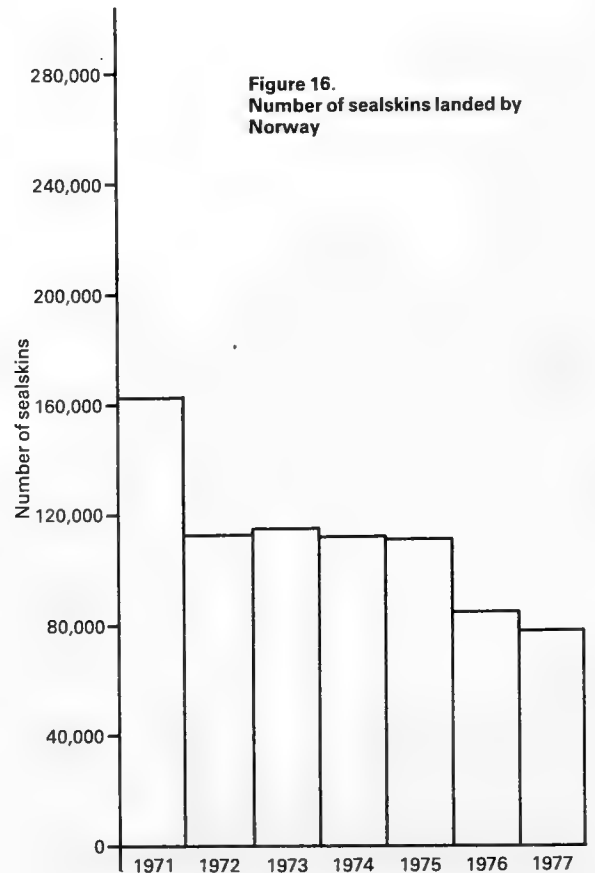
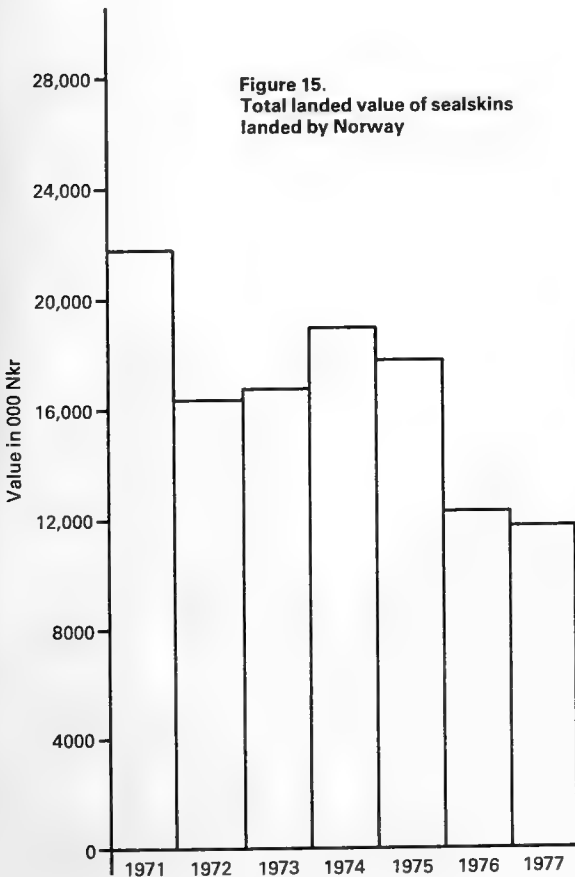


Table 16. Distribution of raw sealskins from Norway

To	Whitecoats		Bluebacks		Other seals	
	1970-1977 (%)	1977 (%)	1970-1977 (%)	1977 (%)	1970-1977 (%)	1977 (%)
Canada	—	—	—	—	0.32	—
Denmark	—	—	3.24	—	10.53	16.45
Finland	21.09	—	—	—	5.74	—
France	40.29	55.64	—	—	18.12	17.03
E. Germany	5.42	—	—	—	1.37	—
W. Germany	13.54	—	92.88	100	20.26	—
Italy	—	—	—	—	0.10	2.14
Netherlands	—	—	3.07	—	0.51	—
Sweden	—	—	0.44	—	13.35	9.05
UK	19.64	44.34	—	—	28.77	53.59
USA	—	—	—	—	0.46	—
	99.98% of 121 536 skins	99.98% of 13 193 skins	99.63% of 40 360 skins	100% of 1 199 skins	99.53% of 260 499 skins	98.26% of 12 154 skins

Calculated from official export statistics.

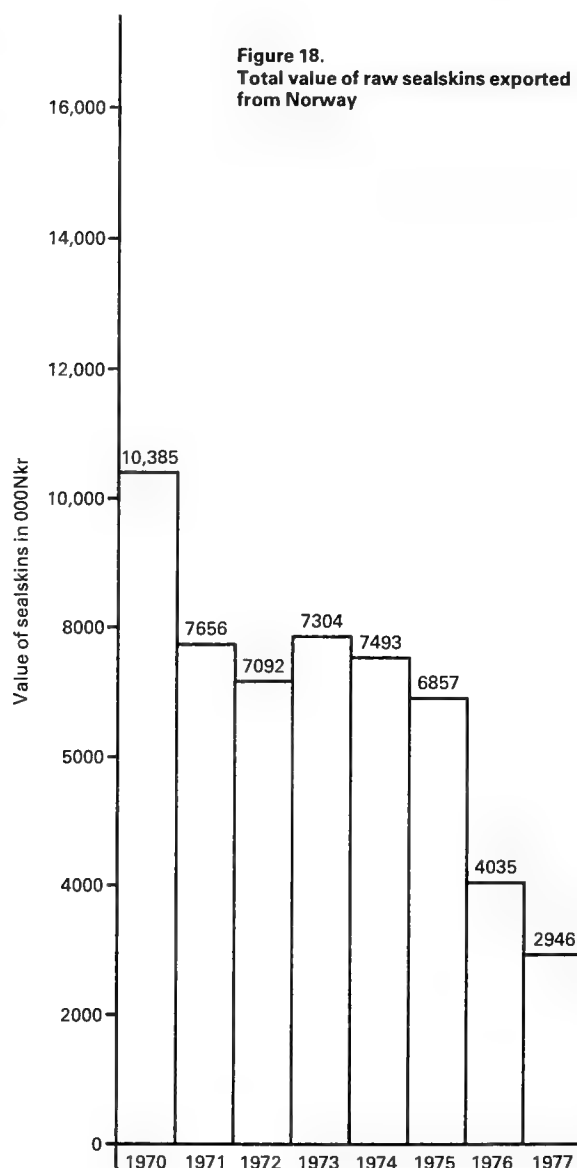
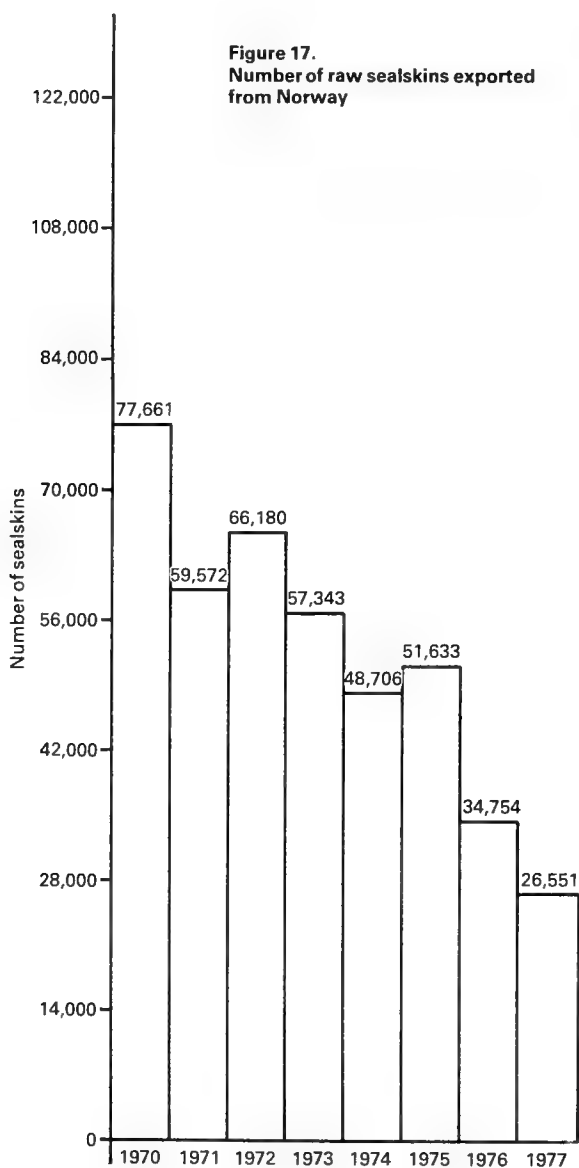


Table 17. Norwegian sealskin exports. Value in 1000 Nkr

Raw Sealskins	1970		1971		1972		1973		1974		1975		1976		1977		Total	
	No.	Val.	No.	Val.	No.	Val.	No.	Val.	No.	Val.	No.	Val.	No.	Val.	No.	Val.	No.	Val.
Whitecoat	11 101	1 115	14 572	1 068	9 334	616	19 683	1 403	20 475	1 380	17 540	1 635	15 638	902	13 198	928	121 541	9 047
Blueback	6 934	2 107	7 617	2 708	5 761	1 776	7 410	2 412	5 140	1 702	3 509	1 181	2 790	876	1 199	401	40 360	13 163
Others	59 626	7 163	37 383	3 880	51 085	4 700	30 250	3 989	23 091	4 411	30 584	4 041	16 326	2 257	12 154	1 617	260 499	32 058
Sub total raw skins	77 661	10 385	59 572	7 656	66 180	7 092	57 343	7 304	48 706	7 493	51 633	6 857	34 754	4 035	26 551	2 946	422 400	54 268
Processed Sealskins	Tonnes Val.		Tonnes Val.		Tonnes Val.		Tonnes Val.		Tonnes Val.		Tonnes Val.		Tonnes Val.		Tonnes Val.		Tonnes Val.	
	169	37 791	139	30 759	117	30 060	129	34 827	152	41 620	105	29 317	133	36 408	120	33 292	1 064	274 074
Total value	48 176		38 415		37 152		42 631		49 113		36 174		40 443		36 238		328 342	

Source: Statistisk Sentralbyrå, Oslo.

Figure 19. Export of raw whitecoat skins from Norway

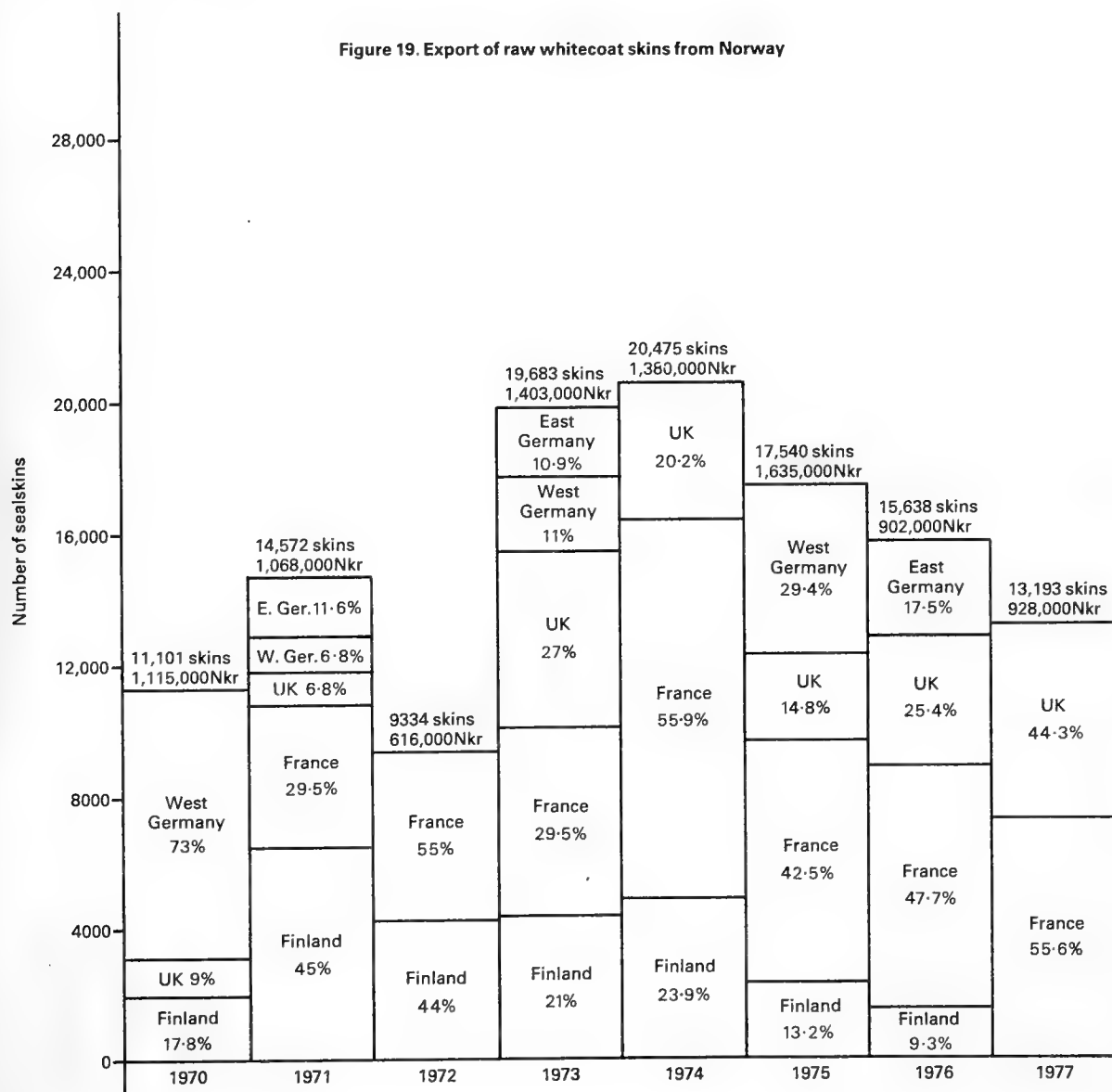


Table 18. Norwegian sealskin imports. No/value in 1000 Nkr

Raw Sealskins	1970		1971		1972		1973		1974		1975		1976		1977		Total	
	No.	Val.	No.	Val.	No.	Val.	No.	Val.	No.	Val.	No.	Val.	No.	Val.	No.	Val.	No.	Val.
Whitecoat	29 870	1 177	—	—	—	—	626	63	13 881	470	59	3	843	114	745	153	46 024	1 980
Blueback	—	—	48	4	—	—	51	21	—	—	—	—	39	12	1 089	113	1 227	150
Other	115 043	7 635	117 561	8 727	123 790	10 369	109 886	9 878	131 508	11 979	115 298	11 218	138 301	12 425	122 638	11 066	974 025	83 297
Sub total raw skins	144 913	8 812	117 609	8 731	123 790	10 369	110 563	9 962	145 389	12 449	115 357	11 221	139 183	12 551	124 472	11 332	1 021 276	85 427
Processed Sealskins	Tonnes		Tonnes		Tonnes		Tonnes		Tonnes		Tonnes		Tonnes		Tonnes		Tonnes	
	Val.		Val.		Val.		Val.		Val.		Val.		Val.		Val.		Val.	
	8	1 675	4	896	8	1 458	5	883	1	265	0	178	7	1 037	6	1 213	39	7 605
Total value	10 487		9 627		11 827		10 845		12 714		11 399		13 588		12 545		93 032	

Source: Statistik Sentralbyra, Oslo.

Figure 20. Export of raw blueback skins from Norway

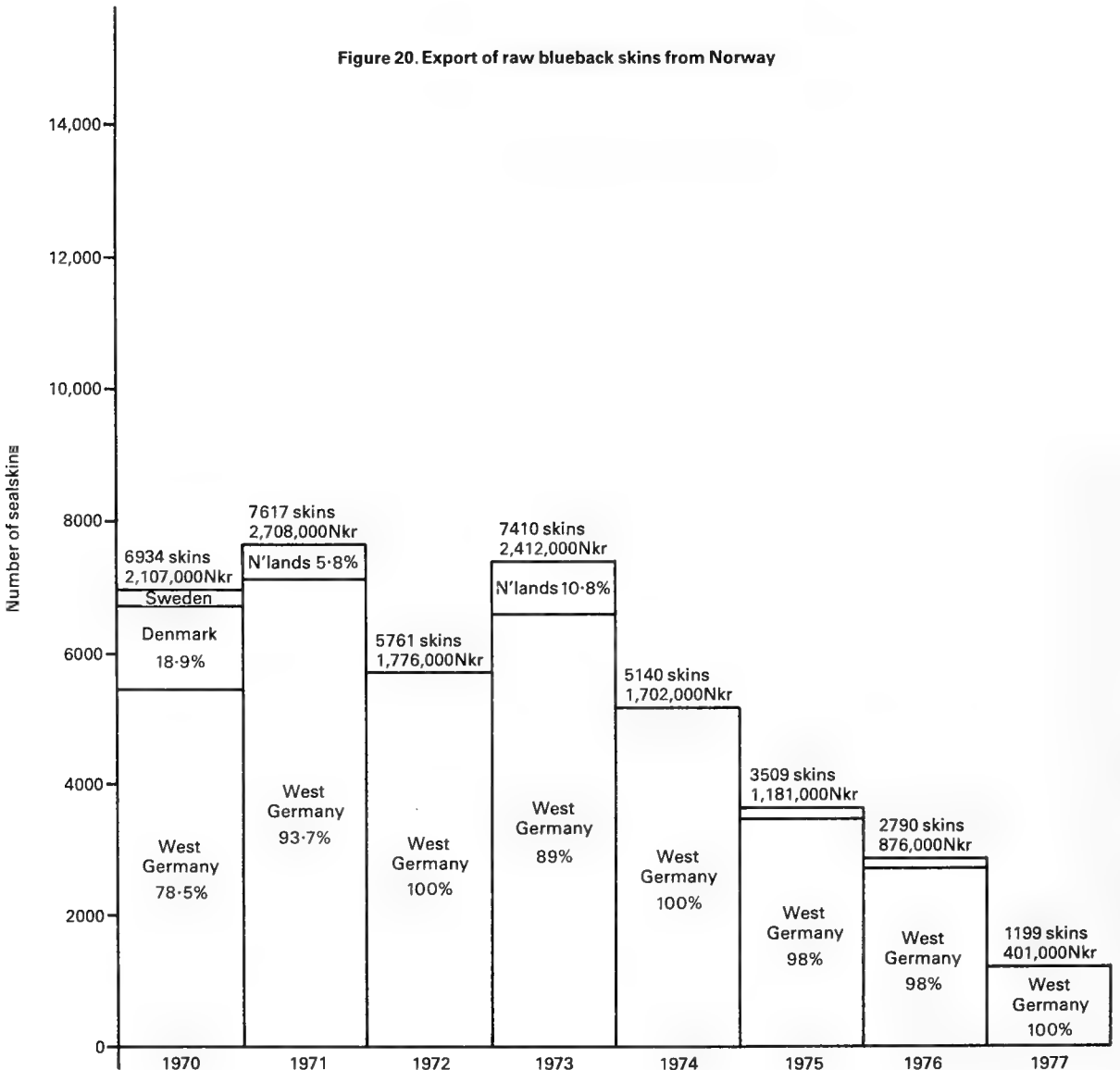


Figure 21. Distribution of raw sealskins other than whitecoat and blueback in exports from Norway

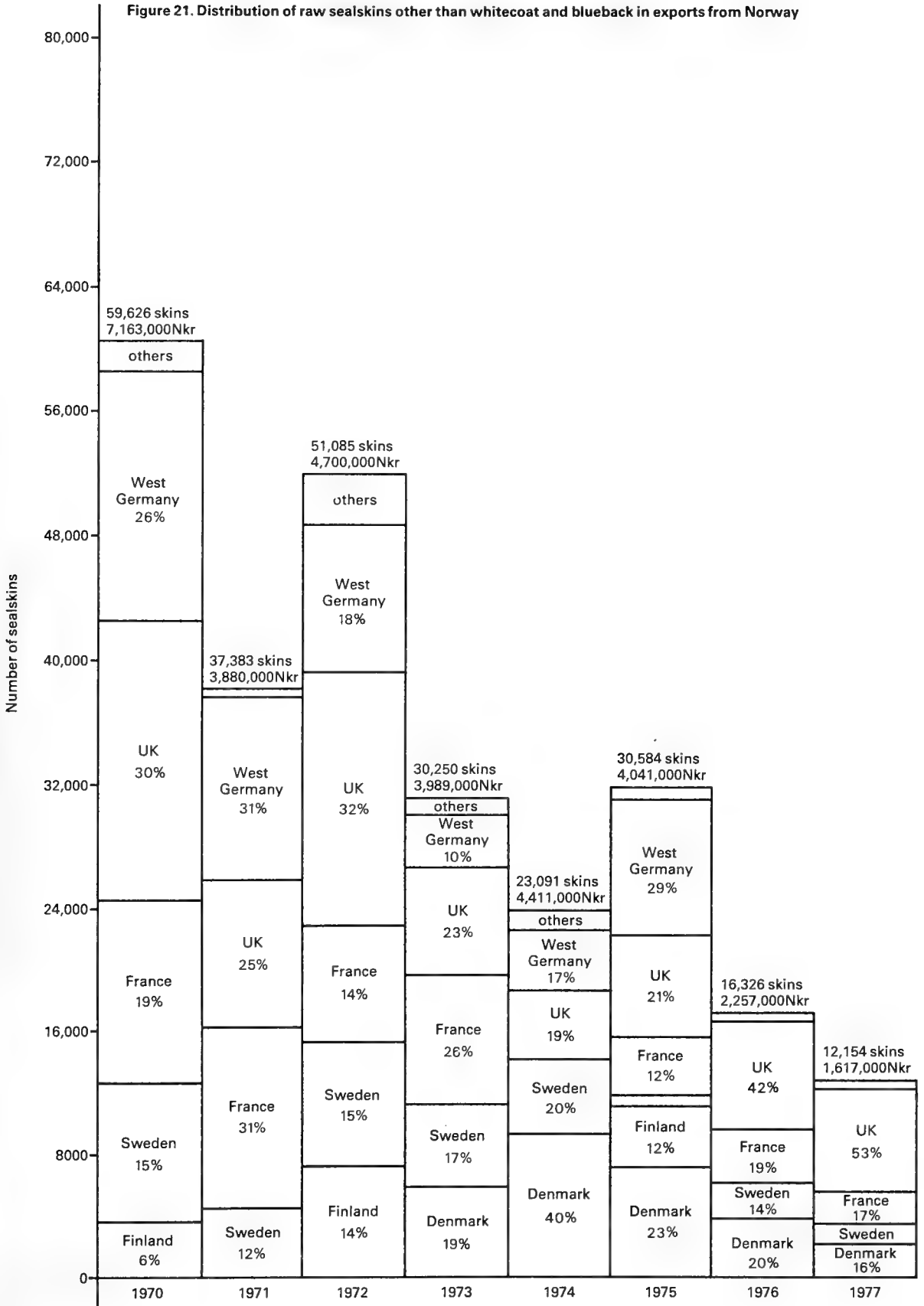
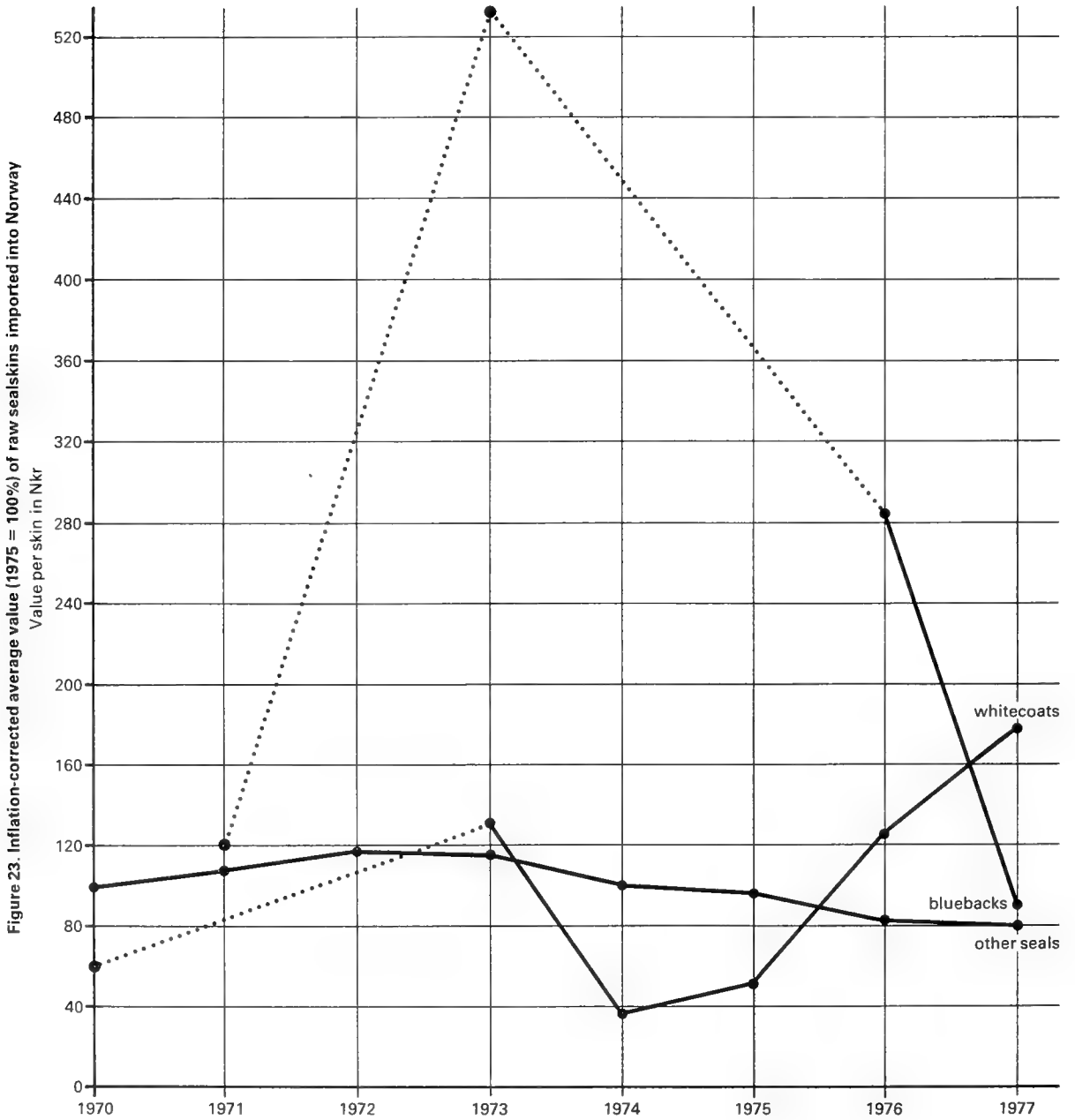
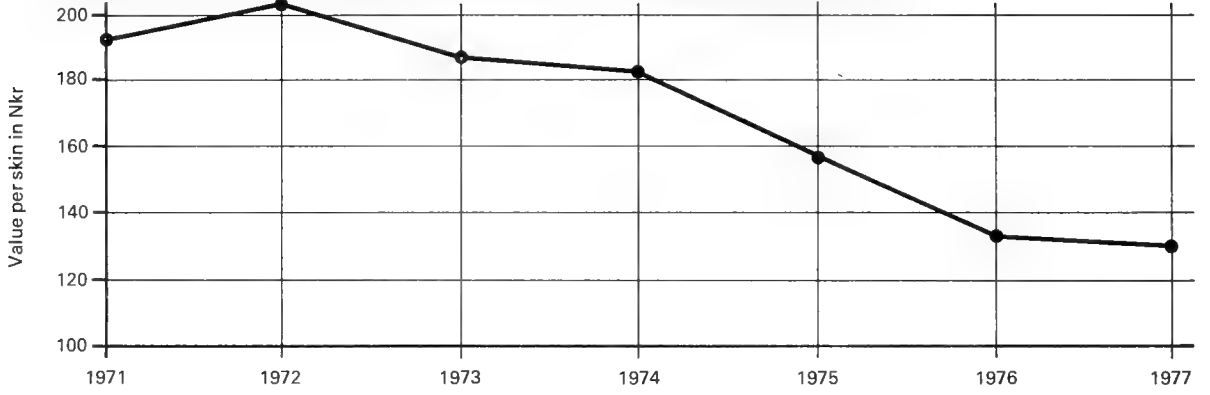
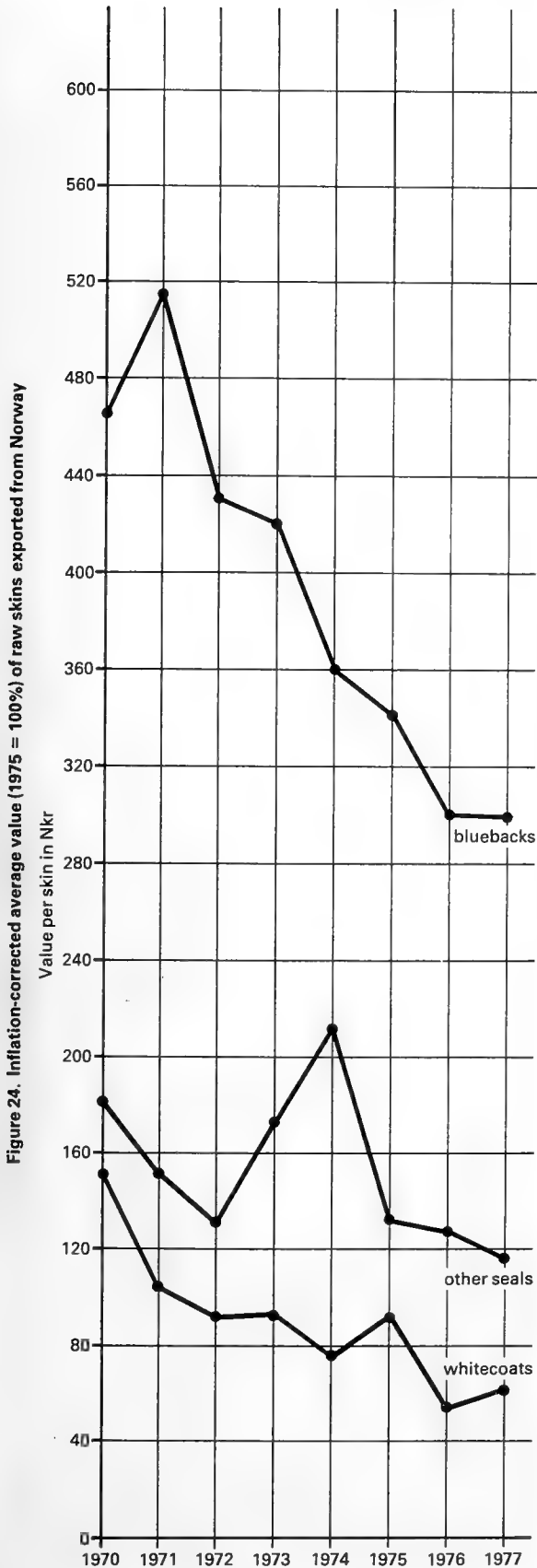


Figure 22. Inflation-corrected (1975 = 100%) average first-hand value of sealskins landed in Norway





Norwegian foreign trade statistics if the trade was worth over Nkr25,000 or, in 1977, over Nkr50,000 – about 240 and 480 skins respectively.

USSR

From 1975 to 1977, 102,414 harp and hooded seals were taken in the USSR, an average of 34,138 seals a year. The total included 5095 hooded seals taken in the West Ice. According to Yakovenko 6000 whitecoats are killed on the East Ice and 24,000 month-old pups are flown by helicopter to state farms for a less dramatic death by injection.¹¹ These are all harp seals. Hooded seal stragglers are also taken, but no figures are available. This lack of information is the major problem in considering the Soviet seal industry, although much historical data on population and catches is available. Five letters to Sojuzpushnina, the official Soviet fur agency, have yielded no information at all. However, Popov says that seal products are of great significance in the economy of the White Sea coastal people. He adds, 'Although the needs for seals products increase annually, the present state of the harp seal population requires strictly limited exploitation, encouraging the future restoration of the stock to its former abundance'.¹¹

Thus many pelts are used by the coastal people, and the rest sent to Sojuzpushnina, which either dresses the skins or sends them to Rieber in Bergen. The dressed skins are sold at the annual spring auction in Leningrad.⁴¹

Foreign Trade. Norwegian statistics record an average import from the USSR of 9728 'other' raw sealskins each year over the eight years, but none in 1976 and 1977. They record no export of raw sealskins to the USSR but many processed sealskins which, as in other countries, are measured by weight. In 1977 Norway also recorded the import of 937 raw skins of bluebacks from the USSR. Soviet foreign trade statistics do not distinguish sealskins, but statistics from other countries reveal no exports of raw skins to the USSR and significant export from there only to Norway, West Germany and Finland.

The Value. Skins of seals and sealions are distinguishable in West German statistics only in 1974, when 2743 raw skins, worth DM248,000 were imported from the USSR, but none since. The bluebacks imported by Norway from the USSR in 1977 were worth an average Nkr100.32 per skin. The recorded value of other sealskins increased and then declined: 1970, Nkr46.74; 1972, Nkr78.24; 1973, Nkr74.37; 1974, Nkr66.6; 1975, Nkr54.53. These prices are lower than the equivalents for Norway's imports from Canada, but the trend in price changes, except in 1975, agrees. I have not identified any other trade in raw sealskins from the USSR.

Processed Skins

There are tremendous problems in analysing the trade in processed sealskins. And once hair seal skins have been dressed and dyed it is often difficult to distinguish one type from another. The skins are all mixed by this stage, and it is impossible to pinpoint their source. The dealer, dresser or tanner may know, but if he does he will usually not disclose it. Those who can discover what the other traders have will know what is left on the market and have an advantage in predicting prices. Some dealers hold skins over for a year or more, which creates a shortage and raises prices. Alternatively, if the price has dropped through lack of demand or any other reason, the dealer will often hold the skins until the price rises again. In some years the supply is high or low simply because of sealing conditions, including both biological (numbers) and climatic conditions. Demand may also fluctuate for a variety of reasons, including anti-sealing campaigns and fashion cycles.

Auctions

Almost all furs auctioned are raw and sold to dealers rather than retailers. Only four auctions are of any importance for hair seal: Hudson's Bay (Montreal); Hudson's Bay and Annings (London); Kongelige Grønlandske Handel (Copenhagen); and Sojuzpushnina (Leningrad).

Hudson's Bay. About 98 per cent of the seals sold by Hudson's Bay in Montreal are ringed seal,⁴⁷ and their main source is the Canadian aboriginal hunters. H.M. Dwan says, 'In deciding whether to sell in London or Montreal, the company would look at the overall market position and . . . the date of the next sale to be held.'⁴³ Skins remaining unsold in Montreal may be re-offered or shipped to Hudson's Bay and Annings for auction in London.

Hudson's Bay and Annings. From time to time Hudson's Bay and Annings, which is 59 per cent owned by Hudson's Bay,⁴³ offer lots described as 'fur seals' or 'dressed and dyed'. These are Cape fur seals offered on behalf of a German dealer.⁴³ The ringed seals come from Canada, having been purchased from aboriginal hunters. All others are sent by dealers, mainly European, but occasionally North American.⁴³ The company publishes low and high prices achieved for each grade of each type of skin (Table 21), but this is no guide to the quantities of each type, as frequently only a few of any one type are offered. However, the number of whitecoats is generally specified, and they are usually dressed, dyed or both. Demand for whitecoats has held fairly steady at the London auctions, and prices have remained firm, rising particularly in 1976 and 1977. The company's managing director says there is no UK market for seal fur, only for leather, and most of the seal furs are exported: approximately 60 per cent to Germany and 20 per cent to Italy. Seal furs are not dressed or manufactured in the UK, and in 1977 seals made up only about £200,000 of the company's £98m. trade.⁴³

Den Kongelige Grønlandske Handel. Sealskins sold at auction by KGH in Copenhagen have already been mentioned. In 1977 sealskin sales brought Dkr3.3 million from ringed seal, Dkr0.5 million from harp and Dkr0.4 million from hooded (calculated from published auction results).

Sojuzpushnina. Table 20 details the high and low prices at the Sojuzpushnina fur auction in July 1977 and January 1978 in Leningrad, all of processed skins and mostly sold within USSR. The category 'whitecoats' does not refer only to harp seal pups but also to new-born Caspian seals, of which some 10,000 are sold at Leningrad each year, mostly for export. There are at least 10 grades of whitecoat by colour and type. In January 1978 at the Leningrad auction 'black' dyed skins fetched the lowest prices at US\$9.75-\$27.00, and 'anthracite' dyed the highest at \$32-\$52, an advance on July 1977 prices. The most valuable hair seals are bluebacks with natural dressed skins, fetching \$72-\$74 in July 1977, and brown-dyed dressed skins fetching \$26-\$30. Over 2000 hooded seal skins were offered for sale, more than would be expected from a catch of stragglers; many of these may be accounted for in Norway's export of processed sealskins to USSR.

Demand

In recent years declining consumer demand has been offset by diversification of products in the fur and leather markets.⁹ A display entitled 'Seals and Sealing' at the National Museum of Natural Sciences in Ottawa notes not only that 10 per cent of the seal pelts taken by Canadians make their way back to Canada but that 40 per cent are used for novelty items. When Kaplan maintained four years ago that Canadian pelts were sold only in European

markets and primarily for leather, he overlooked the improvements in fur handling.¹⁶ It is these which have made the skin so valuable in the past 20 years, and sealskin so popular for fur coats.

Retail Demand. The following list shows some of the items for which harp and hooded seal 'fur' and leather are used ('fur' denotes skin with the hair still on it):^{6 17 28 35 37 55 pers. obs.}

Table 19. Uses of harp and hooded seal fur and leather

Handbags	—	fur and leather
Luggage	—	leather
Wallets	—	leather and fur
Satchels	—	leather
Cigar cases	—	fur and leather
Key cases	—	fur and leather
Purses	—	fur and leather
Moccasins	—	fur and leather
Adults' and babies' slippers	—	fur
Shoes	—	leather
'After-ski' shoes	—	fur and leather
Ski boots	—	fur and leather
Caps	—	fur
Belts	—	leather or shapes of furred skin tied together
Patent leather pumps	—	leather
Bicycle saddles	—	leather
Caps	—	fur
Jackets	—	fur
Jacket collars and cuffs	—	fur
Dressed Eskimo dolls	—	fur
Toy dolls	—	fur
Lemming dolls	—	fur
Tobacco pouch, lighter and pipe covering	—	fur
Hip flask covering	—	fur
Strips under skis	—	fur
Lines, cords and dog traces	}	Aboriginal uses of leather
Covering of kayak frames		

Looking at shops in eastern Canada I saw only the novelty and souvenir items for sale, and these made from ringed seal and harp seal beaters. Moccasins were seen many times but only in souvenir stores, never in shoe shops. Few sealskin coats were seen in London, but many novelty items. In Bergen novelty items were on sale in souvenir shops and more practical items in other appropriate shops. Copenhagen is an important centre for sealskin garments, especially coats and jackets, but not novelty items.

Trade Demand. The largest demand for sealskins is for clothing and for trimming. Whitecoats are almost exclusively used for trimming, especially in Eastern Europe, and linings, e.g. in France.^{41 52} In recent years the demand, particularly for ringed seal fur, has diminished and leather has been resuming its former importance, almost certainly because it is affected comparatively little by fashion and not at all by anti-sealing campaigns. In fact, J. Denhardt maintains that about 50 per cent of all sealskins now go to leather.⁴¹ One trader says that more of the skins from the Rieber Co., which owns a shoe factory, go into shoes than furs. The demand for skins for souvenirs fluctuates only slightly; for slippers and boot manufacture it is increasing slightly, but for caps it has diminished to a very low level, especially for ringed seals.⁵⁵ Rieber finds no problem selling first-class skins of all species and types; problems arise with the middle grades because of manufacturing costs. In effect the better grade skins are increasing in value and the lower ones decreasing.⁵⁵ Many traders believe that fashion dictates the demand; others maintain that the campaigns of animal welfare groups influence demand. No other explanation for the declining demand has been put to me during this investigation.

Table 20. Prices at Leningrad fur auctions, July 1977 and January 1978

	Low	High
July 1977	\$	\$
11 916 dyed Whitecoat, sold 86%, very firm	7.00	24.00
2 069 Nerpa dressed, sold 71%		
Bluebacks Natural	72.00	74.00
Brown Jumbos	22.00	50.00
Bluebacks Brown	26.00	30.00
2 103 dressed Serka Beaters, sold 48%		
Natural	37.00	40.00
Brown	20.00	

January 1978			
13 470 dyed Whitecoat, sold 100%, very strong competition. Advanced compared to recent levels			
	Low	High	
	\$	\$	
North Brown	28.50	34.50	
Black		27.00	
Caspian Brown	18.00	29.50	
6 172 dyed Whitecoat, sold 98%			
Platinum	18.00	36.00	
Anthracite	32.00	52.00	
Sand	18.50	30.00	
Black	9.75	27.00	
Bahia	14.00	36.00	
Cognac		35.50	
Brown	11.00	39.50	

Source: *Fur Review*, September 1977; *Fur Review*, March 1978.

Table 21. Prices at auctions of Hudson's Bay and Annings, London, March 1971–September 1978 (£ sterling)

HARP, BEATER and BEDLAMER			
March 1971			
Hair Seal, dry			
		Low	High
HARP	clear	—	19.25
	sli. stained	15.50	17.50
	stained	—	16.00
	ex. stained	—	12.50
	bad stained	4.50	6.00
	sli. defective	—	10.00
May 1971			
Hair Seal, dry. About 4 800 skins. Unchanged, cf. March 1971			
		Low	High
HARP	XXD/XD	—	—
	sli. stained	—	—
	stained and bad stained	—	—
	DARK/MED	—	—
	sli. stained	—	—
	stained and bad stained	—	—
	sli. defective	—	—
	sli. stained	—	13.00
	sli. stained and stained	—	—
	stained	—	12.00
	ex. stained	—	10.25
	sli. defective	—	7.00
	XXL/XL	—	—
	defective	—	—
September 1971			
Hair Seal, dry. About 8 500 skins. Sold 40%. Declined 10%,			
		Low	High
BEATER	sli. stained	—	8.80
	stained, ex. stained	—	8.00
BEDLAMER	clear, sli. stained	—	13.75
	stained	—	12.00
	ex. stained/bad stained	—	7.10
HARP	clear	—	13.75
	sli. stained	—	11.50
	stained	—	10.00
	sli. defective	—	8.30
WHITECOATS			
September 1971			
Whitecoats, dressed. About 3 450 skins. Sold 75%. Sold well.			
		Low	High
Size 1	I and II	6.30	7.60
	sli. defective	—	5.10
Size 2	I and II	6.10	7.00
	III	5.40	5.50
	sli. defective	—	5.30
Size 3	I and II	5.80	6.10
	III	—	6.00
	sli. defective and defective	—	4.10
Size 4	I and II, etc.	—	4.00
Size 4/6	mixed	—	3.00

March 1978				
Whitecoats, dressed and dyed. Offered 929 skins. Sold 80%. Advanced 5% to London, cf. London, September 1977.				
		Low	High	
Beaver	1	16.00	16.20	
	2/3	—	14.00	
	1/3 dgd	—	12.40	
Sand	0/1	13.80	14.00	
Oyster	0/1	—	12.00	
Brown	0/1	—	17.80	
Black	various	—	5.00	
Bahia	2	13.60	15.00	
	1/3 dgd	11.50	12.00	
	2/3 dgd	—	7.00	
May 1978				
Whitecoats, dressed and dyed. Offered 1 139 skins. Sold 80%. Advanced 15%.				
		Low	High	
Sand	1 dgd	—	8.40	
Oyster	2/3	—	10.00	
Dressed		1.00	5.40	
March 1978				
Hair Seal, Canadian. Offered 8 945. Sold 90%. Advanced 5%. cf. London, January 1978.				
		BEATER	BEDLAMER	HARP
		Low High	Low High	Low High
clear		— —	33.00	— —
clear sli. std	29.00	30.00	— —	32.00
sli. std	— —	— —	33.00	— —
std	— 27.00	— 30.00	— —	30.00
std/ex std	— 24.00	— —	— —	— —
ex std	— —	— 23.00	— —	— —
ex std/bad std	— 22.00	— —	— —	— —
bad std	— 11.00	— —	— —	10.00
ex dark	— —	— 22.00	— —	16.00
sli. def. gd col.	— —	— 20.00	— —	— —
defective	— —	— 8.00	— —	— —
damaged	— —	— 4.00	— —	— —
May 1978				
Hair Seal, Canada. Offered 2 440. Sold 25%. Very firm where sold.				
		Low High		
Dressed Beater		— 14.00		
September 1978				
Hair Seal. Offered 8 820. Sold 60%. Advanced 50%, cf. London, May 1978.				
		BEATER	BEDLAMER	HARP
		Low High	Low High	Low High
sli. std	— 21.00	— —	— —	— —
stained	— —	— —	— —	23.50
bad stained	— —	3.00	15.00	— —
sli. def.	— 8.00	— 12.00	— —	17.00
XXD	— —	— 15.00	— —	— —
XD	— —	— 20.50	— —	— —

Trade

Norway. Norwegian imports of processed sealskin appear always to have been low, but exports between 1970 and 1977 varied from 169 tonnes (1970) to 105 tonnes (1975); 120 tonnes were exported in 1977. A comparison of the Danish figures of processed skin imports from Norway, measured in numbers, with Norwegian exports, by weight, gives 1660 skins per tonne. Comparison with German import figures gives 1200 skins per tonne. Thus the overall average would be 1430 processed sealskins per tonne (i.e. 171,000 processed skins exported from Norway in 1977). These exported skins will be a mixture of species because Rieber in Bergen imports a number of skins specifically for processing and re-export, most of which go to West Germany, with large proportions also to the USSR, France and Denmark, and smaller ones to Italy, Spain, UK, Austria and Canada, among others. The average value by weight of processed sealskins exported from Norway in 1977 was Nkr250,000 per tonne, an average of roughly Nkr174 per skin. Prices of leathers are quoted by Smith and Bull of Oslo who, in July 1978, offered full-chrome tanned hooded-seal leather (18-28 sq ft), best quality at Nkr30 per sq ft and B selection at Nkr27.50 per sq ft value at point of sale for export from Oslo. The maximum they could offer was 10,000 square feet. From 1970 to 1977 Norwegian imports of raw skins exceeded exports by over 598,000. Although Norway is itself a large consumer of sealskin products, the trade discrepancy is made up for by processed exports, which exceeded imports, over the same eight years, by 1025 tonnes – probably 1.4m. skins – worth roughly Nkr266m. The apparent value is certainly an over-estimate, since many of the exports recorded show a value – as high as Nkr184,000 – without any record of quantity, whereas the reverse does not occur.

Denmark. Denmark is another major consumer of sealskins, but over the eight years exports of raw sealskins exceeded imports by over 200,000. On the other hand, imported processed sealskins exceeded exports by almost 500,000, mostly from Sweden and Norway, and then Greenland. The last is surprising, not only because of the absence of any reference to Greenland's processing in the literature, but also because only for 1974-1977 are there any records of Denmark importing from Greenland. Thus in 1976 and 1977 Greenland provided the greatest number of processed skins to Denmark, about twice as many as the next greatest source. The other important supplying countries are West Germany, UK, Finland and USSR. Consequently, Denmark is a net importer of processed sealskins, which are used by the many manufacturers in Copenhagen. The average value of processed sealskins exported from Denmark in 1977 was Dkr265 per skin and of imports Dkr175 per skin. This discrepancy can be mostly accounted for by the high value of exports to Poland, Italy and Spain. Danish exports of processed sealskins are low – 2642 in 1977. From 1970 to 1977 the main recipients were, in declining order, Sweden, West Germany, Poland and Norway, but in 1977 they were Italy, Sweden and West Germany. There is no way of establishing, from the statistics, the numbers of each species involved.

West Germany. West Germany's importance in the sealskin trade is summed up by Walter Langenburger, Secretary of Verband der Deutschen Rauchwaren-und Pelzwirtschaft e.V.: 'The world crop of sealskins runs up to 160,000-170,000 skins: about 112,000 skins are imported into the Federal Republic of Germany a year.'⁵¹ The import figure refers to raw skins only. Another source says that about 120,000 seals a year are processed in Germany, amounting to some 80 per cent of the annual

catch, and implying that the annual catch is 150,000. In fact, the annual catch of harp and hooded seals alone is over 200,000. Nevertheless, West Germany is clearly a most important importer and processor.

Exports of raw skins from West Germany are very low, some 11,000 skins from 1974 to 1977, nearly all remaining in Europe. Langenburger points out that, according to the official statistics, '73,000 skins to a value of DM7.5 million were exported from Germany in 1976, 53,000 skins of a value of DM5.3 million in 1977. Thus most of the skins do not remain in Germany'.⁵¹ These figures appear to be of processed skins. The statistics may be nearly accurate, but the conclusion, being nonsense, demonstrates the ease of misinterpretation. West Germany is another of the major consumers of sealskin products and has imported over 100,000 processed skins a year on average since 1974, i.e. for as long as West German records are available; this is twice the export figure for the same period. Thus, West Germany is a net importer of both raw and processed sealskins. In 1977 suppliers of harp and hooded seals to West Germany, in decreasing order of significance were Canada, Denmark, UK, Greenland and Norway. An interesting point not mentioned in the literature is the import from Greenland. This concerns 11,320 raw sealskins imported from 1974 to 1977. The Royal Greenland Trade Department maintains that there is no direct export of skins from Greenland and that the German figures must be wrong.⁵ Denhardt-Seal concurs, adding that 'in the past there was a manufacturer from Luxembourg who produced seal garments in Greenland for export also to Germany, but only a very small quantity' and that the firm has not existed since 1975.⁴¹ So the Greenland skins remain a mystery.

Fifteen principal countries receive processed skins from Germany, the main two being Greece and Yugoslavia, the latter a particularly important user of whitecoats.⁴¹ The next most important destinations in declining order are Denmark, UK, Malta, Austria and Italy. From 1974-1977, Greece received 32.2 per cent of the processed sealskin exports from West Germany, worth 40.6 per cent of the total sealskin exports and Yugoslavia received 17.2 per cent, worth 13.3 per cent of that value.

Five West German companies deal exclusively in sealskins: Denhardt-Seal GmbH & Co, Spaldingstrasse 74, 2000 Hamburg 1; Josef Foggensteiner GmbH & Co, Niddastrasse 60, Frankfurt/Main; GEFU-Uerbersee Pelzhandels GmbH & Co, KG, Niddastrasse 59, 6 Frankfurt/Main; Wilfried Muller, Niddastrasse 57, Frankfurt/Main; Oskar Volkman, Eduard-Ruppel Str. 25, Frankfurt/Main. However, the large sealskin trade in West Germany is only a very small part of the enormous German fur trade, and whitecoats are but a small part of the seal trade; Denhardt-Seal avoids them as being of poor quality. It seems that German furriers are therefore loath to pay much attention to the controversies over the use of whitecoat, a fur that, while not important to them, draws the attention of animal lovers to the whole fur trade. They were therefore unhappy about the 1978 tour of the Premier of Newfoundland, who was trying to answer the criticisms of animal welfare groups.

Finland. Finland is apparently a net exporter of sealskins. Official trade statistics show an average import of 17,700 raw sealskins a year, about 66 per cent from Canada and 33 per cent from Norway. Processed skin imports average nearly 4000 a year, about 43 per cent from UK, 25 per cent from USSR, 24 per cent from Norway, and 4 per cent from Canada. However, over the same period, 1970-1977, processed sealskin exports averaged 25,000 a year. Thus, from 1970 to 1977, official Finnish statistics show that 115 per cent of all imported sealskins were exported, which means either that a very large number of skins were

imported before 1970 and held over or that the statistics are wrong. Processed sealskin exports from Finland are largely to four countries: about 76.5 per cent to UK, 8.5 per cent to Norway and 5 per cent each to Denmark and Sweden. But only UK and Denmark appear in the statistics of 1976 and 1977, when the average value per skin of the sealskin exports from Finland to Denmark was Fmk73.66 and to UK was Fmk75.37. So these prices are squarely in the middle range of harp and hooded skins. However, I have not found any Finnish dealer who admits to trading in these species.

United Kingdom. In the official UK statistics sealskins have only been distinguishable from other furs since 1976. The problem of comparison between 1976 and 1977 figures lies in the statistics of processed skins. 1976 figures exclude skins in plates, while 1977 figures include them. So, for 1976, Table 32 gives the quantity by weight (kg) because the size of plates varies several fold. The official 1977 practice of adding the number of plates to the number of skins is even more misleading and will account in some degree for the range of average values per processed skin exported, from £4.60 to £122, particularly at the lower end. The upper end may be largely attributable to the rounding up of official statistics and to the omission of quantities below a certain limit, which may be changed from time to time. Bearing these points in mind, the UK recorded trade in all sealskins in 1976 and 1977 was 157,754 imported and 131,478 skins exported. It would therefore appear that the UK is a net importer, but there are very few sealskin garments on sale in the UK. H. Dwan of Hudson's Bay and Annings says there are no dressers or manufacturers of sealskin in the UK,⁴³ although Bamber Furs of Oxford Street, London W1, says that a full-length bedlamer seal coat, on sale in its shop for £500, was dressed by its own factory in London. A hundred years ago Martin and Rice of London was the major dresser of harp, hooded and ringed sealskins. Now, it says, its handling of these skins is negligible.

There are only two UK dealers of any significance – Hudson's Bay and Annings Co., London, and McMillan and Moore Ltd, London. Hudson's Bay and Annings mainly auctions raw skins, while McMillan and Moore arranges the sale of all skins brought by Karlsen Shipping Co. of Halifax, Canada, and also acquires skins from Denmark, Norway and USSR. In 1978 it sold processed whitecoats dressed and tanned at about £12, beaters and bedlamers dressed and tanned at about £17, and dressed bluebacks at about £30. But seals are only a small part of its total trade.⁵²

It is significant that in 1976 and 1977 the recorded export of raw sealskins from the UK is only two-thirds of the recorded import, whereas the exports of processed sealskins match the imports almost exactly, with a difference of only 1140. This match could result from the alteration to the figures caused by the inclusion of plates of skins; there appears to be no way of knowing. The statistics for raw skins include no such confusion. Unfortunately a two-year sample is very small, but if that fact is ignored it appears that over 27,000 raw sealskins worth over £327,000 have been held over in the UK or remained there for dressing and/or manufacture, and for sale in the UK or export.

The bulk of raw sealskins imported to the UK – about 83 per cent – comes from Canada. That these are likely to be from Canadian hair seals is supported by the average 1977 value of £12 per skin. Norway provides about 10 per cent of the imports, with an average 1977 value of £8 per skin. Since these were raw, they could be from any type of seal in the lower half of the range. Some of them go to make leather. Kohnstamm Co. Ltd appears to be the only manufacturer of seal leather in the UK, handling about

1000 skins a year, with sources such as Bergner International in New York and G.C. Rieber in Bergen. This might account for the import of 945 skins from the USA in 1977: if so, the trade could be contravening the US Marine Mammal Protection Act, since Kohnstamm claims that the leather is from harp seal, which is not excepted from the Act. But this is speculation. The skins are destined for small leather goods manufacture, and about 40 per cent go to Japan. Other buyers of seal leather from Kohnstamm are Castelli in Paris, Casagraine in Paris, Valestra in Milan, Ascoli (a private buyer) in Italy, and Dodwell (an agent) in Colchester, UK. According to quality, the manufactured leather sells at £4-£5 per square foot.

The largest proportion of processed sealskins imported into the UK in 1976 and 1977 was from the USSR, 30 per cent; Finland, 27 per cent; West Germany, 26 per cent; and Norway, 11 per cent, including plates and skins. As plates, if any, are included in the figures, calculation of average value is only a guide. Remembering that, the 1977 average value per processed sealskin imported to the UK is calculated as follows: from Finland £12, Norway £14, USSR £23, West Germany £23. Sealskin imports from 16 countries are recorded.

An even larger number of countries were exported to, as the UK still maintains its role as a centre for the fur trade. Thirty countries are recorded as receiving exports of processed sealskins in 1976 and 1977, and three of the four countries receiving the largest proportions of processed skins – West Germany, 37 per cent; Italy, 11 per cent; Norway, 9 per cent; and Finland, 7 per cent – were also major suppliers. But the fur trade is a complex business, with some companies dressing skins for others, and others manufacturing and marketing, so that, while countries may measure their trading success in imports and exports, these in fact show only who is important in the particular industry.

Italy. Italy crops up regularly in the trade statistics of countries exporting sealskins, but I have found no major

Table 22. Prices of some sealskin products seen in shops

Product	Where seen	Price and currency
Full-length harp seal coat	Frost Pels & Skind, Copenhagen	3 970 Dkr (price is reduced by 1 000 Dkr in summer)
Half-length ring seal coat	Frost Pels & Skind, Copenhagen	3 000 Dkr
Harp seal cape with blue fox trim	Leo Stohn, Copenhagen	7 800 Dkr
Harp skin ski-boots	Sven Carlsen, Copenhagen	348–378 Dkr
Harp skin slippers	Royal Hand-knits, Copenhagen	100 Dkr (children) 148 Dkr (adults)
Bedlamer skin, medium quality	Birger Amdrup, Copenhagen	180 Dkr
Harp seal skin dolls*	Snow Goose, Ottawa	CA\$2.95
Harp seal skin purses*	Snow Goose, Ottawa	CA\$5.95
Harp seal skin lemmings*	Snow Goose, Ottawa	CA\$4.95
Bedlamer skin handbags	Taj Mahal, Montreal	CA\$70
Harp skin seal doll	Høgrs, Bergen	49 Nkr
Hip flask covered with bedlamer skin	Høgrs, Bergen	115 Nkr
Full-length adult harp seal skin coat	Bamber Furs, London	£500

* Said to be made by Eskimos.

user and have very little information. However, a ministerial decree, issued on June 8 1978 by the Italian Ministers of Foreign Trade and Finance, controlled the import of raw, tanned and dressed sealskins and products from them, subject to ministerial approval. The Italian Association of Fur, Leather and Suede Manufacturers (AIMPES) says that 'sealskins have now become very rare in Italy, at least in the manufacturing sector'.

Netherlands. In the Netherlands a 'voluntary boycott of the skins of juvenile seals (whitecoats and bluebacks) by the Dutch federation of fur dealers has been in effect since 1969'.⁶¹ The Netherlands' part in the seal trade appears to be small.

Other Countries. France has been mentioned in other sections. Japan imported 2610 skins of beaters in 1977, and 5240 skins of beaters and 89 of bluebacks from January to October 1978. These are mostly for handbags, belts, purses, souvenirs, toys and ski brakes.

Table 23. Norwegian processed sealskin imports

From	1970		1971		1972		1973		1974		1975		1976		1977		Total	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
Austria									0	53							0	53
Belg/Lux	0	70															0	70
Canada							1	94									1	94
Denmark	1	68					0	114	0	38	0	74					1	294
Finland	2	624	0	34	5	909	1	116			0	51			1	94	9	1828
France			0	45									1	30			1	75
W. Germany	1	151			0	63							3	388	1	301	5	903
Sweden	4	655	3	620	2	458	2	364	1	161			1	193	2	268	15	2719
UK			0	34			0	74					2	369	1	287	3	764
USA	0	85					1	96					0	41			1	222
USSR			1	148											1	165	2	313
Total	8	1 675	4	896	8	1 458	5	883	1	265	0	178	7	1 037	6	1 213	39	7 605

A = Weight of skins in tonnes for consignments over 1 tonne

B = Value in 1000 Nkr

Source: Official statistics.

Table 24. Norwegian processed sealskin exports

To	1970		1971		1972		1973		1974		1975		1976		1977		Total	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
Argentina			0	39													0	39
Aus/Samoa	0	212					0	44									0	44
Austria	7	1 771	6	1 467	4	1 123	4	1 476	4	1 237	3	960	3	1 200	2	828	33	10 062
Belg/Lux	0	184	0	33	0	39	1	233	0	90	0	66	0	64			1	709
Canada	9	809	14	1 269	3	523	5	749	6	1 049	4	603	4	678	2	263	47	5 943
Denmark	6	2 286	4	1 387	10	3 472	12	4 476	21	5 798	9	3 597	26	7 210	11	3 088	99	31 314
Finland	1	321	0	49	1	218	1	157	1	187	0	90			1	153	5	1 175
France	25	4 339	33	6 414	25	5 281	20	4 450	16	4 328	10	2 322	11	2 416	8	2 110	148	31 660
W. Germany	60	11 877	44	9 822	35	9 209	41	9 828	62	15 483	30	8 358	57	15 127	63	17 075	392	96 779
Greece											0	46					0	46
Hong Kong	2	651	1	578	1	269	0	42			0	25					4	1 565
Israel							0	41	0	31							0	72
Italy	15	4 144	9	2 637	12	3 419	11	4 413	12	4 595	5	2 185	9	3 271	4	1 556	77	26 220
Japan	0	120	0	54	1	248	4	621	1	158	1	162	1	195	1	365	9	1 923
Netherlands			1	156	2	429	0	46									3	631
Portugal			0	46			0	53	0	42	0	66					0	207
S. Africa					0	35					0	29	0	34			0	98
Sweden	3	712	1	276	2	466	2	516	1	207	0	60	0	67	1	166	10	2 470
Switzerland	3	738	2	457	2	471	2	506	1	335	1	272	0	55	0	98	11	2 932
UK	2	668	1	624			5	1 501	7	1 872	8	789	5	928	0	122	28	6 504
USA	8	1 856	7	1 413	6	1 373	2	342	1	452							24	5 445
USSR	16	3 804	12	2 900	9	1 831	18	4 112	13	3 149	27	7 752	11	3 472	17	4 887	123	31 907
Yugoslavia	3	982	0	43													3	1 025
Total	169	37 791	139	30 759	117	30 060	129	34 827	152	41 620	105	29 317	133	36 408	120	33 292	1 064	274 074

A = Weight of skins in tonnes for consignments of over 1 tonne

B = Value in 1000 Nkr

Source: Official statistics.

Table 25. Danish raw sealskin imports and exports

IMPORTS From	1970		1971		1972		1973		1974		1975		1976		1977		Total	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
Canada									382	8			1 074	68			1 456	76
W. Germany	24 100	4 194	26 400	4 917	5 480	1 029	4 385	819							372	15	60 737	10 974
Greenland									54 755	8 520	53 606	8 477	56 919	9 092	72 369	11 982	237 649	38 071
Iceland	200	29	800	145	1 531	312	2 863	762	313	86	2 081	781	4 661	1 339	2 981	1 004	15 430	4 458
Norway	700	46															700	46
UK	200	56					200	49			1 084	35			149	28	1 633	168
Total	25 200	4 325	27 200	5 061	7 030	1 342	7 476	1 634	55 583	8 617	56 960	9 294	62 654	10 499	75 871	13 028	317 974	53 800
EXPORTS Total	49 900	8 270	88 600	12 772	67 931	8 969	52 431	9 053	54 850	11 271	69 999	16 188	93 382	22 621	75 825	13 210	552 918	102 354

Source: Official statistics

N.B. 1971 and 1970 originally in hundreds

Table 26. Danish processed sealskin imports and exports

IMPORTS From	1970		1971		1972		1973		1974		1975		1976		1977		Total	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
Canada	100	31	100	25	86	72					100	14	630	174			1 016	316
Finland	100	24			424	42	3 676	394	1 013	154			2 020	246	4 008	448	11 241	1 308
W. Germany	6 000	1 120		13			74	39	529	203	5 146	1 165	20 521	4 612	2 819	604	35 089	7 756
Greece													(32)	(20)				
Greenland									3 013	580	3 609	961	43 210	10 120	44 355	11 855	94 187	23 516
Iceland					758	152							52	21			810	173
Italy							226	68	40	15							266	83
Norway	11 000	2 589	6 000	1 399	21 929	4 084	23 175	4 810	3 734	7 687	25 708	6 155	29 956	6 366	23 993	5 035	145 495	38 125
Sweden	7 400	1 107	12 200	1 780	17 931	2 986	25 510	4 762	20 398	4 172	41 072	8 882	20 213	4 155	23 103	4 106	167 827	31 950
															(155)	(33)		
Switzerland				12			34	17									34	29
UK	5 700	92	100	29	373	51	307	45	6 253	405	3 149	518	2 218	218	214	23	18 314	1 381
									(62)	(13)			(5)	(23)				
USA		1	100	30	69	56	411	168	37	31	30	16	304	265	388	67	1 339	634
									(5)	(6)								
USSR			700	53	1 247	122	721	79			417	71	6 192	694	1 569	217	10 846	1 236
Total	30 300	4 963	19 200	3 340	42 825	7 571	54 144	10 382	68 685	13 250	79 231	17 782	125 316	26 870	100 449	22 355	520 150	106 513
									(67)	(19)	(20)	(4)	(37)	(43)	(155)	(33)		
EXPORTS Total to 21 nations	3 600	273	400	112	1 254	333	1 710	323	4 387	926	4 274	858	5 938	1 127	2 642	505	24 205	4 457
									(820)	(120)	(131)	(53)			(106)	(21)		

A = No. of skins

B = Value in Dkr 100

() = Plates, crosses, etc. in addition

Source: Official statistics

N.B. 1971 and 1970 originally given in hundreds

Table 27. West German sealskin imports and exports

	1974		1975		1976		1977		Total	
	A	B	A	B	A	B	A	B	A	B
Processed sealskins										
Imports	98 411	11 600	77 421	8 815	113 754	13 030	126 315	11 427	415 901	44 872
Exports	37 439	2 702	26 255	2 851	72 895	7 497	50 039	5 044	186 628	18 104
Raw sealskins										
Imports	97 910	9 261	151 869	13 587	125 698	10 530	135 678	8 561	511 155	41 939
Exports	1 668	107	6 231	294	2 771	108	648	21	11 318	530

A = No. of skins

B = Value in 1000 DM

Source: Official statistics

N.B. Sealskin is not distinguishable in statistics before 1974.

Detailed statistics showing countries of origin and destinations are available from the Fauna and Flora Preservation Society.

Figure 25. Inflation-corrected average value (1975 = 100%) of all processed sealskins imported by West Germany and Denmark

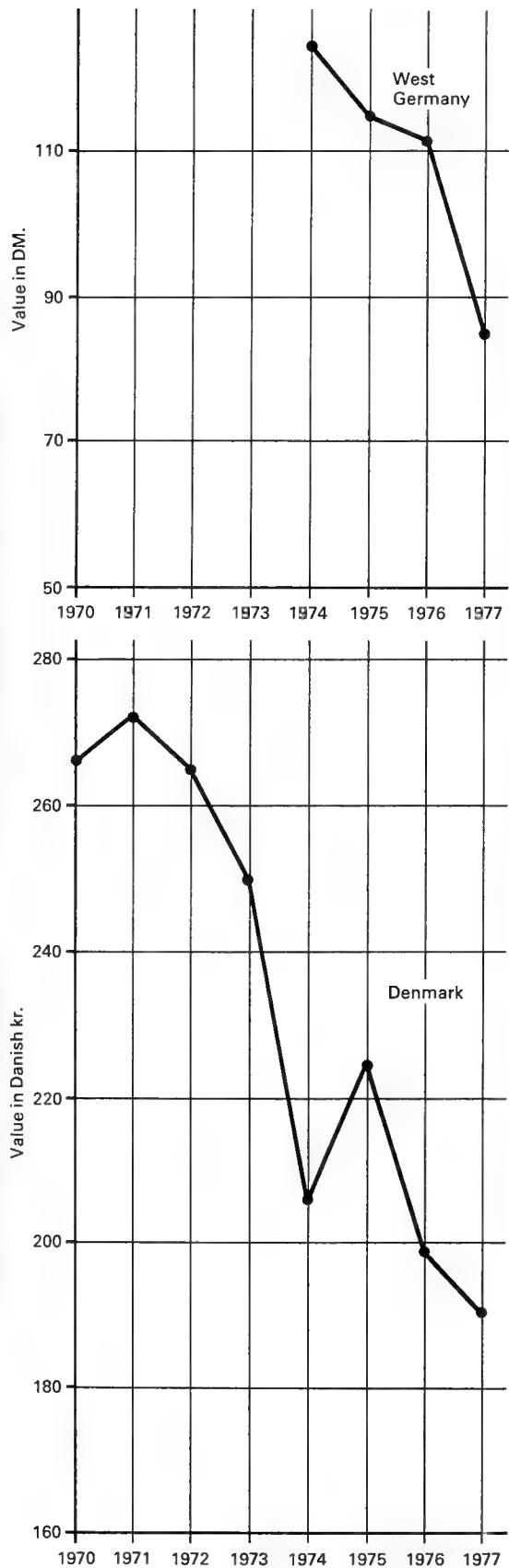


Figure 26. Inflation-corrected (1975 = 100%) average value per skin of processed sealskins exported from West Germany

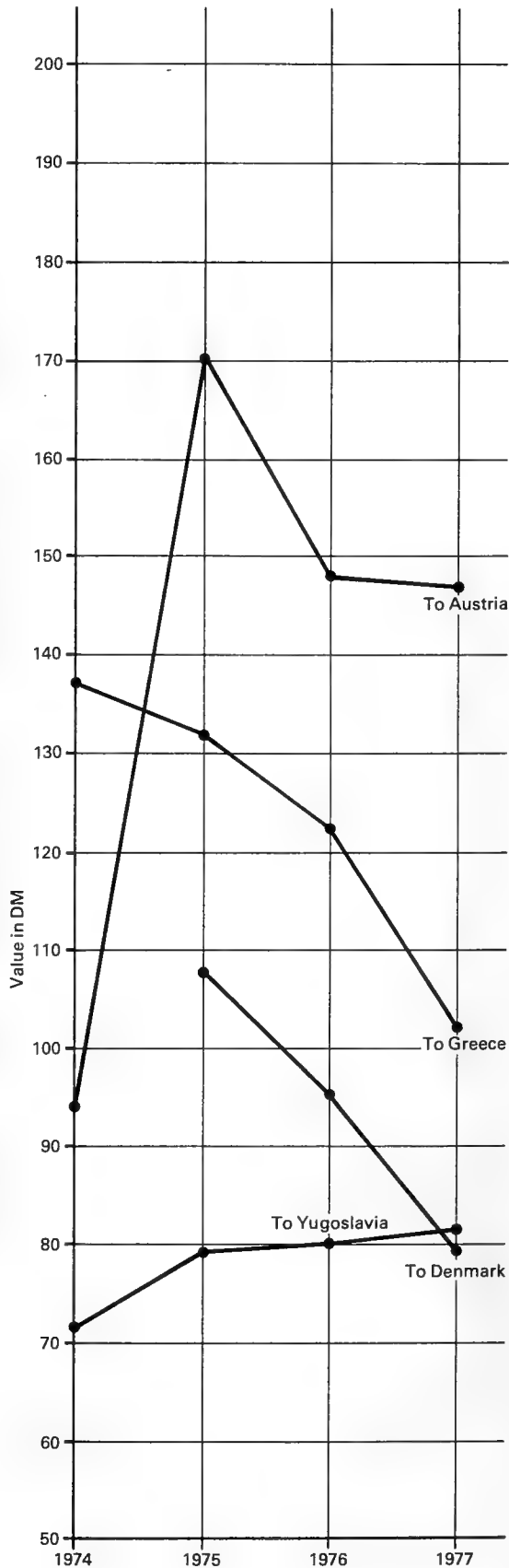


Table 28. Average value/skin of processed sealskins imported by West Germany from Norway, UK and USSR

Year	Norway	UK	USSR	Average value of all imported processed sealskins (in DM)	Value corrected for inflation to 1975 value
1974	108.34	87.22	92.66	117.87	123.42
1975	115.19	105.08	96.17	113.86	113.86
1976	112.81	75.38	79.53	114.54	110.24
1977	96.44	64.11	61.37	90.46	84.88

Source: Calculated from official statistics.

Table 29. Average value of processed sealskins exported from West Germany to Greece, Yugoslavia, Denmark and Austria

Year	Country of destination							
	Greece		Yugoslavia		Denmark		Austria	
	Value	1975 value	Value	1975 value	Value	1975 value	Value	1975 value
1974	131.74	137.95	67.81	71.00	—	—	89.51	93.72
1975	132.75	132.75	78.33	78.33	106.99	106.99	170.35	170.35
1976	128.38	123.56	82.33	79.24	98.19	94.50	153.97	148.19
1977	110.07	103.25	85.79	80.48	84.45	79.22	157.23	147.49

Source: Calculated from official statistics.

Average value per skin given in DM.

1975 values are included to show trends in real value.

Table 30. Distribution of processed sealskins imported and exported by West Germany

Country	Import		Export	
	1974—1977 (%)	1977 (%)	1974—1977 (%)	1977 (%)
Austria	—	—	5.28	3.77
Belg/Luxemburg	—	—	2.72	—
Canada	0.84	1.27	—	—
Denmark	1.0	—	9.56	5.68
Finland	1.46	3.12	—	—
France	6.6	7.9	1.18	—
Greece	—	—	32.2	45.14
Italy	0.04	—	4.67	13.29
Japan	—	—	1.55	3.17
Malta	—	—	7.21	6.87
Netherlands	—	—	2.26	—
Norway	60.51	60.0	—	—
Peru	0.4	—	—	—
Spain	—	—	0.24	—
Sweden	0.47	—	0.44	—
Switzerland	0.52	1.03	2.82	1.24
UK	5.48	7.99	9.28	11.44
Uruguay	4.94	7.37	—	—
USA	9.81	2.27	0.54	0.86
USSR	6.57	7.35	—	—
Yugoslavia	—	—	17.19	8.52
	98.64% of 415 901 skins	98.3% of 126 315 skins	97.14% of 186 628 skins	99.98% of 50 039 skins

Source: Calculated from official statistics.

Table 31. UK exports of raw sealskins. No. skins/value in £ sterling

Destination	1976	1977	Total
Austria	4	672	4 672
Canada	117	819	117 819
Canary Isles	—	12	12
Czechoslovakia	20	203	223
	700	3 921	4 621
Denmark	1 074	5 380	1 074 5 380
Finland	297	3 375	297 3 375
France	528	2 130	2 658
	8 095	57 400	65 495
Norway	1 475	1 510	2 985
	11 906	6 461	18 367
Sweden	5 446	6 075	11 521
	96 050	55 347	151 397
Total no.	27 628	27 930	55 558
Total value	465 482	346 663	812 145

Source: Official statistics.

Table 32. UK trade in processed sealskins. No. of skins/value in £ sterling
() = plates, by kg, in addition (in kg because size of plate varies)

Imports from	1976		1977 (incl. plates etc.)		Total	
	No.	Value	No.	Value	No.	Value
Australia	8	220			8	220
Austria	(300)	(10 698)				
Belgium	100	2 325			100	2325
Canada	498	17 048	56	3 039	554	20 087
Czechoslovakia	(1 550)	(34 506)				
Denmark	149	2 086			149	2 086
Finland	6 132	74 249	14 088	173 669	20 220	247 918
France			45	1 840	45	1 840
West Germany	12 942 (253)	201 009 (11 543)	6 437	149 250	19 379	350 259
Greece	(10)	(423)				
Japan	22	394			22	394
Norway	6 688	58 061	1 371	19 256	8 059	77 317
Switzerland	(386)	(13 619)	287	3 870	287	3 870
UK	30	614			30	614
USA	1 914 (169)	94 124 (23 624)	1 221	64 955	3 135	159 079
USSR	16 747	237 771	6 075	138 400	22 822	376 171
Total	45 200 (2 668)	687 287 (94 413)	29 580	554 279	74 780	1 241 566
Exports to 30 nations: Total	39 762 (3 224)	642 861 (55 693)	36 158	563 531	75 920	1 206 392

Table 33. UK imports of raw sealskins
No. of skins/value in £ sterling

Origin	1976	1977	Total
Canada	36 181 594 370	32 967 394 786	69 148 989 156
Chile	3 540 27 330		3 540 27 330
China	299 5 847		299 5 847
W. Germany	264 2 843		264 2 843
Norway	878 28 603	7 433 60 763	8 311 89 366
Sweden	367 9 491		367 9 491
USA	100 1 257	945 14 034	1 045 15 291
Total no. skins	41 629	41 345	82 974
Total value	669 741	469 583	1 139 324

Source: Official statistics

Table 34. Comparison of West German with Canadian values of sealskins exported from Canada to West Germany

Average value per skin			
Year	Canadian figures \$	German figures DM	Ratio
1974	26.79	76.63	2.86:1
1975	34.47	99.05	2.87:1
1976	31.62	85.74	2.71:1
1977	32.34	77.18	2.39:1

Oil and Blubber

Historically, oil was the most valuable and thus the most important seal product. In the 1890s its various uses included illumination (for example in lighthouses) and dressing jute.²¹ Since then its use has increased, and it is now incorporated into soap, margarine, other edible fats, cosmetics, lubricants and food such as chocolates.⁵³ In Norway refined seal oil is sold for pouring on food and is taken by the spoonful like cod-liver oil. Aboriginal and subsistence coastal communities in Canada, Greenland and USSR, who catch seals largely or partly for local use, almost always keep the blubber, whether or not the skins are sold. In 1802 John Bland stated that a harp seal in its prime would yield 10-16 gallons of oil and a bedlamer 3-7 gallons.²⁷ Nygaard, however, says that, while a new-born whitecoat gives almost no oil, an adult gives up to 20-25kg.⁵⁴

Canada

History

Newfoundland's production of seal oil grew very quickly, from £1016-worth in 1749 to £12,664 in 1768.²⁷ By 1840 there were oil manufacturers at Twillingate, Fogo, Greenspond, Trinity and Conception Bay. It was obviously a profitable business, but not for the sealers; by 1895 their share had diminished 'and hardly ever goes over £8 to £20'.²⁷ By 1850 foreign trade had become quite large even ignoring seals taken by other countries; for example a German and Danish vessel took 200 tons of oil and 6430 sealskins off Newfoundland in 1850. Prowse states that 'the trade with Hamburg in oil continued for many years; Munns (of Newfoundland) sent as much as 500 tons of pale seal oil in a year to Hamburg . . . there to be converted by German science and dexterity into the finest quality of "Pure Cod-liver Oil"'.²⁷

Value to Sealers

There are now only two processors of seal oil in Canada, Karlsen Shipping Co. of Halifax, Nova Scotia, and Carino Co. of St. John's, Newfoundland. Both buy pelts from the sealers, remove the blubber from the skin and pay the sealer according to the weight of the blubber and the quality and type of skin. Dunn notes that in 1976 the processing companies paid about four cents a pound for the fat.⁹ The only other estimate of the value of seal oil to the sealer is calculated from statistics of the Carino operation in 1977. No matter what the source, the price paid to sealers was then CA\$1 per 6.25lb of oil, that is 16 cents a pound. This agrees with Price's estimate²⁴ that from 1976 to 1977 'the value per pound of oil has increased from 4 cents to 18 cents'.²⁴ According to England the price of fat fluctuates sharply: 'During the (second) war it went up to \$12/cwt for young seals, \$9.40 for bedlamers and \$9 for old seals. It is now (1969) down to about \$4 for white coats . . . and perhaps \$3 for bedlamers and other older seals'.¹⁰

Oil Production

The total Canadian production of seal oil in 1976 was 1854 tonnes, worth \$756,000. In 1977 Carino's production was about 1442 tonnes, according to the official statistics. Carino claimed that in 1977 they produced 490 tonnes.⁵⁴ This figure is much closer to the production from Newfoundland ships only. Karlsen's 1977 production was about 650 tonnes. In 1977, therefore, Canada produced about 2092 tonnes, of which the Carino portion was valued at \$507,710.

Distribution and Usage

Once the two processing companies have rendered the oil, it is sold wherever they can get the best price, and in 1977

Carino exported all its oil to Europe.⁵⁴ Karlsen's oil went to Canada Packers in Toronto.⁵⁶ These, however, are not necessarily the usual destinations. Neither company would state the selling cost of their oil, but Canada Packers say that 'crude seal oil sold for 17-23 cents per pound, delivered Toronto, during the 3-4 weeks that it was traded in the spring of 1977'. They do not quote their source, quantity acquired, or use, for trade reasons, but say, 'It was probably used as a component of private-label margarines and shortenings'. They also suggest that other possible users in Canada are Monarch Fine Foods Co. Ltd, Swift Canadian Co. and Procter and Gamble Co. of Canada Ltd. The last two companies deny any use of seal oil,⁶⁰ and Lawrence F. Strond, Vice-President of Monarch Fine Foods, states, 'Our company has not used any seal oil for a period of at least ten years, as far as I have been able to establish'. R.M. Crosbie, President of Newfoundland Margarine Co. Ltd, a subsidiary of Monarch Fine Foods has said, 'we do not use seal oil in any form', adding, 'and to the best of my knowledge no Canadian manufacturer of margarines or other food products uses seal in their processes'.⁴⁰ Yet Mrs Ann Eaton of Fisheries Management Technology Branch in Halifax, says that a lot of seal oil is used in margarine,^{*} and that most high-quality oil is used in Canada for human consumption, because Canada can use most or all the high-quality oil it can get.⁴⁴ She believes that as the oil gets older and the quality lower, with increasing free fatty acid content, the demand in Canada declines. Thus the lower grades of oil may be going to Europe for use in leather tanning, industrial lubricants, paints and so forth; this suggestion is supported by Cliff Robertson's statement that the oil from Karlsen is not for use in lubricants.⁵⁶ However, the issue is confused by a display on Seals and Sealing at the National Museum of Natural Sciences which reads in part: 'In Canada seal oil is used as an industrial lubricant . . . but most oil is bought by Europeans for use in soap, margarines and shortening . . . In 1976 oil accounted for 9 per cent of East coast sealing revenue.'

As the destinations of oil from the two companies in 1977 were completely different, either they are not selling where the price is highest or they are selling different qualities. There is no way of determining this as a fact but, as already stated, Carino pays less for its oil. Price speculates that 'in view of the reduced production of herring oil, it is possible that the seal oil is filling both the domestic and export demand for marine oils'.²⁴ He shows that herring oil production declined from 1970 to 1976, while seal oil first dropped and then rose to above its 1970 level; but seal oil in 1976 still made up only about nine per cent of the decline in herring oil production.

Exports

Canadian official export statistics do not specify seal oil in their tariffs, but include it under 'Fish and Marine Animal Oils not elsewhere specified' - i.e. excluding cod and herring. Table 35 gives the data under this heading for 1976 and 1977, with the calculated unit value per tonne to each country. In 1976 the only exports with an average value per tonne of marine animal oil in the right range to be, or largely include, seal oil went to Costa Rica and UK; in 1977, West Germany, Norway and, conceivably, St Pierre et Miquelon were in the right range. Fish oils are generally cheaper than seal oil, but I have found none so cheap as to account for the low prices given in Table 35.

* Research carried out in 1980 by C.S. Mearns of Cambridge indicates that seal oil is not now used in margarines. This is not conclusive, however.

The following average values per tonne of oil from Atlantic fisheries in 1976 are calculated from the Annual Statistical Review of Canadian Fisheries, 1977: seal \$408; groundfish \$284; herring \$278; other fish \$269; average of total \$305. One can only conclude that probable recipients of Canadian seal oil exports are West Germany and UK – remembering that the exports are to Europe – and certainly Norway. I have not discovered the European buyers, and the only accurate guide to European prices is in Norway's official statistics.

Greenland

As in Canada, oil was once the most important commercial product from seals, but it was not necessarily the most important to Greenland natives, for whom seals had been the major prey for some 4000 years.

Greenland Trade Department

Reeves stated that the Royal Greenland Trade Dept (KGH) was no longer buying oil from the sealers because the pelt prices apparently compensate,⁴⁹ and Kapel confirms that KGH stopped buying blubber in the mid-1960s, but adds that they are now trying to find new ways of using it on a small scale.⁵⁰ Gilbe of KGH says that most of the oil is used in Greenland and that there has been no substantial seal oil trade through Denmark for 15 years.⁴⁸ He told me that a very small quantity is exported to Norway, but as the Norwegian import statistics do not bear this out, the quantity may be too small to be recorded.

Danish Imports and Exports

Official Danish statistics record trade in 'seal oil, including refined' up to 1975. For 1974 and 1975 they are as follows:

	1974		1975	
	Weight (tonnes)	Value (DKr)	Weight (tonnes)	Value (DKr)
Import	2.8	6 000	4.6	9 000
Export	1.1	4 000	1.9	5 000

The 1974 import is recorded as coming from Greenland; the 1975 import probably does so too. In both years the apparent value per tonne is much less for imports than for exports, so it is likely that the oil is imported raw to Denmark, refined there and exported. Average 1975 import value was about Dkr1956 per tonne and export value Dkr 2631 per tonne. The only guide to destination is Gilbe's statement that a small quantity goes to Norway. There is no information on the commercial use of seal oil from Greenland.

Norway

The Companies

In addition to the four de-blubbering plants in Norway – G.C. Rieber Co., Tromsø; Jakobsen Brodr, Tromsø; and M. Karlsen Co., Ålesund (two plants) – there is also a new Government-owned sealing vessel with a de-blubbering plant on board.⁵⁵ These plants, having rendered the oil from the blubber, sell it to a Norwegian refinery, of which there are at least five, but the plants, probably because of trade competition, are unwilling to reveal either the buyers or the quantities of oil produced. Apparently there are no official statistics on the quantity of oil produced by each plant, and the only guide to this is a breakdown of blubber production by town, provided by Bergen Fiskeridirektoratet. For 1977 this was 575 tonnes in Ålesund and 865 tonnes in Tromsø.

Production

A breakdown of the production from harp and hooded seals 1971-1977 shows that the total volume of seal oil produced in Norway in 1971 was 2801 tonnes; in 1977 it had declined to 1440 tonnes, with only a small recovery in yield in 1974 and 1975.

Cost to Refineries

In 1977 Rieber's average selling price to refineries was Nkr2.90 per kilo at the point of export, the price varying with the season.

Usage

Rieber says that most of the oil produced is used in margarines but that a large quantity is also marketed as seal oil in Norway.⁵⁵ This retails at Nkr10-12 per 400gm.

Imports and Exports: Quantity and Value

Foreign trade statistics in seal oil are published by Statistisk Sentralbyrå (Oslo). The import and export figures for 1970-1977 given in Table 37 demonstrate that before 1974 Norway was exporting large amounts of seal oil, mostly to West Germany and Denmark, and importing none. However, since 1974 the situation has reversed, and Norway has been importing increasing quantities and exporting only a very few tonnes: in 1977, 1253 tonnes were imported and two tonnes exported. One problem is with the reliability of data. Australian statistics show an import of 19,995 litres of seal oil from Norway in 1975/6, worth \$7000. But this does not appear in the Norwegian figures.

The reason for the change-about in Norway's trade probably lies in the value of the oil, which from 1973 to 1974 rose rapidly, from Nkr1570 per tonne in 1973 to Nkr4000 in 1974, and has since remained above Nkr3000 per tonne – a fluctuation consistent with the changing value in Canada. Average value per tonne of seal oil imported is not as high as that exported but nonetheless rose to almost Nkr3000 in 1977.

The decrease in exports and increase in imports implies that the demand for seal oil in Norway increased in 1974. Simultaneously, it appears that the value rose enormously, but the reason is unclear. Certainly there was no shortage, but there may have been a shortage of fish oil, since the price of some fish oils rose at the same time. In any case, seal oil plainly became too valuable to be allowed to go to foreign buyers. Another possibility is that before 1974 the exports were mainly of raw oil and after 1973 mainly of refined. This theory might also account in some degree for the difference between import and export values, but there is no supporting evidence, as official statistics do not specify what is covered.

USSR

I have no information on the importance of seal oil in USSR except for Popov's statement that 'the products obtained from sealing (fur, fat and meat) are of great significance in the economy of the people inhabiting the coast of the White Sea . . . the needs for seal products increase annually . . .'²³ There is no obvious record of seal oil exports, and I have discovered no importer of seal oil from the USSR. It is likely that the entire production is used within the country.

Summary

Canada: Production of seal oil fluctuates but remains high, with the total produced in 1976 higher than for the six previous years. Generally the oil goes to Canada or Europe; in 1977 about 60 per cent went to Norway and 30 per cent to Canada Packers in Toronto. **Greenland:** Most of the oil is used by the native people. Up to 10 tonnes a year is sent to Denmark for commercial use⁴⁶; a small quantity may be exported from there. **Norway:** A great

deal of seal oil is used either by consumption or by incorporation into other products for export. In recent years consumption has increased, but there is still a small export to Finland and Sweden. **USSR:** There is no traceable trade in seal oil. Much is probably used by the

northern coastal peoples.

In the two countries where seal oil is commercially traded – Canada and Norway – the price has risen significantly in recent years, with a particular jump in 1974, along with the prices of some fish oils.

Figure 27. Canadian total production of seal oil from Atlantic coast fisheries
 (Source: Annual Statistical Review of Canadian Fisheries 1955-1976, vol. 9, July 1977, Fisheries and Environment, Canada)

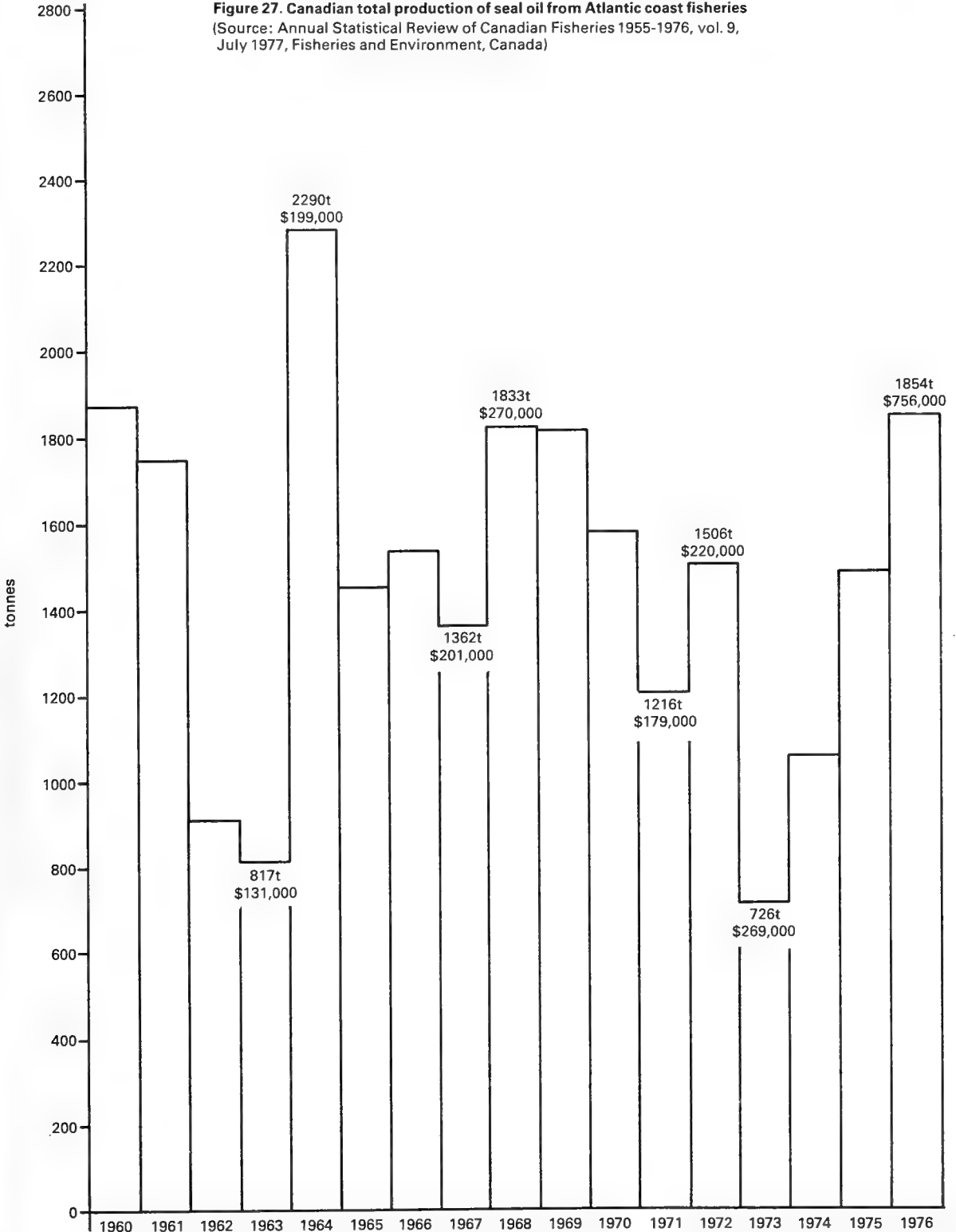


Table 35. Canadian exports of fish and marine animal oils (excluding herring and cod)

To	1976		1977		Calculated unit value (\$/tonne)	
	Tonnes	\$000	Tonnes	\$000	1976	1977
Australia	1	11	—	—	11 000	—
Costa Rica	1.8	1	—	—	555	—
West Germany	220	33	1 653	802	150	485
Norway	3 911.9	566	1 250	633	145	506
St Pierre et Miquelon	—	—	99	34	—	343
UK	1.9	1	—	—	526	—
USA	3 374.8	430	7 985	598	127	75
Total	7 511.4	11 041	10 987	2 068		

Source: Official statistics

Table 36. Production of seal oil by Carino Co

Year	Quantity (gallons)	Value (CA \$)
1970	283 395	234 651
1971	171 788	113 724
1972	102 373	76 370
1973	145 358	217 601
1974	127 915	313 392
1975	223 447	305 005
1976	287 520	417 479
1977	337 146	507 710*

Source: Statistics and Computer Services Division, Fisheries and Oceans Canada, Pleasantville, St John's, Newfoundland, Canada.

*Source: Department of Fisheries and Forestry, Economics Branch — Fisheries Service, Newfoundland Region.

Table 38. Atlantic Sea Fisheries Canadian production of seal oil

Year	Quantity (tonnes)	Value (CA \$000)	Calculated value/tonne (\$)
1955	1 805	304	168
1956	1 864	319	171
1957	1 217	225	185
1958	4 089	301	74
1959	1 240	212	171
1960	1 873	186	99
1961	1 744	105	60
1962	917	119	130
1963	817	131	160
1964	2 290	199	87
1965	1 455	261	180
1966	1 535	297	193
1967	1 362	201	147
1968	1 833	270	147
1969	1 822	215	118
1970	1 586	288	181
1971	1 216	179	147
1972	1 506	220	146
1973	726	269	370
1974	1 060	571	539
1975	1 486	591	397
1976	1 854	756	408

Source: Annual Statistical Review of Canadian Fisheries, 1955–1976, volume 9, July 1977, Fisheries and Environment, Canada.

Table 37. Norway's foreign trade in seal oil

	1970		1971		1972		1973		1974		1975		1976		1977		Total		
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	
EXPORT to																			
Denmark			700	959			269	418										969	1 377
Finland													14		2			14	2
France	21	45																21	45
W. Germany	1 000	1 530			80	142												1 080	1 672
Sweden													4						4
Total	1 030	1 591	704	966	82	147	274	431	3	12	12	44	6	18	2	7	2 113	3 216	
IMPORT from																			
Canada									521	1 172	751	1 465	1 212	2 376	1 253	3 699		3 737	8 712
Total	0	0	0	0	0	0	0	0	521	1 172	751	1 465	1 212	2 376	1 253	3 700		3 737	8 713

A = Tonnes.

B = 000 NKr.

Source: Official statistics, Statistisk Sentralbyrå, Oslo, and Fiskeridirektoratet, Bergen.

Figure 28. Comparison of the landed value per tonne of seal oil processed by the Karlsen and Carino Companies

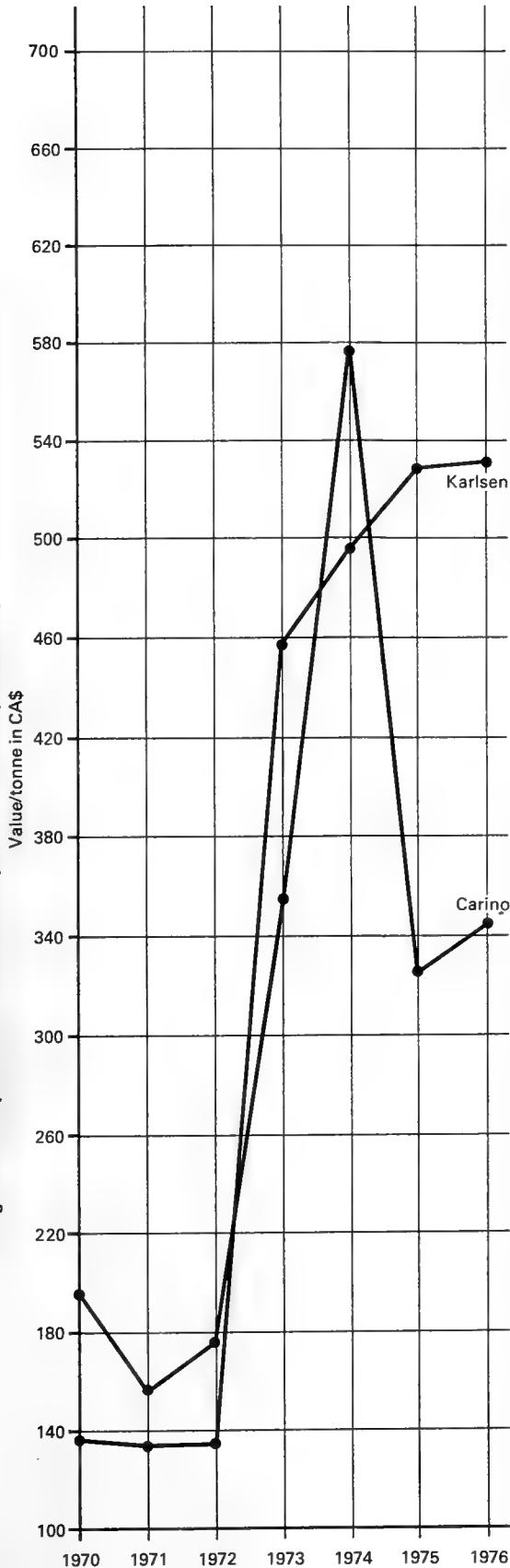


Figure 29. Average value per tonne of seal oil exported from Norway

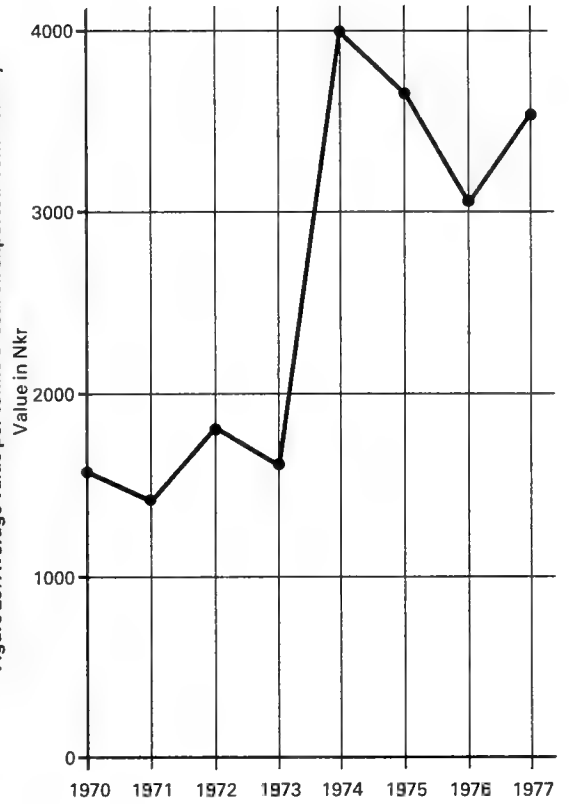
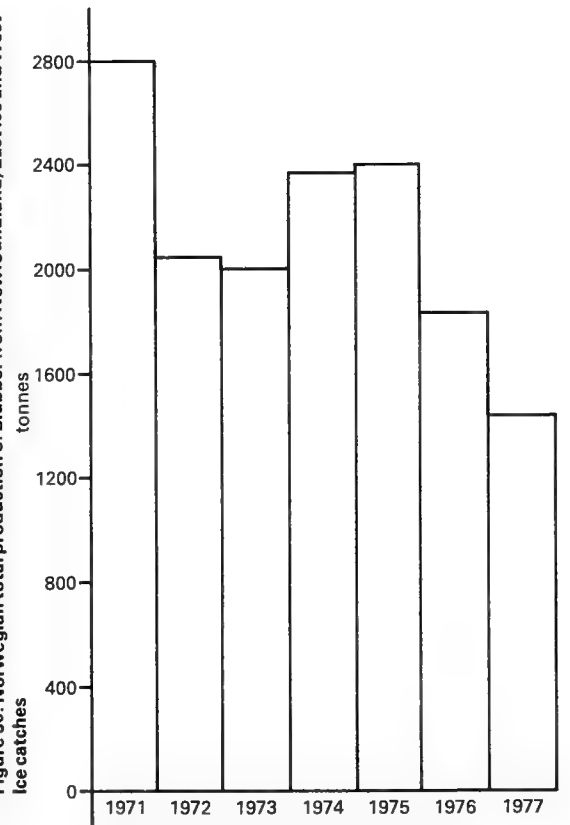


Figure 30. Norwegian total production of blubber from Newfoundland, East Ice and West Ice catches



Source: Fiskeridirektoratet, Bergen, official statistics, 1977

Meat

No matter where it is taken, harp and hooded seal meat does not enter international trade. Indeed, the only indication I have found that any seal meat may be traded internationally is its inclusion in European Customs-tariff headings, along with frogs' legs and whale meat. Since, in the UK, whale meat imports have been banned since 1973, inclusion of an item in a tariff heading does not mean that it is imported. On the other hand, if no whale or seal meat is included in the imports, this means that the UK imported over 17 tons of frogs' legs, worth more than £32,000, in 1976, and over 13 tons, worth more than £22,000, in 1977; the prices seem too high to be whale or seal meat, at an export value of about £1.20 per pound. The nearest thing to international trade is the supply of seal meat from Greenland to Greenlanders in Denmark. But, as Government agencies in Canada, Greenland, Norway and USSR are encouraging seal-meat consumption for reasons of economic or renewable-resource exploitation, consideration of the present situation is relevant here.

Canada

Flippers

From about three months old, harp and hooded seals have enough meat to make it worthwhile taking their carcasses. Flippers are also taken from pups, for the meat on the shoulder which comes with it. Horwood writes, 'the flipper is the front shoulder, corresponding to a shoulder of lamb or a shoulder of pork, except that it is much tastier than either. It is heavy with rich, lean meat, the colour of real mahogany, so tender that you can cut it with a fork, and with a hearty, gamy flavour like that of wild duck. Flippers are cooked in huge pies with vegetables and pastry. They are the centre of social feasts and family gatherings.'¹² Flipper soup is also a popular dish in Newfoundland.

Flipper Prices. Proulx says that in the Magdalen Islands in 1969, sealers sold flippers at 70¢ a pair (\$4.2 a dozen) to a local buyer for shipment to Newfoundland.²⁶ Reeves notes that the Department of External Affairs gave the rate for flippers as \$15-\$18 a dozen,²⁸ and Dunn says that in 1976 the first-hand value of flippers in Newfoundland was \$10.80-\$24 a dozen and that they retailed at \$2 each,⁹ which, if true, meant there was no profit on those with a landed price of \$24 a dozen. He adds that the price had increased during the previous few years. In 1977 Mercer quotes the same retail price,¹⁹ and Price says that the 1976-1977 range was \$10-\$24 a dozen retail;²⁴ Button confirms the upper end of this range in Newfoundland in 1978.³⁹ These prices apply to fresh flippers and are higher early in the season.

Flipper quantities. Dunn states that 78,000 flippers were marketed in Canada in 1976.⁴² In his survey of the 1976 seal hunt he estimated that the number of flippers landed by each type of sealing operation was as follows:

	no. of flippers	value CA\$
landsmen	22,548	10,489
small vessels	114,416	137,299
large vessels	151,843	62,275
Total	288,807	210,063

These values indicate a cost of about 73¢ for each flipper. If the estimate is accurate, then the total number of flippers taken represents at least 144,403.5 seals, that is 21,017.5 more than the official number of harp and hooded seals taken.

Fresh and Frozen Meat

According to Premier F.D. Moores of Newfoundland, speaking at a press conference in London in February 1978, 20,000 seals are consumed each year by sealers and their families – about 14 per cent of the 1978 kill of harp and hooded seals. Mercer states that 20,000 seals are used for domestic consumption and 10,000 for canning.¹⁹ The largest supply to Newfoundland is of fresh and frozen seal roasts and steaks with an estimated total value of approximately \$490,000 in 1976, representing 22 per cent of the seal harvest.⁹ Yet as recently as 1969 Horwood said, 'Except for hides and fat, the flippers are usually the only parts of the seals brought to shore. The carcasses are left for the sharks and the flatfish.'¹² The growth of the industry has not been a result of chance but governmental encouragement. C.E. Button stated, 'I am aware that the Government of Newfoundland Department of Fisheries has been encouraging increased utilization of seal meat in the Province of Newfoundland and has, with the assistance of the Federal Department of Fisheries and the Environment and the Department of Industry, Trade and Commerce, attempted marketing initiatives in oriental and scandinavian countries.'³⁹ And Bruce Jones, of one of the canneries, claims that Notre Dame Bay Fisheries, Comfort Cove, Newfoundland, receives a government subsidy to can seal meat.⁴⁹ However, Button has been unable to confirm this.

Fresh Meat Prices. Retail outlets for fresh and frozen seal meat include community stores, major supermarkets and private sales by individuals;⁹ their sources include seal hunters, sub-agents, agents and wholesalers, or any combination of these.⁴² The price the retailers pay for fresh meat is not established, but probably varies according to the source and would not be very different from the price paid by the canneries. In 1977 meat was retailing at \$1.40/lb;²⁸ Price records a range of retail prices for whole carcasses in 1976 and 1977, from \$2 to \$7.²⁴ (The carcass of a one-year-old seal yields about 35lb of meat, and of a three-month-old seal about 18-20lb.⁴⁵) In 1978 in St John's, Newfoundland, carcasses fetched about \$4.50.³⁹ In 1975 the Canadian Department of External Affairs gave the carcass price as \$4-\$7,²⁸ and so the price appears not to have changed. According to Dunn, the value of carcasses bought by canneries fell from 30¢/lb. in 1975 to 15¢ in 1976.⁹ Price, on the other hand, records the same values in reverse order, and says that the average 1977 price was 23¢/lb. But Lewis Eveleigh and Bruce Jones told me that sealers sell the meat for 45-50¢/lb early in the season and about 25¢ later. They both buy meat for their canneries at 20-25¢/lb^{45 49}.

Canneries

Only two firms in Canada, both at Notre Dame Bay, Newfoundland, now can seal meat: Notre Dame Bay Fisheries Ltd of Comfort Cove, and S.T. Jones & Sons of Little Bay Island. Notre Dame Bay Fisheries is the major processor, claiming to can about 500,000lb of meat a year.⁴⁵ According to Dunn the plant was specifically designed for seal meat,⁴² which they have been canning for about eight years,⁴⁹ using mainly seals of one year, two years and three months old; the last are canned separately, having relatively more bone and less meat. The meat is canned with the bones in, and sold under the name *Arctic Brand Seal Meat* in a recipe that also includes onion, pork and salt. In 1977 the company sold 6200 cases of 24x14oz tins and 1500 cases of 24x7oz tins, i.e. 145,950lb of meat – nothing remotely like the 500,000lb a year claimed to be canned; the difference is probably made up by fresh or frozen meat sales. In Labrador 300-400 cases were sold to

the Eskimo communities. In 1978, however, the company packed no seal meat because, it claims, the Government had changed the regulations regarding the amount of bone that could be used, and it cost considerably more to pack the boneless meat. The Government had also asked the company not to put the protein content – 23–27 per cent – on the can.⁴⁵ The cases are generally sold to retailers in Newfoundland. The company has also had enquiries from a Japanese company wanting seal carcasses for use in foods in Japan.

S.T. Jones & Sons Ltd has been canning seal meat, either young seals with the bone or older ones without, for 15 years.⁴⁹ The brand name is *Sea Treat*. In 1977 they produced 2000 cases – 800 cases of 24x14oz tins and 1200 of 24x7oz tins, i.e. 29,400lb. Cases of 14oz tins sell at \$19.95 and of 7-oz tins at \$12.75 – respectively 83¢ and 53¢ a tin. Their income from 1977 sales was thus about CA\$31,260. In 1978 they canned no seal meat because, they say, there was no market for it.⁴⁹ This company has also received enquiries from Japan.

Price and Quantity of Canned Meat. Canned seal meat retailed in 1976 at 49¢ for 7-oz tins and 89¢ for 14-oz tins in St John's, Newfoundland.³⁹ The price for 7-oz tins is exceptionally low compared with the S.T. Jones's quoted selling price. These may be from Notre Dame Bay Fisheries, which could afford to sell at a lower price if its product included the bone and if it received a government subsidy.

The role of the Carino Co. in the seal-meat industry is not at all clear. Plainly they are involved, since B. Nygaard states, 'We do not think it would be possible to market all the seal meat for human consumption. We believe the bulk of it will have to find other consumers, and we are looking into what could be done with mink food.'²⁰ I would speculate that carcasses are landed at Dildo with seal sculps and that Carino sells the fresh meat. No record is kept of seal meat landed, making it impossible to compare one year's yield with the next. However, Dunn, from his survey of the 1976 sealing industry estimated that the number of carcasses landed in that year was:⁹

source	no. of carcasses	gross revenue (CA\$)
landsmen	12,264	48,065
small vessels	40,866	153,904
large vessels	6,464	23,027
Total	59,594	224,996

(See Table 39 for details of the survey)

Table 39. Estimates from findings of 1976 survey of seal hunters in Canada

Item	No. of respondents	Sample averages	Standard error of the mean	Coefficient of variation	Population estimates	Confidence interval (90% probability)
No. of carcasses landed		(No. of carcasses)			(Total carcasses landed)	
Landsmen	131	16.11	1.51	9.3	12 264	10 378–14 148
Small vessels	57	51.40	7.55	1.5	40 866	31 019–50 707
Large vessels	5	34.20	11.26	32.9	6 464	2 974–9 954
Gross carcass revenues		(\$)			(\$)	
Landsmen	134	61.73	5.23	8.4	48 065	41 348–54 692
Small vessels	56	193.59	30.32	15.6	153 904	114 373–193 435
Large vessels	6	121.83	47.15	38.7	23 027	8 411–37 641
Number of flippers landed		(No. of flippers)			(Total flippers landed)	
Landsmen	61	63.61	29.31	46.1	22 548	5 508–39 581
Small vessels	37	143.92	27.38	19.0	114 416	78 719–150 114
Large vessels	5	803.40	551.08	68.6	151 843	18 970–322 655
Gross flipper revenues		(\$)			(\$)	
Landsmen	58	31.12	3.23	10.3	10 489	10 309–12 273
Small vessels	37	172.70	39.42	22.8	137 299	85 901–188 692
Large vessels	6	329.50	83.49	25.3	62 275	36 397–88 154

Dunn concludes that in 1976 the total fresh meat sales represented 22 per cent of the total seals harvested and achieved a final value of \$490,000.⁹ The difficulty lies in calculating the quantity sold privately or used by the sealers. However, the results of his seal-hunters' survey indicates that about '28,000 seal carcasses were sold to retail outlets in the fresh meat market, and as many as a further 9000 seal carcasses may have been sold by individual seal-hunting enterprises directly to consumers, or were consumed domestically'.⁴² Dunn also estimates that canned meat represented a further five per cent of the 1976 harvest with three canning factories operating.⁹ This is apparently consistent with the plant managers' estimates of 7500±500 carcasses used for canning that year.

In 1976 three canneries in Newfoundland purchased over 300,000lb (135,000kg) of seal meat, according to a Newfoundland Government press release in February 1978, but their production of canned meat totalled only 128,000lb. Even this exceeded demand, and 18,000lb remained in storage at the end of the year. The maximum possible production was estimated as 1.5 million lb, representing 56,000 carcasses,⁹ but one plant has since stopped processing seal meat. This is not surprising since Dunn records the meat processing companies' estimate of demand for the processed product as 'in the area of 110,000lb annually, and relatively inelastic with respect to price'.⁹ If the claimed sales of 175,350lb in 1977 are accurate, then the demand had plainly risen in that year; Eveleigh told me that demand for seal meat generally was increasing.⁴⁵ However, there is no traceable export or import of seal meat by Canada in any form.

Greenland

According to Kapel by far the greater part of the meat from seals caught by Greenlanders is used locally. He calls it 'the daily bread', and well over 2000 tonnes is used annually. 'Smaller quantities (60–80 tonnes annually) are traded frozen or dried for sale in other districts along the coast of Greenland, where fishery is more important than hunting.'⁵⁰ In addition 'frozen seal meat and blubber, for sale to Greenlanders living in Denmark, amounts to a few tons per year. Only Greenlanders can purchase it.'⁴⁶ There is apparently no other trade and no cannery.

Norway

Sealers from Norway take flippers and meat from harp and hooded seals for their own use and for private sale. They have an interest in keeping no records of what they land or sell, since any declared income would be taxed,

and Norwegian taxes are high. In 1977, for the first time, a seal-meat cannery was started by the Norwegian Government and run by the Trondhjem Preserving Co. This is an experimental cannery, and the company is still trying to determine whether the Norwegian public will accept seal meat. In 1977 and 1978 it canned each year approximately five tons of seal meat, which was the maximum carrying capacity of the refrigerated ships. If the experiment is successful however, it should be possible to send more ships.⁵⁹

Trondhjem Preserving Co. mostly cans other products, and seal meat represented just 0.3 per cent of their total production in 1977. Their seal products are a steak called *Polar Biff*, and *Polar Kaker*, a processed 'cake', both sold in a white sauce. R. Strøm says, 'our prices to the trade will be around \$1.90 and \$1.20 respectively for an 850g can'.⁵⁹ Seal meat being low in fat and high in protein, Strøm feels that in marketing 'the only disadvantage is the meat's rather darker colour'. Karl Bjøbaek of Det Kongelige Fiskeridepartement maintains that Norway has never imported or exported seal meat.

USSR

Popov notes that seal meat is increasingly important for the inhabitants of the White Sea coast.²³ Yakovenko states, 'Nothing is wasted . . . the meat goes as fodder to mink and silver fox farms . . .'¹¹ F. Jean Vinter also records that seal meat was used by fur farms in the USSR and that seal tongue was a delicacy.³⁵ Sergeant noted that the Russian method of taking live ragged-jackets by helicopter to coastal farms for killing makes the use of meat much easier.³⁵ Yakovenko says they are killed by lethal injection,¹¹ but it is not clear what the implications are for the use of their meat. Drugs that would allow the carcass to be used for human consumption would probably add heavily to the already high cost, but in any case ragged-jackets and young bedlamers have very little meat.

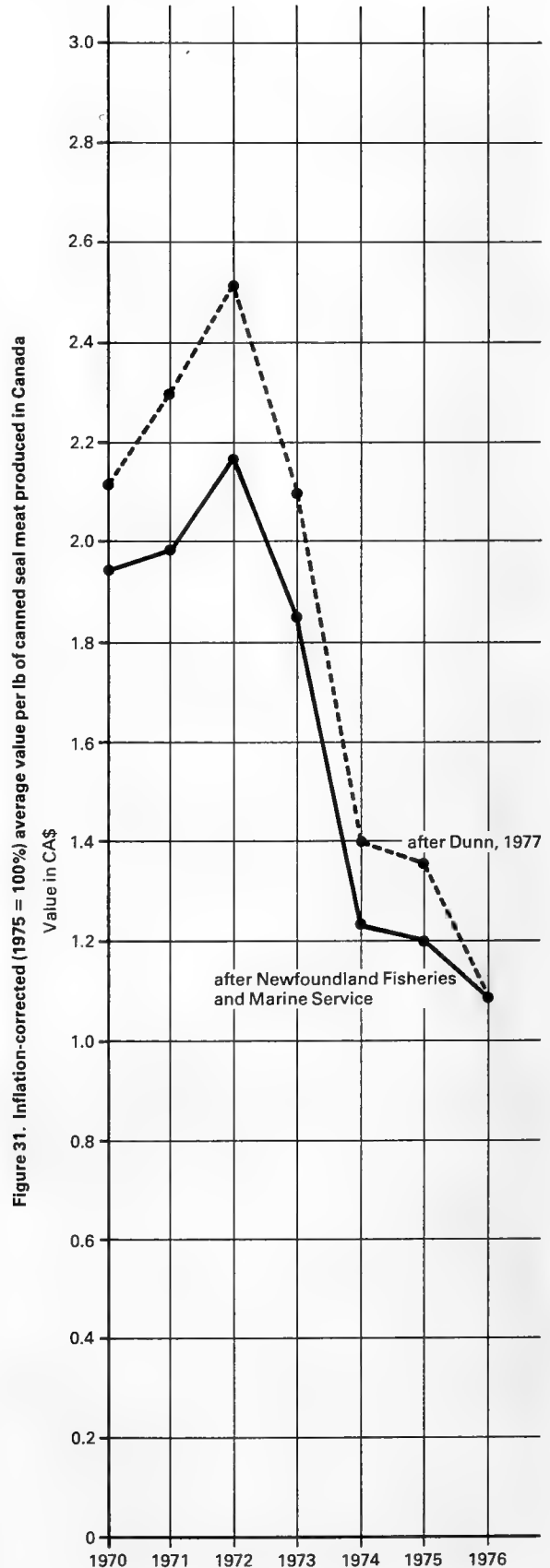
I have no information on commercial uses of seal meat in Russia and there is no apparent export or import.

Table 40. Canadian meat production

Seal Meat Production and Market Values on Canada's Atlantic Coast, 1969-1876 (after Dunn 1977)			
Year	Processed seal meat (000 lb)	Processed value (\$000)	Calculated unit value
1969	54	50	0.93
1970	25	32	1.23
1971	26	35	1.35
1972	39	62	1.59
1973	61	98	1.61
1974	36	47	1.31
1975	123	166	1.35
1976	128	145	1.13

Production of Seal Meat in Newfoundland, 1970-1977 (after statistics supplied by Statistical Officer, Environment Canada, Fisheries and Marine, St John's, Newfoundland)			
Year	seal meat (lb)	Canned value (\$)	Calculated unit value
1970	28 728	32 463	1.13
1971	30 192	35 224	1.17
1972	44 928	61 776	1.37
1973	69 288	98 158	1.42
1974	41 256	47 135	1.14
1975	140 184	166 469	1.19
1976	130 056	147 072	1.13
1977	113 054	Not available	-

Figures from Dunn (1977), and Newfoundland Fisheries and Marine Service (in litt)



Discussion and Conclusion

Skins

Changing Catches

Most of the harp and hooded seals are taken by Canadians and Norwegians and less than 20 per cent by Greenlanders and Russians. In every area the numbers taken are considerably smaller than a hundred or even fifty years ago. Canada, Norway and USSR operate a scientifically established quota system, but not Greenland, where it would be difficult to enforce; however, the other quotas make an allowance for some Greenland catches. So it is significant that over the period with which this report has mostly dealt – 1970-1977 – the number of harp and hooded seals traded by Canadians, Norwegians and Russians has decreased, while the Greenlanders' trade has increased by about 240 per cent.

Changing Values: Old and New Theories

From 1973 to 1977 sealskins were declining in value, whatever the source. Those five years were also the period of the major anti-killing campaigns, and many furriers blame the animal welfare and conservation organisations for damaging their trade. But some types of skin, and skins from some areas, have been decreasing in value for much longer than that. So far, these organisations have not claimed 'success' in damaging trade, but the claim is made for them. In Canada the campaign is said to have damaged the Eskimo share of the market: Nygaard notes that 'good quality seems to be selling fairly well, but beaters are slow (to sell). The opponents have done their work. Beaters are sold natural and therefore look like seals.'²³ This is a reference to the apparently widely held view that the animal welfare and conservation organisations are concerned only about the clubbing of whitecoats, but that their campaigns have affected the sales only of furs that are recognisable as seal; whitecoat sales are not affected, according to the Managing Director of Hudson's Bay and Annings.⁴³ Greenland subsistence hunters have been so badly affected by the campaigns that the KGH is now subsidising them, according to Finn Kapel.⁵⁰ In West Germany, Jürgen Denhardt also feels that the anti-sealing campaigns have affected the prices and sales of his sealskins, despite the fact that he does not deal in whitecoats because of their low quality.⁴¹ The other main factor influencing demand, according to the fur trade, is the fashion cycle. Hugh Dwan maintains that this moves between long- and short-haired garments and that in the present long-haired phase the demand is for whitecoats.⁴³ This view is not totally convincing, as whitecoat skins are ostensibly used mainly for linings and trimmings. Sergeant agrees that there is a cycle of demand but believes that the cycles for each type of skin are independent of each other.⁵⁸

In fact the value of sealskins has been declining for longer than major anti-sealing campaigns have been operating, and there was the beginning of a recovery in 1978. The fur market has declined since the campaigns began, but so has the market in processed seal meat, which is almost certainly not affected by conservationists. If, as Denhardt suggests, 50 per cent of sealskins go to leather,⁴¹ I would expect no decline caused by the fashion or campaign factors in at least half the demand, since the consumer cannot recognise seal leather. Also, as the general demand for natural furskins has declined,³⁸ a similar trend for sealskins could be expected. Clearly, many of the relatively small number of companies that handle sealskins before the retail stage deal largely or exclusively with sealskins. Fluctuations in demand, including those caused by anti-sealing pressures, are therefore likely to have a much greater effect on price than

they would if sealskins were only a small part of many companies' turnover.

The diversification of sealskin uses has helped to counteract the decreasing demand,⁹ particularly in novelty items, where the important question is 'which came first, the product or the demand?' It would be ridiculous to suggest that there was any demand for pipes and cigarette lighters covered in harp seal skins before manufacturers made them, yet they are produced and sold in Montreal. A general decline in the use of furs³⁸ is another possible cause for the decline in sealskin prices but the numbers of seals whose products enter international trade is established not by consumer demand but by fisheries management authorities, so that whether or not there is a demand for skins, a certain number of harp and hooded seals will be taken each year. If supply exceeds demand the expected result is a drop in price and possibly a diversification of use to ensure that no investment is lost. This has certainly happened with sealskins and, to a small extent, with processed seal meat in Canada. Improvements in skin dressing have caused them to become more important than the oil in the trade and facilitated their use in high-class garments. I suspect that the use of skins in novelty items may be no more than the use of a surplus that is unusable in other ways.

Humanitarian Demands

If the demand for sealskin could be met without endangering populations and using the seals as a 'renewable resource', it would be environmentally advantageous but only acceptable if the killing could be done humanely. The USSR's killing by lethal injection might be humane, but being bundled into containers and flown to 'farms' could be horrifically disturbing to the pups. If it were possible to be entirely certain that clubbing was humane, that also might be acceptable – but there is no way of knowing, and it is known that many clubbed seals do not die outright.^{13 29} The catching of seals in nets that occurs off north-east Canada is certainly inhumane. Shooting seals not only requires a skilled hunter to hit the 'right' spot but also means that animals in or near water may sink or escape wounded. For these reasons, in May 1975, Canada's Committee on Seals and Sealing recommended to the Minister of State for Fisheries that 'no hooded seals should be shot in the water' and noted that 'the losses are estimated at 40 per cent', an unacceptable level of waste.

Oil

Blubber is rendered to oil and either used locally or sold into commerce. Prices have increased as fish oils have become scarcer, and showed a particular jump in 1974. Despite a feeling that, because of this shortage, good quality marine oils should remain in the country of production, much of the Canadian product is going to Europe, mainly Norway. The Norwegian origin of the two Canadian blubber-rendering plants in Canada perhaps has some bearing on this. Seal oil in any form is apparently far more useful than skins in any form, and given the bad management of fish stocks internationally, it may once again become the most important product of the industry.

Meat

Seal meat seems always to have had some importance for the coastal sealing communities, and the Norwegians and Canadians have both tried to increase the use of the meat and to broaden consumption from the sealing communities to the public generally. Every year thousands of tons of seal meat are left to be washed back into the sea – an appalling waste in a world short of food. If a condition for Canadian and Norwegian sealing licences required that a

certain percentage of the carcasses be used, then the problem would be to find the markets. It is significant that, despite Canadian Government attempts to increase the consumption of processed seal meat, none at all was processed in 1978. The two canneries give different reasons for this: change of government regulations on recipe, and no demand. Either way this sort of wastage is unacceptable, and I suggest that greater consideration be given to the potential uses of the meat, even as an animal food.

Changing Markets

What would be the result if Norwegians stopped their sealing? When at the August 1977 meeting the senior representative of the Department of Fisheries and the Environment asked 'whether it was anticipated that withdrawal of Norway from northwest Atlantic sealing operations would adversely affect the market for Canadian seals' the answer was no.³ However in a report of the discussion at the same meeting, H. Rowsell of COSS writes, 'If Canada decided to go it alone, we may have twice as many seals for Canadians but this does not mean that we will have the same price that we had for the numbers of seal pelts sold this year. It may mean an actual decrease because the market place may influence the buying of the seal pelts and thus lower the price.'³⁰ If the implication is that Canada would take over the processing of seal pelts and market them within the country, it is unrealistic. People do not suddenly buy furs who never did so. In some countries, Germany, for example, seal garments sell well, and in others, such as the UK, they do not. Consideration of any changes in marketing practice must take account of existing markets and demands. There is an abundance of farmed and ranched animal skins that can do the job of seal furs, but the number of oils that do the job of seal oil is limited. They come chiefly from fish and baleen whales, generally badly managed stocks that are in shorter supply each year.

With the increasing attention to management of natural renewable resources throughout the world, exploitation for food gain is likely to become of greater importance, as can be seen in the attempts to stimulate the use of seal meat and in the rising importance of seal oil.

Non-Consumptive Values of Seals

So far no attention seems to have been paid to the non-consumptive values of harp and hooded seals; wildlife tapes, films, television programmes and books are a thriving industry because people are interested in the subject and pay for them. It is impossible to assess the value of seals to the public as opposed to any other form of wildlife, but one way might be to check the success of a book like Bruemmer's *The Life of the Harp Seal*,⁶ or the monetary support for anti-sealing campaigns such as those run by Greenpeace or IFAW. This would be a first step to measuring the effect of anti-sealing campaigns in the demand for seal fur: the income could be graphed against the fall in value of the furs. However, it would be a poor guide, since, besides the other factors involved, there are so many animal organisations involved in seal campaigns, and some animal organisations actually support the kill. Many thousands of letters are sent to ministers, MPs and animal welfare and conservation groups. What is the total cost of postage? What is the effect? How much does it cost to transport and keep protesters on the ice fields off Newfoundland, and what is the effect? How much is spent on advertising, printing, distribution or literature? What is the value of television time and of press coverage? All these must be taken into account in any comprehensive calculation of the effects of anti-sealing campaigns. If there is to be an accurate estimate of the non-consumptive value of seals, something like this will need to be done.

Summary

Skins

The bulk of harp and hooded seal skins from Canada goes to Norway and West Germany. From Norway – and Greenland, via Denmark – the skins go mainly to East and West Germany and southern Europe. Most of the USSR skins are not exported. West Germany and Norway are major centres for the trade in skins both because they are consumers and because they have specialised sealskin processors. The principal consumers appear to be in West Germany, East Germany, Italy, Sweden, Finland and France. The UK is an important distribution centre. The real value of harp and hooded seal skins has been declining for at least five years, and in some countries at least eight years. In 1978 there was the beginning of a recovery, although it may be only temporary. The better quality skins may be holding their price, but diversification of uses has probably helped to slow the overall decline. The current most important uses are for jackets, coats and coat trimmings and, increasingly, for shoes and slippers.

Oil

Seal oil from Canada is generally used in Canada or Europe. Much of it goes to Norway, which also appears to consume its entire local production. Greenland and USSR do not appear to export seal oil. It is used mainly in shortenings, and the value is rising with the decreasing availability of fish oils.

Meat

In Canada, Norway, Greenland and USSR the most important consumers of the meat appear to be the sealers themselves. In Canada the market for meat is limited to Newfoundland, even for canned meat, which has been produced commercially for about fifteen years. Recently its value appears to be declining. The data are insufficient to assess the trade in fresh and frozen seal meat. In Norway a seal meat cannery started in 1977 is still in the experimental stage, and none of this canned meat enters international trade. It could be construed as a major criticism of the sealing industry that most of the meat from seals killed is wasted.

Afterword

To alleviate concern over my calculations I should explain that, in comparing 'real values' over a period of years, I have always used figures from one country, to eliminate currency problems, and at one point of sale or purchase, to eliminate trade profit problems. The 'real values' are arbitrarily those of 1975, calculated on the Wholesale Price Index of the country concerned. I am, therefore, confident that the comparisons I have made are valid. The overall impression was of a decline in 'real value' of sealskins at the time I finished writing, in December 1978, and was supported by traders' complaints of declines.

One of the reasons given by traders for the decline in prices was that long-haired skins were in fashion. Mr Chr. Rieber (in litt.) has kindly pointed out that this is now (May 1980) changing, and, as most sealskins are short-haired, demand for these is likely to increase.

In the north-west Atlantic, where the greatest controversy exists, the quotas for 1979 and 1980 remained the same: 180,000 harp seals and 15,000 hooded seals. Preliminary kill figures were:

		Greenland	Canada	Norway
1979 take	Harp seals		138,031	20,288
	Hooded seals		6,632	8,306
1980 quota	Harp seals	10,000	150,000	20,000
	Hooded seals		6,000	6,000
			+3,000 to either	

Norway was still active in 1980 although its allocation had been cut.

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Addendum

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