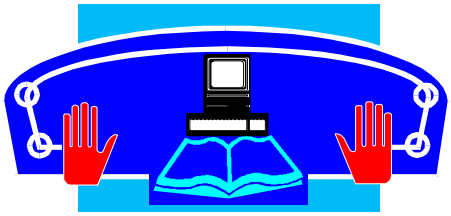

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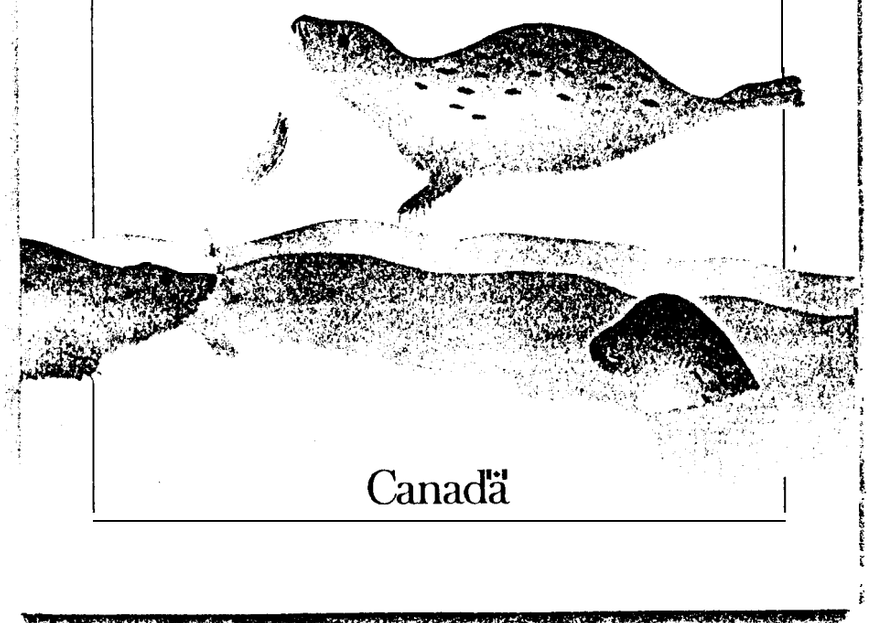
Seals and Sealing in Canada

Report
of the Royal Commission
Volume 1



Canada

SEALS AND SEALING IN CANADA

REPORT OF THE
ROYAL COMMISSION

Volume 1

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La Commission royale sur les phoques et
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Royal Commission on Seals and the
Sealing Industry in Canada

Her Excellency the Governor General in Council
Privy Council
85 Sparks Street
Ottawa, Ontario
K1A 0A3

Your Excellency:

We are pleased to enclose herewith the Final Report of the Royal Commission on Seals and the Sealing Industry in Canada in accordance with the provisions contained in the Order-in-Council P.C. 1984-2242 of June 22, 1984, as revised and amended on September 26, 1985 by P.C. 1985-2905 and on December 20, 1985 by P.C. 1985-3769.

Respectfully,

Albert H. Malouf
Chairman

Kenneth Radway Allen
Commissioner

Russel Lawrence Barsh
Commissioner

John A. Gulland
Commissioner

Robert Ian McAllister
Commissioner

Wilfred Templeman
Commissioner

September 1986

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It is time to take our bearings and to chart the broad lines of public policy for the coming years. Canadian domestic issues are unavoidably bound up with international developments. Accordingly, the policies we develop – foreign and domestic – must address both Canadian and international realities. The two are inseparable elements of a truly national policy.

Rt. Hon. Joe Clark, Secretary of State for External Affairs

(Competitiveness and Security: Directions for Canada's International Relations. 1985. Dept. of Supply and Services, Ottawa.)

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FOREWORD

During the past 20 years the management of seals in Canada has changed from being viewed as essentially a technical matter that concerned a few fishermen on the east coast and a handful of scientists and fishery administrators, to a responsibility which has aroused considerable interest, and sometimes strong feelings, among a great many Canadians. Canada's approach to seals and sealing has also evoked public interest in a number of other countries and given rise to actions which have had important impacts on Canadian international trade and, on occasion, threatened Canada's image in other countries. The controversial nature and the complexity of many of the issues involved have created substantial difficulties for successive governments in their efforts to develop policies for the management and utilization of the seal populations which would be well balanced and acceptable to a wide spectrum of Canadian opinion.

The Royal Commission on Seals and the Sealing Industry in Canada was set up by the Government of Canada in August 1984. Its Mandate was to review all matters pertaining to seals and the sealing industry in Canada, to assemble relevant information, and to make recommendations on the implications of this information for the development of policy. The Royal Commission's considerations included social, economic and biological matters. The Government considered that such an Inquiry would do much to clarify the situation for the general public both in Canada and in other concerned countries. It would provide an opportunity for all interested parties, Canadian and foreign, to put forward their views and to present any evidence they desired, and thus assist the Commission in drawing its conclusions and making its recommendations.

The Royal Commission has now completed its work, and the tindings are presented in this Report. The first volume (Part I) describes the setting up of the Commission, the tasks with which it was faced, the way in which it attacked those tasks, the principal conclusions it has reached, and the recommendations which it is presenting to government on the basis of those conclusions. The subsequent parts of the Report contain detailed discussion of the issues that the Commission examined.

PART I

Summary

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Chapter 1

Introduction

Establishment of the Royal Commission

Order in Council P.C. 1984-2242 of 22 June 1984 created a commission to inquire into and make recommendations on all aspects of seals and sealing in Canada, including the social, cultural, ethical, scientific, economic, resource management, and international implications.

The Mandate

in particular, as set out in the Mandate, the Royal Commission was called upon to inquire into and report on the following matters:

(a) *the social and cultural* **impact** *and economic bene-/its and costs, including regulatory costs, of seal-***ing** *in Canada;*

(b) *the ethical considerations relevant to the harvesting of seals;*

(c) *the status of Canadian seal stocks and measures currently* **in force** *in Canada to conserve, manage, protect and regulate the harvesting of seals, including the adequacy of such measures;*

(d) *the interactions between seals and commercially exploited fish populations that may affect food supplies or contribute to parasite transmission;*

(e) *the interactions between seal populations and commercial fisheries, including, inter alia, competition between seals and fishermen for fish stocks; interference* **in** *fishing activity by seals, including damage to fishing gear ond catches; and the effects and related economic costs on the*

quality of fish catches by transmission of parasites by seals;

(f) the principles necessary to manage seal stocks for conservation purposes, including appropriate cull levels, so as to ensure the continuing *abundance and health of seal stocks and to minimize adverse* interactions *between seals and Canadian fishing resources and operations;*

(g) *the methods for harvesting seals commercially and their suitability;*

(h) the domestic and international opportunities for and constraints on the processing and marketing of Canadian seal *products;*

(i) the availability of alternative sources of income and opportunities for adjustment for individuals and communities currently dependent on the seal harvest;

(j) the concerns of individuals and groups with a direct, indirect or declared interest in sealing in Canada, including an assessment of such interests;

(k) the public awareness and attitudes in Canada and abroad on sealing policies and activities in Canada and the extent LO *which such attitudes could constrain future revitalization of commercial* sealing, or *adversely affect other commercial interests and activities, and recommended approaches for removing those constraints;*

(1) the international comparisons, as *appropriate, for the preceding elements; and*

(m) the possible new international initiatives for managing Canada's seal resources, for harvesting seals and for related activities.

The Royal Commission was asked 10 present to the Governor in Council a preliminary report not later than 31 December 1984 and a final report not later than 30 September 1985, In response to requests by the Commission, its Mandate was extended to 30 September 1986.

Early in its deliberations the Royal Commission decided to interpret its Mandate as covering all aspects of seals and the sealing industry in Canada. It determined that this would include the position of seals in Canadian subsistence economies, as well as any international aspects which have arisen in connection with Canadian seals and sealing.

Royal Commissioners

The following Commissioners were appointed by Letters Patent under Orders in Council:

Chairman

The Honorable Albert Ii. Malouf

Justice, Court of Appeal of the Province of Quebec, Montreal, Canada. From November 1972 to June 1973 he presided over and granted the request for the issue of injunction presented by the Indians and Inuit against the James Bay Energy Corporation et al. in revindication of their territorial and ather rights in the Province of Quebec. From July 1977 to May 1980 he presided over the inquiry into the coat of the Olympic installations and games held in Montreal in 1976.

Other Commissioners .

Dr. K. Radway Allen

of Sydney, Australia. Formerly Chief of the Division of Fisheries and Oceanography, CSIRO, Cronulla. He has been involved for many years in research of the population dynamics and management of marine mammals, particularly in association with the International Whaling Commission, the Food and Agriculture Organization (FAO) and the United Nations Environment Programme (UNEP).

Mr. Russel L. Barsh

of Seattle, United Slates. He taught law and public policy at the University of Washington until 1984, when he returned to the practice of public international law and environmental management with indigenous communities in the United Slates and Canada, He has published works on Indian history, government, law and economic development.

Dr. John A. Gulland

Of Cambridge, England. Presently Senior Research Fellow, Centre far Environmental Technology, Imperial College, London. Until 1984 he was with the Deportment of Fisheries, FAO, Rome His particular concern has been with the population dynamics and management of marine living re. sources, including fish and marine mammals,

Professor Ian McAllister

of Halifax, Canada. Professor of Economics, Dalhousie University, since 1971, and Chairman, Lester Pearson Institute for International Development. He has advised a number of governments and published books and articles on regional development, foreign aid, energy and industrial policy issues, especially relating to Canada, Africa and the European Community.

Dr. Wilfred Templeman

of St. John's, Canada. Formerly Director of the Biological Station, Department of Fisheries and Oceans, St. John's, His scientific papers include a review of the living marine resources of Newfoundland, including seals and whales, a study of the infection of cod and other fish of the Canadian area hy the sealnematode, and a study of the life history of the capelin, probably the principal food nf the harp seal.

Dr. Patrick A. Geistdoerfer

Responsible for research in marine biology at tbe Centre National de Recherche, Paris, France. Following his appointment as a Commissioner, Dr. Geistdoerfer attended the opening meeting of the Royal Commission held *in* Montreal on 24 September 1984, but did not participate further in the activities of the Commission, and subsequently submitted his resignation.

Office of the Royal Commission

The Commission setup its office in the Palais de Justice in Montreal. A list of all staff employed in the Commission's office is contained in the Administrative Appendix.

Preliminary Report

In accordance with its Mandate, the Royal Commission submitted a Preliminary Report to the Governor in Council on 19 December 1984. This report dealt primarily with the work of tbe Commission in getting organized, as well as its estimate of the cost and the duration of tbe Inquiry. It outlined the methods to be employed to gather the information required to fulfil the Mandate of the Commission.

Informing the Public

The Royal Commission wrote to groups and associations which had previously shown an interest in the subject of the inquiry, advising them of its Mandate and tbe manner *in* which it intended to do its work. *In* addition, public notices appeared in newspapers across Canada and abroad, publicizing the Mandate of the Royal Commission and the public hearings which would commence early in 1985. To assist interested persons in approaching the Commission, a formal Statement of Policy and Procedure was prepared, detailing the Commission's Mandate, its Commissioners, its terms of reference, the rules to be followed during the public hearings, and the manner of submitting briefs and obtaining access to documents in the possession of the Commission. This statement is reproduced in the Administrative Appendix.

Press kits were prepared and distributed to Canadian and foreign newspapers in Canada and abroad, and a memorandum dispatched to Canadian diplomatic posts and missions.

Sources of Information

In order to carry out its task, it was necessary for the Royal Commission to draw on all possible sources of relevant information and opinion. These sources included:

Harp seals in the Gulf of St. Lawrence

- public submissions either as written briefs or in personal presentations to the Commission;
- studies undertaken by expert consultants engaged by the Commission to examine particular topics;
- information and opinion provided by experts in particular fields at the request of the Commission;
- published scientific and technical literature;
- personal knowledge, experience and research of Commissioners and staff.

Public Hearings and Visits

The Royal Commission sought to provide all members of the public interested in its Mandate with the opportunity to present briefs and appear *before* it at. their common convenience. Al the some time, faced with constraints of time and budget, the Commission had to strike a reasonable degree of balance.

With this in mind, it was necessary for tbc Royal Commission to hold its public bearings over a fairly short period of time and in Canada's large urban centres accessible to tbc public, the major newspapers, and radio and television stations. The Commission was also obliged to keep in mind the importance of hunting, trapping and fishing to the indigenous population, and the importance of seals and sealing to the inhabitants of the Arctic, the Atlantic region and, to a lesser extent, the Pacific communities, Montreal, Toronto, Vancouver and St. John's were accordingly selected as the cities for the public hearings held in Canada.

Many Inuit associations and Inuit individuals expressed a desire that the Royal Commission visit their particular communities, In view of the large number of such requests, the Commission asked some of the associations to co-ordinate their activities and help it to choose the most appropriate areas for it to visit and receive presentations from persons resid. ing in and around the communities chosen,

As a result, the Commissioners visited Holman on Victoria Island in tbe western Arctic (N. W.T.), Pangnirtung in the eastern Arctic (N.W.T.), and Kangiqsujuak in northern Quebec.

Because of the international interest in the scaling question, the Royal Commission also held public hearings in Europe and the United States; these hearings took place in London and Washington. The localities and dates of hearings and other public sessions of the Commission were:

Locality	Date
Montreal	22-25 January 1985
Toronto	28-31 January 1985
Vancouver	4-5 February 1985
London	9-10 April 1985
Washington	17 April 1985
Montreal	22-23 April 1985
St. John's	21-23 May 1985
Kangiqsujuaq	27 May 1985
Pangnirtung	28-29 May 1985
Holman	18 June 1985

A total of 156 witnesses gave oral testimony on these occasions,

Written Submissions

In addition to oral representations, the Royal Commission received a total of 137 written briefs. The sources of written briefs and oral testimony included sealers; the sealing industry; the fishing and fish-processing industries; the fur industry; representation of the aboriginal peoples; conservation, animal-welfare and animal-rights groups; veterinarians; academics in such fields as biology, economics, sociology, nutrition, philosophy and law; local development groups; elected representatives; government departments; representatives of foreign governments; and concerned individuals. The names of the persons, groups and associations who submitted briefs, as well as the names of witnesses who appeared before the Commission, are set out in the Administrative Appendix.

Consultant

The Royal Commission frequently required information which was not available from witnesses, and which could not be obtained with its own staff resources. For this reason it retained a number of consultants to carry out special studies in its behalf. These consultants are listed in the Administrative Appendix.

Expert Inquiries

The Royal Commission has also drawn heavily on the help and advice of people who had particular knowledge and skills in matters with which it was concerned. This help, which has been readily given, has ranged from the provision of basic facts to discussion of complex scientific issues, and even to review of preliminary drafts of technical sections of its Report. In the Administrative Appendix the names of the persons who have helped the Royal Commission in this way are listed.

Organization of the Report

The Report of the Royal Commission is published in a series of volumes.

This introductory volume conveys in a compact form the essential features of the Royal Commission's work. These features include the

establishment of the Commission, its method of operation, a general account of the issues which the Commission had to examine and, most important, the principal conclusions reached and the recommendations based on them.

The subsequent volumes provide detailed discussion of the issues that the Royal Commission has examined; they present the data available to the Commission on each issue, and the reasoning by which the Commission has reached its conclusions and recommendations, The final volume also includes an Administrative Appendix, which contains additional information about the operational details of the Commission, supplementary to that given in this volume,

Finally, there is material accumulated hy the Royal Commission in the course of its studies which should be preserved to make it available to interested parties. This material, in the form of technical reports, is listed in the Administrative Appendix. It has been deposited at the headquarters library of the Department of Fisheries and Oceans *in* Ottawa and at the Pinniped Bibliography, Department of Zoology, University of Guelph, Ontario, Canada, and access to it may be obtained on application.

Chapter 2

Seals and Sealing in Canada

Ten species of seal inhabit Canadian waters, and most of them have been hunted *on* some occasion or another, for a variety of purposes: for food and clothing, for commercial sale, or to protect segments of the fisheries. In the public eye, sealing has been especially associated with the hunting of young harp and hooded seals in the early spring in the northwest Atlantic.

The Atlantic Seal Hunt

Sealing plays an important part in the seasonal cycle of activities of many small communities along the Atlantic coast. It comes at a time of year when there are few available income-earning activities, and when cash is needed to overhaul the boats and gear for the summer fishing. Its significance is therefore greater than the relatively small dollar returns 10 most participants that the eums earned might suggest.

The harp seal is the speciee mainly involved. About two million of these seals now inhabit the northwest Atlantic. They migrate south in winter, to breed in late February and March on the ice in the Gulf of St. Lawrence and at the Front - the area east of Newfoundland and southern Labrador. They then return north to their main summer feeding grounds, along the west coast of Greenland and in waters of the eastern Canadian Arctic as far north as Ellesmere Island. During the 1970s, some 130,000 "whitecoats" - pups a few days old - were token annually. Even larger numbers were killed in the 19th century and the earlier part of the 20th century. In addition to pups, some adults *were* killed on the breeding grounds. Older animals are also taken in migration through Canadian waters and on the summer feeding grounds *in* the Canadian Arctic and off Greenland.

Since a quota wae imposed in the early 1970s, the population has probably increased slightly, and now that hunting has been substantially reduced, the population can be expected to increase more rapidly. This possibility causes some concern to the fishing industrybecause of theeffects it might have on the abundance of commercial fish and on the incidence of nematode parasites, which have a life-cycle involving the reproductive stage

in seals and an earlier stage in fish, where they cause economic losses to the fishing industry,

Sealers on the ice at the Front (Circa 1920s)

The hooded seal also breeds on the ice off the east coast of Canada, almost entirely at the Front and in Davis Strait; its distribution is rather more northerly and offshore than that of the harp seal. It is less numerous "than the harp seal; the population in the northwest Atlantic numbers about 300,000, Pups (called "bluebacks") and some adults have been hunted at the Front by the same large vessels that take harp seals.

Between 1978 and 1982, an annual average of about 10,000 pups and 2,600 adults were taken by Canadian and Norwegian sealers, and about 3,800 seals of all ages were taken at Greenland. Doubts have been raised as to whether hunting was depleting the population; it now seems possible that the numbers were increasing *even* before the drop in catches in 1983.

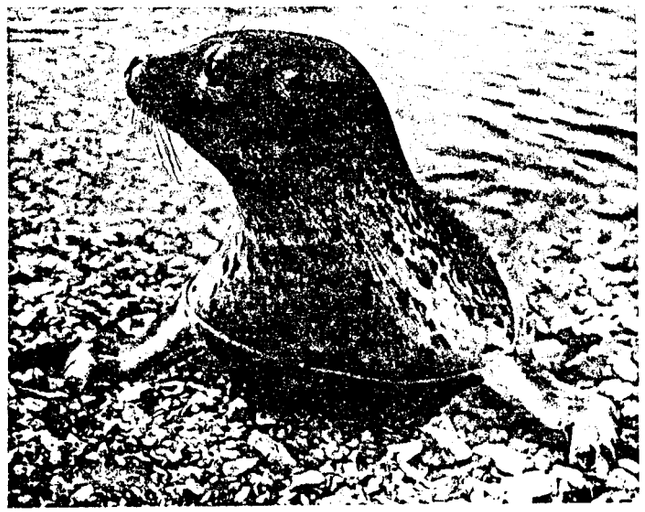
Pups of both harp and hooded seals have been caught primarily by sealers in large vessels, but they have also been taken by men going out from shore on foot or in small boats (landsmen) rind, to a lesser extent, by small groups of scalers in medium-sir.cd vessels (longliners). Between 1946 and 1982, Norwegian vessels also took part in the hunt at the Front. In the early years of the bunt, the main product was oil from the blubber, but in recent years the greatest part of the gross return in the commercial hunt has come from the skins. These underwent preliminary processing in Canada before being exported, mainly to Norway, for further processing and sale to the international fur trade. Until recently the main final market was Western Europe, but this market has now collapsed. Some income is still obtained from oil. Although there is little meat, apart from the flippers, on young pups, there is much on the older animals. Most seal meat is either used by the sealers themselves or is sold fresh, frozen or canned.

Seals in the Arctic

Sealing is important for many communities of aboriginal peoples of the Canadian North. The main species hunted is the ringed seal, but some bearded seals are also taken. In ssddition small numbers of harbour seals are caught, as well as some harp seals during their summer migration. The chief use of the seals is for food, and to a lesser extent for clothing, by the sealers themselves and their families, but some skins arc sold for cash. The importance of these sales has increased with changes in hunting practice. Hunters now rely more than formerly on rifles and snowmobiles, and *hence* need cash for ammunition and fuel.

The ringed seal is the most abundant of the arctic species. Little is known of its population biology, but in the Canadian Arctic its numbers probably run to seven figures. The catch in recent years has amounted to a few tens of thousands annually. The population as a whole seems ta be in a healthy state, but there is concern that some local stocks may be over-exploited.

The larger bearded seal is much less numerous and *even less* known than the ringed seal; the population in the Canadian Arctic may possibly be of the order of 200,000 animals.



Ringed seal

Other Atlantic Seals

The grey and harbour seals also inhabit Atlantic waters; neither species has been hunted commercially to any extent in recent years. Both species, but particularly the grey seal, cause concern to the fishing industry because they damage nets, compete for fish and play a role in the transmission of nematode parasites (codworm/seal worm). Both have therefore been subject to bounty schemes, and *grey* seals have also been subject to culling operations.

The grey seal is found on the Atlantic coast roughly, between Nantucket Island in the United States and, in summer, northern Labrador. The present population, which is centred on Sable Island and the south-eastern Gulf of St. Lawrence, probably numbers about 70,000. In common with most other grey seal stocks in the north Atlantic, the Canadian stock had been greatly reduced by the beginning of the 20th century, but is now

recovering, The group breeding on Sable Island is currently increasing at about 13% per year. About 1,700 animals, on average, have been culled annually in recent years as a population control measure.

The harbour seal is widely distributed on both the Atlantic and Pacific coasts; the Atlantic population numbers about 13,000,

Seals on the Pacific Coast

The northern fur seal is the most abundant SCSI in the north Pacific Ocean. It does not breed in Canadian waters, but mainly on islands in the Bering Sea, although some thousands of females and young males visit the B.C. coast each summer. It was harvested until 1984 under the management of the international North Pacific Fur Seal Commission, of which Canada was a member, although Canadians have not been directly involved in tbe hunt for many years. The part of the herd from the Pribilof Islands, from which the Canadian visitors come, now numbers about 800,000, but it is declining by about 8% per annum. The annual kill on the Pribilof Islands averaged about 25,000 during the 1970s and up to 1984, although the United States government has now limited the take to the subsistence needs of the Pribilof Islanders, Much of the evidence suggests that the recent decline in the population has not derived from the hunt, but is more likely to be the result of juvenile seals becoming entangled in discarded and lost fishing nets and other plastic debris.

Two kinds of sea lions arc found on the B.C. coast, The Steller sea lion ranges in the eastern Pacific from Alaska to California, but only about 5,000 out of a total of 200,000 now inhabit Canadian waters. There has been no commercial hunt since 1966, but between 1913 and 1968, culling operations killed up to about 2,000 sea lions annually. The present population is well under-half the original level and dots not appear to be increasing, possibly as a result of competition from a large population, breeding just across tbe Alaskan border.

'f'he California sea lion breeds mainly off the southern part of the U.S. west coast, but recently about 4,5oO males have visited tbe southern B.C. coast each year in late winter and early spring. This species has not been hunted anywhere for many years.

The harbour seal is also widely distributed on the Pacific coast, with a population of about 50,000. It has not been hunted commercially, but

bounty and other hunting during 1914-1969 probably accounted for an average of 3,000-6,000 kills annually, Since hunting ceased in 1969 the harbour seal has been increasing at a rate of about 10% per annum.

The northern elephant seal is the only other seal found in Canadian Pacific waters. It breeds off southern California, and appears in Canadian waters only in very small numbers.

Chapter 3

Issues Arising from the Mandate

The Mandate given to the Royal Commission was complex. In broad terms the issues can be summarized as follows:

> *Under what conditions, if at all, is it acceptable for mankind to utilize or manipulate the seal populations for human benefits; how far have recent and present Canadian seal hunts satisfied these conditions; and what steps should be taken to ensure the acceptability of any future Canadian operations involving the killing of seals? In addition, how significant has sealing been to Atlantic and Arctic communities; what effect has there been on these communities from the decline in the mar. kets for seal products; and what need, if any, is there to provide compensatory assistance?*

To execute its Mandate the Royal Commission addressed these questions by grouping the items in the Mandate into four main categories:

- public concerns about scaling;
- economic, social and cultural issues;
- biological issues;
- management issues.

Public Concerns about Sealing

Views on humanity's relations with animals are very diverse, ranging from a totally utilitarian view that humanity may do what it wishes to animals regardless of the effect on them, to the view that the rights of ani-reals should be recognized as entitled to at least as much respect as those of human beings. The Royal Commission has surveyed a cross-section of public

views through opinion polls, both in Canada and in several other countries that have figured prominently in the sealing controversy. In so doing, it examined the factors that were considered by one group or another as important in determining whether or not a particular type of seal hunting was acceptable.

The political climate surrounding the seal debate has been largely determined by the active campaigns directed since the mid-1960s towards closure of the hunt. The Royal Commission has examined the origins and sources of support for these campaigns and the methods which have been employed; the Commission has also examined the nature and extent *of* the opposing campaigns which have supported continuation of the hunt.

Another important political event, which resulted in large part from the campaigns against sealing, and which had a major effect on the sealing industry and therefore on the hunting of seals, was the ban on the importation of some seal products by the European Community. The Commission has examined the manner in which this ban came into being, its effect on Canadian sealing, the response by the Canadian government, and likely future developments.

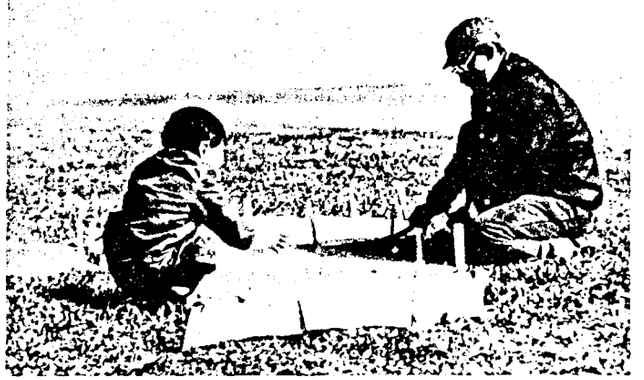
Factors which arc clearly important to the public in forming a view of Lhc acceptability or unacceptability of any part of the seal hunt are:

- the degree of cruelty, if any, involved in the killing of seals;
- the effect on the seal population, especially whether its *survival is en*dangered;
- the significance *of* the hunt to the economic well-being and culture of the people engaged in it;
- the importance of the usc to which the seal products are put.

The Royal Commission has examined all these aspects

Economic, Social and Cultural Issues

Two groups of Canadian communities depend strongly on seal hunting for subsistence and for an important part of their cash income. Many of the aboriginal communities of the North and many small non-aboriginal communities on the Atlantic coast constitute these groups. These communities seem to have been seriously affected by the collapse of the European market for seal products that occurred in 1982-1983. The Royal Commission has carried out direct studies in both groups of communities to determine the extent to which they depend on seals, and the effects produced by the loss of a commercial market for seal products, It has also assessed the possibilities of alternative employment or other compensation for luck of employment in sealing, and the consequences of various forms of compensation for the cultural and economic life of the communities.



The overall contribution of the sealing industry in its various forms Lo tbe Canadian economy has been examined. [n this connection it is necessary to consider not only the direct economic costs and benefits of the industry itself, but also the effects on international status and trade resulting from the adverse image of Canada that has been generated by the anti. sealing campaign.

Future prospects for any sealing industry would depend on the possibility and acceptability of developing other markets, both in Canada and

elsewhere, for seal products, including not only skins, but also meat and oil. The Commission has examined these possibilities.

Biological Issues

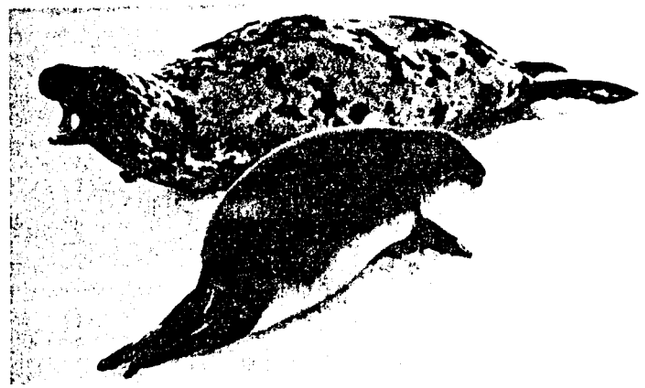
In view of the importance attached to the question of humaneness or cruelty in the killing of seals, the Royal Commission has examined the methods used in the various hunts and sought expert advice on the level of suffering involved in each of these methods. It has also looked at proposals for alternative methods of killing which might be more acceptable. To provide standards of comparison, it has reviewed information on the level of humaneness in two other circumstances in which great numbers of large mammals are killed, slaughterhouses and big game hunting.

To determine whether any of the Canadian seal populations have been seriously reduced, and particularly whether survival of any species has been endangered by hunting, the Commission has reviewed and sought expert opinion on the available information on the sizes and compositions of the seal populations, and how they have changed in recent years as a result either of hunting or of other causes.

Other human activities could have adverse effects on seal populations. These include the passage of large ice-breakers through the arctic ice and pollution by toxic chemicals. Seals can also become entangled in active or abandoned fishing gear. The Royal Commission has reviewed what is known of these effects.

Three aspects of the interactions of seals with commercial fisheries have been examined. Using the available information on the sizes of the seal populations, the Royal Commission has assessed, as far as possible, the quantities of commercially important fish and other marine animals consumed by seals, and the effect that this consumption is likely to have on the amount and value of the catch of commercial fisheries.

Another complaint raised by fishery interests concerns the transmission of nematode parasites (codworm/sealworm) by seals. The Royal Commission has studied the incidence of parasites, the costs of removing them from fish flesh, and the reduction in value caused to the product. It has also, to the extent possible, examined the relation between seal numbers and parasite frequency, and the degree to which the parasite-related costs could be reduced by reducing seal stocks.



Hooded seal and blueback pup

The Commission has also assessed the available information on the direct losses which seals cause fishermen by robbing their catches and damaging their gear.

Management Issues

Management issues arise at several levels. The current controversy emphasizes the need for the identification and adoption of principles and objectives for the management of seal populations which are widely acceptable to the Canadian people and to the broader international community. If these goals are to be achieved, there is need both for a higher level of public knowledge about seals and seal hunting, and for the establishment of machinery to work out these objectives through wide and reasonably public consultation. The Royal Commission has considered ways in which these processes of public education and consultation could be more effectively advanced.

Once suitable objectives have been identified, their achievement for any particular seal population will require both adequate knowledge of the biological factors involved and efficient administrative mechanisms. Basic to the biological problems are the general principles relating the size and

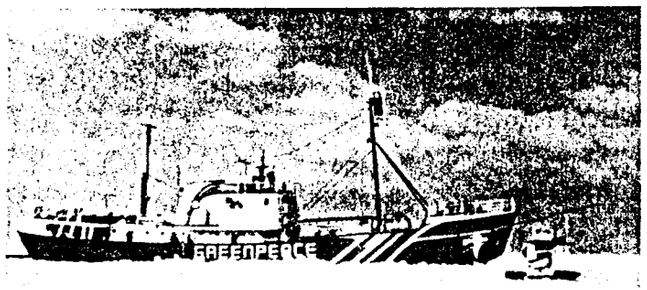
structure of animal populations to numbers removed by exploitation or predation. These principles apply directly when seals are taken, either by commercial or subsistence harvesting, or by culling with the aim of reducing adverse effects on the fishing industry. Essentially the same principles also apply when seals are preying on commercial fish stocks, In addition to knowledge of these basic principles, management requires knowledge of the population parameters of the particular seal and fish stocks where the problems arise. The Royal Commission has reviewed much of the available information on these biological problems and drawn such conclusions as it could on their implications for management. The Commission has, however, found great deficiencies in the present level of knowledge and has identified *requirements* for further research to provide a more effective basis for future management.

The Royal Commission has also commented on a number of possible administrative arrangements and practices which might be considered with a view to improving the efficiency of management of seal stocks.

The Royal Commission recommends that any killing of wild animals should minimally satisfy these conditions.

As will be shown later, most present-day Canadian sealing satisfies all four conditions. Sealing operations pose no significant risks to any stocks. There is little cruelty or unnecessary suffering inflicted in most sealing operations. Some people have attacked the triviality of the ultimate uses of seal products (e.g., in fashion furs), but the critical issue is the importance of the income generated to those hunting seals. This income is of considerable importance to sealers living in conditions of limited economic opportunities. In most sealing operations there is little or no waste of any usable seal product.

Analysis of opinion polls and other information showed that the public is not always well informed about seals and sealing. Many present opponents of sealing give as their reason for opposition one or another of the four points listed above. Their opposition might be reduced or eliminated if they were made more aware of the degree to which these conditions are satisfied in present-day sealing. The government should assist in providing better information to the public, especially through the media. It should also keep itself well informed about public opinion concerning seals.



The Rainbow Warrior *in the Gulf*

ethical arguments against them seem, on logical grounds, to be as strong as the ethical arguments against sealing.

The killing of seals should not, therefore, be prohibited as a matter of principle. Nevertheless, opinion polls, letter-writing campaigns and other measures of public feeling show that there is considerable opposition to the clubbing of seal pups. While this opposition may be largely an emotional response to the attractive picture of a white, dark-eyed "baby seal", or to the brutal image of one being clubbed and skinned on the ice, it is a very strong response, and it is unrealistic to consider any resumption of the whitecoat harvest. Whatever the facts about conservation or cruelty, a renewal of large-scale commercial hunting of seal pups would make sealing once again a matter of divisive public controversy. Consequently, the killing of the pups of harp seals (whitecoats) and hooded seals (bluebacks) for commercial purposes should not be permitted.

Biological Issues

These issues are concerned with the conservation of the stocks, the possible cruelty of the killing methods, and the interactions of seals with fisheries. Following the collapse of the market for sealskins, Canadian harvests, with the possible exception of some small local groups of ringed seals, are much less than the sustainable yields. The populations of most species of seals are therefore increasing. In fact, it is likely that the abundance of harp seals has been increasing ever since the application of effective quota regulations in the 1970s. In some cases the rate of increase is fairly rapid – grey seals on Sable Island are increasing by some 13% per year. These increases will probably intensify the seriousness of the impact of seals on fisheries, as is discussed below. Even if markets recovered and harvests of older harp and hooded seals increased, there should be no conservation problem caused by harvesting, provided that the system of monitoring the stocks and imposing catch limits and other controls is as effective as was that for harp seals during the last decade.

Adult harp seal and whitecoats

Northern fur seals of the Pribilof Islands of the north Pacific are not hunted in Canada, although some visit Canadian waters during their migrations. Their numbers are declining, possibly because of entanglement with pieces of old fishing nets and other waste material. Canada should continue to collaborate with the other countries concerned to tackle this problem. With this exception, human activities that indirectly affect seals, such as the depletion of fish stocks and pollution, currently pose no significant threat to seal stocks. However, if year-round large-vessel shipping traffic develops among the arctic islands as a result of mineral or oil development, it could pose threats to seals, especially because of the break-up of the patches of ice on which ringed seals have their breeding dens.

Any killing of large numbers of animals, whether the clubbing or shooting of seals, the shooting of wild animals for food *or* sport, or the slaughter of domestic animals for food, will involve some pain and suffering. Sealing is no exception. There are two types of sealing where suffering is considerable: netting, and deliberate wounding of seals *in* open water to facilitate their retrieval. These types of scaling should be phased out as soon as possible. Other types of sealing, when properly conducted, involve little or no cruelty. Young harp seals, for example, suffer no stress as the sealer approaches; proper clubbing produces unconsciousness or death virtually instantaneously; and in most cases - indeed, in all cases for older pups after weaning - there is little evidence of stress being caused 10 the mother or to other seals in the vicinity.

Management Issues

The changing attitudes of Canadians towards seals and sealing, and the growing number of people who believe that seals should be considered as more than just another potentially harvestable resource, require modifications in the methods of formulating and implementing Canadian sealing policy. The Royal Commission is therefore recommending that the Department of Fisheries and Oceans should be assisted by a broadly representative advisory group charged with drawing up the basic Canadian policy on seals. This policy should include scientifically based, long-term management plans for seal species, and it should take into account the interests of those provinces and communities that are particularly dependent on sealing, as well as the views of major conservation and animal-welfare groups, and the probable impact of seals on commercial fisheries. In the Arctic, formulation of policy on sealing should be a co-ordinated process between the aboriginal peoples, and the Governments of Canada and the Northwest Territories. These governments should encourage and formalize self-regulation of harvesting by the aboriginal peoples.

The management issues which were in the forefront before 1983 - conservation of the stocks, and elimination of unnecessary cruelly-are now much less urgent. They were, in any case, largely resolved by the applications of various regulations (closed seasons, quotas, restrictions on killing methods) in the late 1960s and the 1970s, and the great reduction of catches, following the collapse of the market for sealskins, has eased any remaining problems.

At present, the crucial management question arises from the relation between seals and fisheries, including damage done to fishing gear, the transmission of parasites, and competition between seals and fishermen for fish. At issue is the question of whether or not to cull the increasing populations of grey seals and harp seals in the Atlantic and harbour seals in the Pacific. (The question of a possible harp seal cull assumes that, as seems likely, there will be no large-scale commercial harp seal hunt in the immediate future.) Though the total loss caused by seals to Canadian fisheries is not accurately known, it is almost certainly appreciable and is likely to increase. The method of reducing these impacts that shows the most promise of being effective is the control of total seal numbers by some form of cull, although in some cases, such as harbour seals in the pacific, the killing of individual seals at places where fisheries are especially vulnerable may be effective.

Greyseals

The choice of whether or not to cull should take into account the estimated scale of cull required to have any substantive impact, and the costs of such a cull. It should also take account of the uncertainties that surround such estimates, the degree to which these uncertainties could be reduced by further research, and the likely public reaction to a cull.

For harp seals the balance between these factors is such that no government-operated cull would be justified at present.. In particular, the extent of the impacts on fisheries is known much less accurately than it is for grey seals. Further research should enable more precise estimates to be available in a few years' time, when the matter should be carefully re-examined.

For grey seals, which have the greatest per capita impact on fisheries, the arguments are more evenly balanced. The long-term benefits to fisheries from all causes, for each grey seal killed, would greatly exceed the costs of carrying out a cull. It is not clear, however, whether a large annual cull of several thousand grey seals, which would be required to stabilize the population, would be generally acceptable to the Canadian public. The public reaction to a cull may become clearer, and the choice of whether or not to cull nray become simpler after this Report has been published.

Economic, Social and Cultural Issues

The direct economic benefits from commercial sealing are extremely small compared with the Canadian gross national product (GNP) or even

percentage tends to under-represent the importance of lantic communities. In addition to providing cash income, des high-quality food, and plays an important role in the l life of the communities. Furthermore, sealing occurs in d spring, when there is very little else to do. The income ides, in addition to day-to-day expenses, the money for s and gear for summer fishing. The success of all types of g is highly variable from year to year, and a variety of needed to provide security in years when one or another e loss of income from sealing weakens the whole annual and thus threatens the survival of some of these commu- es to sealing have been considered by the Royal Commis- ects are not good. Few show much economic promise, and sonal employment in late winter and early spring, which is he gap in the seasonal cycle that is left by the absence of

ncome from sealing has come from the sale of skins. Much seals caught is eaten by the sealers and their families or flippers of young seals are considered a delicacy in small proportion is canned and sold elsewhere in Canada. ubber is also sold.

Atlantic whitecoat hunt

older seals were not included in the EC ban, and for Inuit products this non-inclusion was explicitly stated, The collapse in the markets for all types of sealskins was more the result of changing demand than of any legal barriers. However, the drup in demand was largely the result of a strong, well-publicized campaign against sealing. The European discussions, especially the debates in the European Parliament at Strasbourg, provided useful occasions for this campaign to focus public awareness on seals and sealing. The large anti sealing majorities in the European Parliament and the later formal Directives were probably influential in strengthening public opinion against buying any type of seal product.

Sealing was, and remains, even more important for the people of the North. No crops will grow in the North, and inhabitants must rely on harvesting wildlife. The mix of seals, fish, caribou and birds in their diet varies from area to area. In no area can the hunters depend on a single species; instead they must change with the seasons. 'There are many areas where for months seals, principally ringed seals, are virtually the only food resource, or where, taking the year as a whole, seals supply lhe most important single source of food. Even when they are able to earn standard wages, Inuit cannot afford to eat as nutritious or as healthy a diet based on relatively expensive foods imported from the south, as that obtained from hunting.

Over the years the pattern of hunting has changed from travailing with dogs to greater use of snowmobiles, and from harpooning the seals to shooting. This change has probably decreased the amount of suffering because more seals are killed outright, but it mccy have increased the proportion of seals that arc killed but not recovered. 'I'he use of snowmobiles has made it possible for Inuit to live in centralized townsites and continue to go hunting, but it has also increased their need for cash to pay for fuel and spare parts. In addition to providing food and clothes for people (and, where they are still used, food for dogs), sealskins have been sold, and the cash has been used to buy hunting equipment. The collapse of sealskin markets has reduced the cash income of Inuit hunters by as much as two-thirds, resulting in decreased hunting which has led to poor nutrition.

The Future of Commercial Sealing

Since 1982, the context of the scaling controversy has changed dramatically. The seal hunt as it is commonly understood - the large-scale killing of whitecoat harp seal pups on the ice - has ended. At the same time the market for all other seal products has collapsed.

The effect on other sealing has been largely inadvertent; it was not the objective of most of those who have worked for the end of the whitecoat hunt, Public opposition to the killing of older seals is much less widespread than is that to the killing of seal pups, and there is considerable public support for Inuit hunting.

The collapse of the markets for seal products in 1982-1983 has been very serious for many communities in the Arctic and in Atlantic Canada. The Royal Commission has therefore examined possible actions that might be taken to relieve the economic and social distress in these communities. The outlook for markets for seal products is not good. There is no immediate prospect for a revival of the market in Western Europe, and the markets in other areas outside Canada have always been, and are likely to remain, *very* limited. 'f'here is also a very large existing inventory of sealskins and a continuing supply of some tens of thousands of skins from Norway and Greenland. 't'he prospects for marketing Canadian skins outside Canada are therefore extremely poor. On the other hand, there is an existing msrket *in* Canada for some 20,000 sealskins and for the meat from some 40,000 seals. The Canadian market could probably be increased, provided that prices do not escalate,

Because many of those protesting against the commercial seal bunt are sympathetic to the Inuit, and because the products from Inuit hunting were specifically not included in the EC Directive, the possibilities for revival of an export trade in Inuit products are much better than those for the products from commercial sealing, These possibilities will be increased if the products from Inuit sealing can be clearly identified with a distinctive trademark.

Apart from the skins of wildlife, and some carving and other artwork, the Arctic produces little other than minerals and oil, Extraction of minerals or oil could threaten the fragile arctic ecosystem, and both activities offer limited long-term employment to local people. If the human population is not to depend largely on government handouts, the best possible use must be made of wildlife, as a source of food and cash. This is not likely to happen unless the Inuit can receive a reasonable cash return from those skins not needed for their own subsistence. This implies some restoration of the market for sealskins to about tbe pre- 1983 level. To accomplish this, encouragement needs to be given to the development of co-operative enterprises in Inuit communities, for improving the processing and marketing of clothing and other seal products. Efforts to restore the markets for Inuit products would be helped by a more direct dialogue and exchange

Inuit skinning bearded seal

of information between representatives of Inuit peoples and he more responsible conservation and animal-welfare groups.

It is also possible that the current legal barriers, under the United States *Marine Mammal Protection Act of 1972*, to the importation of Inuit seal products into the United States might be removed by seeking an exemption for Inuit products. There may be legal grounds for such an exemption under the 1794 Treaty of Amity, Commerce and Navigation.

Even with good marketing it will be some time before conditions relating to Inuit sealskin products are restored to the level of those occurring before the market collapse. In the intervening period considerable economic and social distress is likely to continue in many communities. The Royal Commission is therefore proposing that there should be a fund of $4 million annually for at least five years, to support Inuit engaged in subsistence hunting, and to provide them with a cash income approximately equivalent to that accruing before the market collapse.

The situation on the Atlantic coast is quite different. There could be a future for some types of seal hunting but not for others. The whitecoat hunt aroused widespread opposition and should not be allowed in the future. There appears to be less opposition to the killing of older seals and some sympathy for the people in the small isolated communities in northern Newfoundland and elsewhere.

The possibility of alternative activities, including increased fishing and the development of aquaculture, should not be ruled out, but the only identified activity that seems capable of partially filling the early spring gap in the cycle of seasonal activity, and thus reducing the economic problems of the most seriously affected communities, is a modest sealing industry based on taking older seals. The prospects for this development differ for the three major groups of sealers.

The end of whitecoat hunting means the end of large-vessel sealing. Only in breeding areas do the large concentrations of seals occur that can support this kind of large-scale sealing, and hunting on these patches only for adults would not be economically viable, even if it made biological sense.

Longliners take older seals and do not ordinarily harvest whitecoats. The fish catches of these vessels provide the principal economic support of communities in northern Newfoundland and the Magdalen Islands, and participation in the seal hunt has been necessary for the financial viability of longlining enterprises. If markets for products from older seals could be improved, the economic problems faced by those communities would be marginally lightened.

Landsmen include a number of people, especially in the small outports, for whom catching older seals is an important part in the seasonal cycle of activity, as well as people who only go sealing very occasionally, and for whom sealing is not economically important. Past catches by landsmen in northern Newfoundland and especially at the Magdalens have included significant quantities of whitecoats. The permanent loss of the whitecoat harvest would involve considerable economic loss for these people.

In the years immediately preceding the EC ban, landsmen and longliners used to take some 40,000–75,000 older seals annually. The recent Canadian market has been perhaps half or less of this number, but it might be possible over time to develop the domestic market to the level at which it might be capable of absorbing these quantities. This development would, however, be subject to three conditions:

- Primary processing facilities for this quantity of skins would need to be available.
- Effective market development work would need to be implemented.

- Prices and costs would need to be favorable

As in the Arctic, it is not expected that restoration of modest seal product markets would resolve most of the economic and social problems. The Royal Commission is therefore proposing direct financial support. This should take two forms. A training and development fund of the order of $50 million should be made available to sealing communities to help them in general economic development. It is possible that a proportion of the fund might be used to support industry feasibility studies regarding the processing and marketing of the products from older seals. Another fund, of about the same value, should be used to compensate sealers for lost income and other losses associated directly and exclusively with the disappearance of the markets for seal products. This compensation should be given in the form of a single grant payment to individuals judged to have been aggrieved.

Chapter 5

Conclusions and Recommendations

As a result of its studies and deliberations, the Royal Commission has reached a number of recommendations, which it hopes the Government of Canada will find useful in developing its future policies and actions pertaining to seals and sealing in Canada. For a fuller discussion of the rationale underlying each of these recommendations, the reader is urged to consult the relevant chapters of the Report.

However, in order 10 provide an overview, in which all recommendations can be read quickly and related to the principal conclusions on which they are based, this summary chapter has been compiled.

The conclusions and recommendations are organized under the following general headings:

- Should Harvesting Be Continued?
- Killing Methods,
- Marketing and the European Ban,
- Aboriginal Sealing Communities,
- Atlantic Scaling Communities,
- Impacts *on* Fisheries and Population Control,
- Environmental Protection,
- Public Information,
- Canadian Management,
- international Management.

In the few cases where a conclusion under one heading leads to a recommendation that appears under a different heading, this is noted. At the end of the chapter, an index is provided that lists the relevant recommendations for each chapter.

Should Harvesting Be Continued?

(See Chapters 8,9, 11, 12,21,22, 30.)

Conclusions

- **The question of whether it is ethically right or wrong to kill animals generally, or seals specifically, is a matter of personal conviction. The policies adopted by Canada on such matters need to take into account the opinions of the public. (Recommendations 37, 38.)**

- **Public opinion on the killing of animals ranges between the extreme views that any utilization of animals is permissible and that all use by man is wrong. The great majority of those polled in Canada and a number of other countries bold intermediate views, and accept the killing of animals, pravided that harvesting dots not threaten the species, the killing is acceptably humane, and it is carried out for important social and economic benefits witbout appreciable waste, ([recommendation 36.)**

- **Recent harvesting of seals in Canada has generally met the criteria specified in the above conclusion, Although the final use of some seal pelts in fashion markets is viewed by *some* people as a trivial use of seals, the income generated from seal hunting and the primsrry processing of the products has been very important to many of those involved.**

- **There is considerable sympathy with the traditional hunting of seals for faod and clothing, by both aboriginal and non-aboriginal peoples, and somewhat less for hunting seals to provide cash to support other subsistence activities.**

- **There is very strong public opposition] to the clubbing of harp seal pups (whitecoats) and hooded seal pups (bluebacks). This hunt is widely viewed as abhorrent both in Canada and abroad. The resulting public protest cannot be effectively countered by any technical arguments about the facts of the issue.**

- **Non-commercial hunting of sealpups is usually on a very small scale and would be very difficult to halt altogether.**

- **harp and hooded seals:**
  The Canadian stocks were reduced by Iarge-scale commercial hunting through most of the 19th and 20th centuries. These declines continued in the years 1950 to 1970 but were halted by the quotas imposed since 1971. Tbe stocks of harp seals, and most probably also hooded seals, have almost certainly been increasing since the collapse of the market. Harp seals in the western Atlantic number about two million, Tbe total number of hooded seals is not so well known, but may be around 300,000.

- **Grey seals:**
  Grey seals appear to have been quite common on the Atlantic coast when the Europeans first came to Canada. They declined in subsequent centuries, presumably due to overexploitation, and were scarce at the beginning of the 20th century, They are now rebuilding rapidly, and number around 70,000,

- **Harbour seals:**
  Little is known about the past history of the hunting of harbour seals. In the quarter-century up to 1976 they were decreasing *in* Atlantic Canada. [n 1976 a bounty program was discontinued, and numbers of harbour seals arc now increasing slowly. They number about 13,000, On the B.C. coast there are about 50,000 harbour seals and their numbers are increasing by about 10% per year,

- **Steller and California sea lions:**
  About 5,000 Steller sea lions are resident on the Canadian west coast; there is no clear trend in numbers at present, but they are substantially fewer than early in the century. About the same number of male California sea lions visit the Canadian west coast in winier; there has been a substantial recent increase in numbers, but the long-term trend is not clear.

- **Northern fur seals:**
  This species only occurs in Canadian Pacific waters on migration, Its numbers have undergone considerable fluctuations as a result of earlier overexploitation and subsequent corrective management measures. Improved management enabled the population to build to a peak in the 1940s and 1950s, It has since been declining for reasons that are not clear, but entanglement in pieces of netting and other marine debris is probably a major factor. Current numbers in the eastern Pacific are a little under a million. (Recommendations 28, 43.)

- Ringed and bearded seals:
  Ringed seals are widespread in the Arctic and probably number over a million in Canadian waters. The population as a whole is probably stable, but it is possible that local stocks in areas that were heavily hunted may be depressed, Management measures are necessary to assure the continued stability of ringed seal stocks in some of the areas where they are an important resource for humans, (Recommendations 13, 40.)

  Bearded seals are much less numerous than ringed seals and correspondingly fewer are killed, but local overexploitation is also possible.

- Since the application of quotas to harvests of harp and hooded seals, Canadian management of seals satisfies the criteria laid down in the World Conservation Strategy of maintaining essential ecological processes and ensuring sustainable utilisation,

- For all species of seals in Canadian waters there are some uncertainties in the estimates of numbers and population trends. Regular monitoring is necessary to provide reliable information on the current status. This information is needed both for the management of those stocks, which are still exploited, and for development of policy in respect of those stocks which are seen to he, actually or potentially, a threat to commercial fisheries.

Recommendations

1. The killing of seals should be permitted only when subject to appropriate controls on the numbers killed, the methods of killing, and the purposes for which they are killed.

2. The commercial hunting of the pups of harp seals (whitecoats) and hooded seals (bluebacks) is widely unacceptable to the public and should not be permitted.

3. Non-commercial hunting of pups of harp seals (whitecoats) and hooded seals (bluebacks), to the extent that it occurs at all, should be carefully regulated and strictly limited.

4. The Canadian government should regularly monitor the stocks of seals.

Killing Methods

(See Chapter 20.)

Conclusions

- Judged by the criteria of rapidity of unconsciousness and particularly the absence of pre-slaughter stress, the clubbing of seal pups is, when properly performed, al least as humane as, and often more humane than, the killing methods used in commercial slaughterhouses, which are accepted by a majority of the public.

- If killing of seal pups of any species is ever deemed necessary, the special pistol developed by T.I.Hughes mny prove to be more humane and less repugnant than clubbing. It is probably safe to use but requires further testing under field conditions.

- Catching seals in nets unavoidably causes slow and probably painful death.

- Shooting seals in Canada for subsistence or commercial purposes is generally more humane than the shooting of animals for sport, except that

  (a) the practice of deliberately wounding seals in order to facilitate retrieval must lead to considerable suffering; and

  (b) the use of small-calibre low-power ammunition can cause a high incidence of wounding unless shooting ia very accurate.

- No methods of killing which have come to the notice of the Royal Commission, other than clubbing and shooting, achieve acceptable standards of humaneness.

Recommendations

5. If any killing of seal pups on the breeding grounds is to be done in the future, for example, as a measure of population control, further tests of the Hughes pistol under operational conditions should be undertaken.

6. In view of the suffering involved, the government should take action with a view to phasing out, as rapidly as possible, the netting of seals in those communities which now rely largely on this method to take harp seals both for subsistence and to provide a substantial part of their income. Netting of seals in other areas should be prohibited immediately.

7. Discussions should be held with sealing communities with the aim of making clear that the practice of deliberately wounding seals to facilitate retrieval is not condoned, and of finding ways of reducing it as far as possible.

8. Discussions should be held with sealing communities with a view to ensuring the use of rifle ammunition that produces a high proportion of instantaneous kills under the conditions normally encountered in hunting each species of seal.

9. No new methods of killing seals for purposes of either harvesting or population control should be used *in* Canada unless they are clearly demonstrated to be acceptably humane.

Marketing and the European Ban

(See Chapters 10, 13, 16, 18.)

Conclusions

- In 1983, the Council of the European Communities issued a Directive banning the import of raw, tanned or dressed skins of pups of harp seals (whitecoats) and hooded seals (bluebacks). A second Directive *in* 1985 extended this ban to 1 October 1989,

- The Directives reflected public concern over the killing of baby seals rather than the scientific evidence regarding the survival of the seal stocks and the humaneness of the method of killing. The discussions in the European Parliament, Commission and Council leading up to the Directives provided occasions for well-orchestrated anti-sealing campaigns by protest groups. Most markets for seal products bad already collapsed prior 10 the issuance of the European Council's initial Directive.

- If the Royal Commission's Recommendation 2, to end the commercial hunt for harp seal whitecoats and hooded seal bluebacks, is followed, sealing in Canada would be fully consistent with the declared intention of the European Council's Directives. Canada has nothing to gain, and much to lose, by continuing argument with the European Community on this matter. (Recommendation 45.)

- Although the European Council's Directives have explicitly not been aimed at the bruit traditional hunt, the collapse of the market for seal products which are surplus to the Inuit domestic requirements has been a traumatic experience and many Inuit have viewed the European Council's Directives as the cause. The European Commission has increasingly recognized this problem.

- Western Europe has traditionally been the largest market in the world for sealskins, accounting for ahout 80% of tbe world trade, In order, the five major seal product consumers in Europe have been West Germany, Denmark, Italy, France and Greece. In 1981, the European Community imported some 460,000 sealskins of all species (raw and dressed); by 1984 it was down to some 120,000 and 1985 estimates are of the same order. Prices have been sharply depressed; a backlog of pelts appears to be still in stock *and* there seems no likelihood of any significant market recovery over the next few years in Western Europe.

- On the basis of a market survey the Royal Commission found that present markets for seal products in the Far East are extremely small, and major *new* market developments seem unlikely in the near future. The Royal Commission did rust undertake a market development study, which would have been beyond its mandate.

- Markets in South Africa and Latin America are very limited and are supplied from local sources. There is a legal ban on importation of seal products into the United States.

- The market for sealskins in Canada was, in 1985, not more than some 20,000, mostly in the footwear industry, but also in the garment and souvenir industries. Currently, there appears to he no Canadian market for fashion garments using sealskins. Atlantic Canada has been estimated to have a market for the meat of at least 40,000 seals per year provided the prices are competitive and the quality good. There is considerable sympathy for the plight of the scaling communities in Atlantic Canada and resistance to seal products is probably less strong in this region.

- There is widespread interest in articles made by aboriginal peoples following their traditional handicrafts. It would assist the Inuit in finding markets both in Canada and abroad if a distinctive trademark were developed to identify their products. Such a trademark could be applied to all handicraft products, not only those derived from seals, This might be more effective if product marketing and development were done in co-operation with the Inuit in other countries (e. g., Greenland).

- Canadian government support of Inuit efforts to market their surplus products in Europe and elsewhere is desirable,

Recommendations

10. The Canadian government should assist in the development of potential markets within Canada for products from seals other than whitecoats and bluebacks.

11. The Canadian government. recognizing that the European Council's Directives were explicitly not aimed at Inuit sent products, should assist Inuit organizations in exploring opportunities for marketing their products in the European Community and elsewhere and should encourage co-operation among the Inuit of Canada and Greenland, and between Inuit and European authorities.

12. The Canadian government should encourage the development of community and co-operative enterprises in Inuit communities for processing and msrrketing clothing and other products. It should also encourage establishment of a recognizable trade mark to identify products directly derived from traditional Inuit activities and promote its widest possible public recognition in Canada and elsewhere. Care should be taken, however, not to encourage any commercial hunt that would endanger the traditional hunting for subsistence needs.

Aboriginal Sealing Communities

(See Chapter 13.)

Conclusions

- Seals arc a vital resource for the Inuit for economic, social and cultural reasons. Sealing is the most economical means al maintaining adequate nutritional levels in most northern c~)rnmunit.its, Increased use of imported foods will result in substantially poorer health and extra costs which the Inuit can ill afford.

- Centralization of Inuit communities in recent decades has resulted in many Inuit living considerable distances from their hunting areas. Motor transport, especially snowmobiles, increased in response to this development.

- Northern communities have suffered considerably from the loss of commercial sealskin markets. The virtual disappearance of the commercial market currently threatens the subsiste nce hunt since the cash income gained from the sale of seal products could be used for the purchase of the equipment necessary to enable the Inuit to carry on traditional hunting. For some communities the total cash income has fallen to a small proportion of the pre- 1982 level. The sale of seal products remains the most feasible and environmentally appropriate means of meeting the cash requirements of motorized hunting,

- Northern communities also suffer from high transportation costs, from gasoline prices which are much higher than those in other parts of Canada, and from high prices for lubricants, spare parts and ammunition. One factor in the high prices of all goods, including store food, in the North may be the lack of competition in the retail market in many communities.

- Activities such as fur harvesting, tourism and commercial fishing appear to have limited potential in the Arctic and would probably provide additional income for only a few Inuit. Arctic mineral and oil/gas exploration and exploitation might reduce the availability of marine mammals without leading to the development of a more prosperous northern economy in the long term. (Recommendations 29, 30)

- In the absence of a sealskin market to provide them with cash, Canadian Inuit would need up to $4 million annually for at least several years to maintain subsistence hunting at the same level as before the European Council's Directive. Local hunters and trappers associations have the capability to manage such funding effectively.

- In its 1794 Treaty of Amity, Commerce and Navigation with the United Kingdom, the United States promised to allow aboriginal peoples free passage and trade across the Canadian border. The United States Marine *Mammal Protection Act of 1972* nonetheless restricts the importation of aboriginal Canadian products derived from marine mammals, while protecting the right of U.S. Inuit and Indians to produce and sell crafts of this kind.

- Present federal scaling regulations require that Labrador Inuit follow regulations that are intended primarily for the Atlantic harp and hooded seal hunt, and this is causing them unnecessary hardship. Aboriginal subsistence hunters in British Columbia, Quebec and other parts of the Atlantic provinces may encounter similar difficulties as a result of federal regulations that are designed for the management of commercial hunting

Recommendations

13. The Canadian government should encourage and formalize self-regulation of Inuit marine mammal harvesting. Arrangements should also be made for the necessary research to provide Inuit with appropriate scientific advice as a basis for self-regulation.

14. The Canadian government should provide temporary relief to Inuit hunters through negotiated arrangements with representative Inuit organizations, such as local hunters and trappers associations, to ensure that wildlife harvesting can continue. Such relief should consist of annual payments of up to $4 million for at least five years, after which the need for financial support should be reviewed.

15. The Canadian Government should initiate discussions with the United States authorities, with the aim of expanding the trading exemptions contained in the United States *Marine Mammal Protection Act of 1972* to include all aboriginal peoples of North America without discrimination. Inuit representatives should be consulted throughout these discussions.

16. Federal regulations should be modified to allow residents of the Labrador coast north of Fish Cove Point to hunt seals in the same manner as aboriginal peoples of the Canadian Arctic. The Canadian government also should ensure, in consultation with representative local aboriginal organizations, that its regulations do not interfere with subsistence hunting of seals by aboriginal communities in British Columbia, Quebec, and other parts of the Atlantic provinces.

Atlantic Scaling Communities

(See Chapters 14,15,16,17, 18.)

Conclusions

- In 1982, a typical year prior to the collapse of the market, the gross value of commercial sealing in the Atlantic region was about $7 million. The net economic benefits, aRer subtracting the costs involved, were some $2.5 million. These benefits are extremely small in relation to those from many large industries in the Atlantic region, although it may be noted that, when government subsidies are deducted from even quite large projects, the net economic benefits can be very small or even negative.

- Sealing makes a very important contribution to the economies of parts of coastal Labrador, northern Newfoundland, the Magdalen Islands and the Quebec north shore of the Gulf of St. Lawrence. Its importance cannot be narrowly measured only in dollars; there are also major social, cultural and nutritional benefits, and it provides a critical infusion into the economies of many poor communities.

- Except for the very limited meat on whitecoats, the seals killed have been fully utilized. 'The skins and some meat have been sold to processing plants, but most of the meat has been consumed locally.

- There are no full-time sealers in Atlantic Canada. Sealing, like the various forms of fishing in the communities concerned, tits into a sea-

sonal cycle of activities. It is particularly important because it comes at a time when there are few other income-earning activities available in the areas and when cash is needed 10 prepare boats and gear for the fishing season. Where, as was the case in several locations, the economic visibility of communities was already marginal, the loss of a key seasonal activity is extremely serious.

- In many coastal communities a substantial proportion of the population has been seriously affected by the collapse of the market for sealskins, including those people who have traditionally earned income from the hunt, those who had access to the meat and those who earned income from the primary processing of the pelts.

- A deep sense of frustration has been felt by many of the people affected by the demise of seal markets. They have seen an important base to their livelihood last due to the campaign which has hcen waged against sealing. They feel aggrieved economically, socially and culturally. There isa need for financial compensation for these losses.

- The alternative employment opportunities in most of these coastal communities do not appear very promising although a number of ideas have been generated by background studies for the Royal Commission. It is concluded that support should not be confined to compensation, but should also include a serious effort to help develop new employment opportunities. In many cases, some training elements are likely to be necessary, as well as modest public works, small industry support and market development studies,

- Some form of scaling activity appears more promising than most other identified options, in large part because of the seasonal timing and the relationship with the fisheries.

- The hunts by landsmen and longliners in the years before 1982 produced around 40,000-75,000 older seals annually, Provided costs arc kept within bounds, the markets within Canada could possibly, with a little development, absorb this volume of skins and meat. This would, however, only be practicable if there were adequate facilities for *primary* processing of *seal* pelts in Atlantic Canada. (Recommendation 10.)

- [f a cull of harp seals is undertaken, the employment of ex-sealers could help relieve some of the economic distress in the most seriously affected communities. (Recommendation 26.)

Recommendations

17. The federal government should assist the victims of the very unusual circumstances that have led to the demise of commercial sealing. Within theconstraints noted elsewhere in this Report regarding seal hunting, the Canadian government should support private initiatives aimed at reviving an industry based on older seals.

18. There is a need for support for training and development as well as compensation.

    (a) A new fund of the order of $50 million should be made available by the federal government to sealing communities for development and retraining within the framework of Economic and Regional f.)evelopment Agreements (ERDA). Sealing communities themselves should be given a clear role in the detailed shaping and monitoring of the fund. The most appropriate federal sponsoring department would appear to be the Department of Regional Industrial Expansion. A proportion of this fund could well be used to support the processing and marketing of products from older seals.

    (b) A new fund of the order of $50 million should be established to compensate sealers for lost income and other losses associated directly and exclusively witb the demise of markets for seal products. The fund, under the sponsorship of the Department of Fisheries and Oceans, should probably be administered by two committees, one for Newfoundland and Nova Scotia, and the other for Quebec. Beneficiaries should be individual sealers, sealing operators who relied on sealing to finance their vessels, individual workers in seal processing plants, and the owners of processing plants.

Impacts on Fisheries and Population Control

(See Chapters 24,25,26,29, 30.)

Conclusions

- Seals cause financial losses to the fishing industry through competition for fish, damage to gear and catches, and contamination of fish with nematode parasites.

  (a) The quantity of commercial fish consumed by seals is certainly large. The value of tbe resulting loss of catch can only be estimated very approximately, but on the Atlantic coast it is probably significant in comparison with the value of the present catch. On the Pacific coast the value of the lost catch is probably very small compared to that of the present catch.

  (b) Seals damage gear and remove fish from nets. The total annual losses from these impacts may be at least $2 million on the Atlantic coast. No estimate is available for the Pacific coast, except for a loss of $700,000 for salmon gill-netters,

  (c) Nematode parasites (codworm/sealworm) have been increasing in commercial fish on the Atlantic coast in recent years. Present losses due to the costs of removing worms and the reduced prices paid for infected fish are probably at least $30 million annually. Losses on the Pacific coast appear to be much smaller.

- The species of seals differ considerably in their impacts and in how these impacts might change in the future.

  (a) Ringed, bearded and northern fur seals probably have, at most, very small impacts.

  (b) Hooded seals may cause some losses due to competition for fish, but it is possible that their main feeding grounds are too deep and too far north for hooded seals to constitute a serious threat to Canadian fishermen.

  (c) Harp seals seem to have, at present, an impact only through competition for commercial fish; this impact could be significant.

In the absence of a hunt the harp seal stock will increase. The effects due to competition and perhaps also damage to gear or transmission of parasites may possibly increase to the level at which they have serious impacts on the fishery.

(d) Grcy seals, which are increasing rapidly, are the major source of infection with parasites, and also probably contribute significantly to the losses due to competition for fish, and to gear damage. These impacts are estimated to be between $60 million and $115 million annually. Though far from precise, these estimates are known with greater precision than is the case for harp seals.

(e) Harbour seals on the Atlantic coast cause losses that are very small compared with those due to *grey* seals; in addition, the population is expanding only slowly, if at all. On the Pacific coast harbour seals are increasing quite rapidly, and appear to cause significant losses of herring and salmon. On both coasts damage seems to be localized near seal colonies and areas of fish concentration.

(f) Sea *lions* may have a small impact through competition for fish and damage to gear, although *some* of these losses may be highly visible.

- These losses could be reduced, or at least prevented from increasing, by reducing or stabilizing seal populations. Based on present information, the only effective method of controlling the numbers of seals is through a cull, though other methods cannot be completely ruled out. For some seals the financial savings from such actions could be several times greater than the costs involved. if the seal stocks are increasing, as is the case for harp and *grey* seals, there would be disadvantages in postponing a cull if control measures are desirable, The longer a cull is postponed, the greater the impacts on fishermen and the larger the numbers that would ultimately have to be killed. (Recommendation 38.)

- In some circumstances the extent of the impact can be reduced without affecting the seal populations. The damage 10 fixed gears or aquiculture establishments may be reduced if effective methods of scaring seals away from these operations can be developed. It may also be possible to develop cheaper techniques for detecting and removing parasites from fish fillets.

- There are considerable uncertainties about the magnitudes of many of these impacts, especially in relation to the effects of competition. There are also very large uncertainties concerning the extent of the changes in the impacts, especially the impact of parasites, that would result from changes in the numbers of seals. These changes are unlikely to be exactly proportional. (Recommendation 42.)

- In view of the many uncertainties about the costs and benefits of population control, any such operations would need to be regarded as experimental and be supported by an expansion of relevant research programs.

- Operations by government-employed hunters are generally superior to a bounty scheme on the basis of their effectiveness in meeting the objectives of the cull, their better collection of data on the kills, their lower cost, and the greater humaneness of controlled operations.

- Where seals cause serious local losses which cannot be prevented in other ways, consideration may be given to allowing fishermen to kill "nuisance" seals under strict controls.

- Public attitudes towards killing seals, and regarding the relative values of seals and commercial fisheries, are factors to be considered before any decisions on culling are made.

- Tbe chosen balance between the interests of fishermen and the views of those opposed to any killing of seals needs to be expressed in explicit guidelines for each seal population, determining whether they should be allowed to increase, be reduced or be stabilized.

- For *only* four species - harp, grey and harbour seals and Steller sea lions - do current total impacts, or marginal impacts per seal, appear sufficiently large to make it necessary to consider measures of population control.

- For harp seals the present marginal impact per seal may be quite small, and might possibly be less than the cost of a government-operated cull. Large numbers would need to be killed for effective control, and there are many uncertainties that might be significantly reduced in a few years if there is an effective research program. A government-operated cull does not appear justified at the present time.

- The net economic benefits of a cull of harp seals would be greatest if it were carried out by existing scalers under a program of price supports for sealskins. In addition, such an operation would help to relieve some of the economic and social problems being felt in the traditional sealing areas. A Iargc-scale cull of this kind would, however, almost certainly involve very considerable public protest, (Recommendations 37, 38.)

- For grcy seals the economic benefits of a cull to the fishery would, even on conservative estimates, be several times the likely cost of a cull. Culls of grey seals were carried out in the years up 101983 without significant public protest. About 7,ooO grey seals would need to be killed annually in order to maintain the population at its present abundance. This is more than were killed in the pre-1984 culls. Culls of this magnitude would almost certainly require operations on Sable Island, and these might generate increased public protest.

- For harbour seals the total impact is relatively small, and the most serious effects concern limited areas. The problems might be resolved by allowing fishermen to kill "nuisance" seals under strict controls, or by localized government culls.

- For Steller sea lions the damage from attacks on fishing operations tends to be relatively conspicuous; however, the greatest impact on the fishery is probably due to competition for salmon. Losses due to all causes seem to be small compared to those on the Atlantic coast. The population is probably no greater than it was in 1913, and is not increasing. There seems to be no technical justification for instituting a cull at this time, although it will be necessary to keep a watch on population trends.

Recommendations

19. The Department of Fisheries and Oceans should, with appropriate advice (see Recommendation 37), establish explicit guidelines for determining which seal populations should, in principle, be allowed to increase, or be reduced or stabilized. No population control activities should be undertaken unless clearly favoured by the balance of social and economic benefits, and then only under a carefully monitored long-term program of evacuating their efficacy.

20. Any population control operations should be done under government supervision.

21. Fishermen operating fixed gears, including aquiculture establishments, maybe given licences to kill "nuisance" seals in the vicinity of their gears under strict controls, with provision fora recompense for return of biological material of value to research programs.

22. Any population control programs should be:

    (a) designed to provide detailed data on such matters as the number, age, sex, location and parasite load of the animals killed; and

    (b) associated with continuing monitoring of the population concerned to determine any changes in the numbers, structure and principal biological parameters of the population, as well as the efficacy of the population control measures.

23. The Canadian government should promote further studies aimed to establish more precisely the impact of seals on fisheries through competition, damage to gear, and transmission of parasites. Particular attention should begiven to the relationship between changes in seal numbers and changes in impact, especially in relation to parasites. Research programs should also be undertaken to determine the effects of any control operations, both on the seal populations and on their impacts.

2 Studies should be made of possible methods of controlling the abundance of seals, other than by culling. Studies should also be made of possible methods of reducing impacts other than by a general reduction *in* seal numbers. These might include seal-scaring devices and improved techniques for detecting and removing parasites.

25. There should not be a cull of harp seals in 1987, but the impact of harp seals on fisheries will increase, and tbe possibility of a cull in later years must be seriously considered.

26. If a cull of harp seals is found to be biologically and economically desirable and publicly acceptable, consideration should

be given to the use, in the implementation of the cull, of ex-sealers from the communities most severely affected by the collapse of the seal markets.

27. The Royal Commission believes that biological and economic considerations indicate that substantial advantages would be gained by a cull of grey seals. Nevertheless, befare deciding whether to implement such a cull, the Canadian government should take account of public opinion and should make use of the advisory processes discussed in Recommendations 19 nnd 37 for this purpose. Because grey seals are increasing rapidly, a decision needs to be made as soon as practicable.

Environmental Protection

(See Chapters 13,22, 23.)

Conclusions

- Reduction *in* numbers of many species of tish by commercial fisheries will have some effects on seal populations. Because of the wide variety in the diet of most seal species these effects are believed to be generally small and are not necessarily adverse. in any case they are very difficult to determine.

- Some seals are killed by becoming entangled in active fishing gear, either accidentally or when trying to take fish from the gear. The limited evidence suggests that the numbers dying in this way are small compared either to some past commercial kills (harp seals) or the natural rates of increase of some populations (harp seals and *grey* seals).

- Lost or discarded fishing nets and other plastic debris cause the deaths of many seals. It is likely that they are the principal cause of the decline in the northern fur seal population since the 1960s. There is need for active steps to try to alleviate this problem.

- There is no evidence of any adverse effects of chemical or radioactive pollution on seals in Canadian waters. DDT, *PCBS* and related organo-

chlorine compounds have caused harmful effects elsewhere, including the United States Pacific coast, and there are some indications of harmful effects on belugas in the lower St, Lawrence River. 'I'here are also, however, some indications that the quantities of DDT in the sea are diminishing,

- The principal danger to seals in the event of a major oil spill would be to northern fur seals as a result of loss of thermal insulation due to oiling of the pelage. All other Canadian seals, which depend mainly on their blubber for insulation, are less vulnerable in this respect. However, ringed seals could be vulnerable if oil accumulates at their breathing holes.

- Serious adverse effects *on* seals, particularly ringed seals, in the Arctic could result from arctic development activities such as surface mining for minerals, petroleum exploration and exploitation and, particularly, large-scale sea transport through the ice in association with these activities.

Recommendations

28. The Canadian government should work both domestically and internationally to reduce the amount of netting and other plastic material being discarded at sea. It should also support studies aimed at developing modifications to fishing gear which will reduce the hazard to seals and other marine life caused by the lost nets.

29. The Canadian government should not permit development in any part of the Arctic without a thorough investigation and disclosure of the potential environmental impacts on seals and sealing communities, and the consent of any aboriginal community whose legal rights are affected.

30. In addition, any significant increase of ice-breaker traffic in the Arctic may affect the numbers and distribution of ringed seals as well as the mobility of hunters, and therefore should be conditional on (a) consultations with communities that use the sea ice to ascertain the extent to which their activities may be affected, (b) routing designed to mitigate effects on seals and hunters, and (c) compensation to hunters for any unavoidable effects.

Public Information

(See Chapters 9, 11, 30.)

Conclusions

- The public attitude to seals and sealing has sometimes been based on incomplete and inaccurate information, including matters such as the trends in population numbers and the importance of sealing to local communities.

- Organizations opposed to commercial sealing were more effective than sealers or the Canadian authorities in presenting their views to the public at large and to the European authorities, Reasons for this included the nature of the issue, the lack of public awareness of the biological, social or economic backgrounds, and the isolation and lack of resources of the sealing communities.

- The public obtains nearly all its information from the media, rather than directly from protest groups *or* the government, but expects the government to be the primary source of this information.

- The government needs to be informed about public knowledge of, and attitudes toward, seals and sealing in order to frame national policies that are responsive to those attitudes. Regular monitoring of public knowledge and opinion would also be valuable for checking the effectiveness of programs to keep the public fully informed about seals. (Recommendation 38.)

- Government restrictions on observation of the commercial seal hunt became an important source of conflict.

Recommendations

31. The Canadian government should ensure that tbe public is much more fully and regularly informed about the *reasons* for, and background to, its policies regarding seals.

32. The Canadian government should facilitate greater balance in the public presentation of the views both of the sealing communities and of other interested groups.

33. The Canadian government should make the most effective use possible of the media in disseminating information about sealing.

34. The Canadian government should undertake regular studies to examine public knowledge and views regarding seals, both to assist it in tsrking account of these views in formulating Canadian seal management policies, and to enable it to ensure that its activities aimed at keeping the public fully informed about the issues underlying these policies are being effective.

35. Observers should be permitted to view any operations in which seals are killed, subject to such legal constraints as are necessary to protect personal rights and property.

Canadian Management

(See Chapters 8,9,11,12, 13,17,27,29, 30.)

Conclusions

- Although therewas overexploitation of the harp seal populationup to the 1960s, recent Canadian management of seal stocks has been generally successful.

  (a) Harpseals have very probably been increasing in recent years and it is likely that hooded sealshave also been increasing; quotas set since 1972 have been in accordance with the balance of scientific advice.

  (b) Humane hunting techniques have been brought into effect.

  (c) With a few well-publicized exceptions, regulations have been enforced effectively.

- The most widely accepted objectives for managing wildlife are those set out in the World Conservation Strategy. They are:

  (a) to maintain essential ecological processes and life-support systems *on* which human survival and development depend;

  (b) to preserve genetic diversity; and

  (c) to ensure the sustainable utilization of species and ecosystems.

- The views of Canadians towards seals and sealing vary. Inadequate recognition by the government in its policy making of the width of this range of views about seals and sealing, has probably added to the bitterness of the harp seal controversy.

- Management of seals and sealing throughout Canada is presently entrusted to the Department of Fisheries and Oceans (DFO). DFO has the necessary technical competence in data collection, research into all aspects of marine ecosystems, and enforcement. However, many of those who view seals as other than an exploitable resource feel that their concerns are not adequately reflected in policy making. This concern would be reduced if DFO had a visible mechanism for taking into account all relevant interests when setting basic policy,

- In the Arctic, research into, and policy for, seals and sealing need to be closely integrated with similar activities in respect of polar bears and arctic foxes which are the major predators on ringed seals. Management of, and research into, polar bears and arctic foxes are presently the responsibility of the Government of the Northwest Territories, with the exception that the Department of the Environment shares responsibility for research inlo polar bears.

- The *Constitution Act, 1982, sec. 35,* and federal commitments limit the Government of Canada's authority to regulateaboriginal wildlife bar. vesting except in accordance with a claims settlement or some other form of aboriginal consent. (Recommendation 13.)

- Aboriginal groups in the Arctic sre in the process of finalizing agreements with the federal and territorial governments under which they are assuming a certain degree of management responsibility and control, (Recommendation 13.)

- Considerable uncertainties surround many aspects of seals and sealing, including the population dynamics of the stocks of seals. Particularly important uncertainties relate to the interactions between seals and fisheries through competition for fish and transmission of parasites. Intensified research is needed to reduce these uncertainties, whether or not commercial seal hunting is continued. (Recommendation 23.)

- The non-consumptive use of seals such as the viewing of seal herds can generate income in some areas in the Gulf. With appropriate controls it can be carried out without harmful impacts on seal stocks, their environment or any sealing that might continue.

Recommendations

36. The minimal explicit objectives of Canadian wildlife resource conservation strategy should be as stated in the World Conservation Strategy:

    (n) to maintain essential ecological processes and life-support systems on which human survival and development depend;

    (b) to preserve genetic diversity; and

    (c) to ensure the sustainable utilization of species and ecosystems.

    Two further objectives should be to ensure that:

    (d) wild animals are harvested with a minimum of suffering; and

    (e) harvesting nativities serve important human needs and involve minimum waste.

37. The Department of Fisheries and oceans. with the assistance of a representative advisory group, should explicitly establish for each seal stock both priorities for management and use that reflect social, economic and other values, and management plans based on these priorities.

38. Management plans should be based on information on seal numbers, on seal impacts on fisheries, and on public attitudes toward the killing of seals. They should include proposals for target levels of populations in the medium term, and for the number of seals, if any, that may be killed in population control programs, subsistence hunting and commercial sealing.

39. The non-consumptive use of seals, such as the viewing of seal herds, should be encouraged subject to appropriate regulatory measures to protect the animals and their habitat.

40. Federal responsibility for seals in the Arctic should be closely co-ordinated with responsibility for the rest of the arctic ecosystem. Policy formulation should be a coordinated process involving aboriginal peoples, the Government of Canada and the Government of the Northwest Territories.

41. Tbe Canadian government should consider transferring responsibility for seals on the Atlantic and Pacific consts to a section of the Department of Fisheries and Oceans separate from those directly concerned with fisheries. The responsibiiities of this section should include the protection of seals, management of nny utilization and the interactions with fisheries.

42. Senl management policies should be supported by an active, well co-ordinated research program addressed to all the relevant issues. The financial and staff resources given to this program should be substantially greater than those given to seal research in recent years.

International Management

(See Chapters 10,22,28, 30.)

Conclusions

- Some species of seals inhabiting Canadian waters also move into waters under the jurisdiction of other countries and, to a lesser extent, into international waters. In addition, many seal products enter international trade, and seals and sealing in Canada arouse a great deal of interest outside the country. Canada therefore *needs* to collaborate with other countries on seal matters, and to take account of views outside Canada in setting policies on scale.. in particular, collaboration with Greenland, and with the European Community in relation to the Directives, is desirable.

- Canada belongs to one international organization and is a party to one convention involved *in* tbe conservation and management of seals.

(a) The Northwest Atlantic Fisheries Organization has provided valuable scientific advice on the management of harp and hooded seals, but for some people its credibility may have been weakened because participation is largely limited to government-employed scientists.

(b) Inclusion of harp and hooded seals under Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora has occasioned considerable discussion at recent meetings of the Parties to the Convention. Inclusion of these species would not, despite the title of the Convention, imply that they were endangered; it would only imply that they could be vulnerable unless exploitation is properly managed and that trade in their products should be controlled by licensing. Past history shows that harp and hooded seals do fail into this category, The addition of a simple licensing procedure to the present quota system would meet Canada's management obligations under the Convention if the species were listed in Apperulix II. Canada's past efforts to oppose listing these species in Appendix II have served only to add fuel to the sealing controversy, and to place in doubt in some eyes the sincerity of Canada's efforts to support conservation issues. It appears that there is good reason, if the issue is raised again, to re-examine the position to be taken by the Canadian government on this matter.

- Canada has been a member of the North Pacific *Fur* Seal Commission which was terminated very recently. Because of a decline in the numbers of fur seals, there is a need for Canada to continue to support efforts 10 determine the causes of this decline and, if possible, remedy it. In addition, the importance of interactions among fur seals, fish and other elements of the marine ecosystem is being increasingly appreciated, It would be desirable to absorb the functions of the Fur Seal Commission into a more broadly based international body, concerned with research and the conservation of all elements of the marine ecosystem of the north Pacific.

- Proposals have been made for a new international commission with broad responsibility for seals. However, as long as the Northwest Atlantic Fisheries Organization is in place, and efforts are being made to establish a new international body with responsibility for all elements of the north Pacific ecosystem, there does not appear to be a good reason to setup a new sealing organization. Experience also suggests that it could be very difficult to reach agreement on the strut ture and membership of such a body.

Recommendations

43. Canada should continue *to* collaborate with all interested countries in the promotion of research into fur seals and in the coordination of management measures. Canada should also take an active part in efforts to establish a new international body with responsibility for all elements of the north Pacific marine ecosystem.

44. Canada should seek to broaden the participation of scientists working outside government institutions in those working groups of the Northwest Atlantic Fisheries Organization concerned with seals.

45. The Canadian government should offer to co-operate in the preparation of thereport of the European *Commission,* which was requested by the 1985 Council Directive, and is to he concerned "in particular with, on the one band, the developments in scientific data on the conservation and the population status of harp and hooded seals and, on the other hand, the development, .. of the market in sealskins derived from the Inuit's traditional hunting.. ."

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Photo Credits

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1. Harp seals in the Gulf of St. Lawrence.
   Department of Fisheries and Oceans.

Chapter 2

1. Sealers on the ice at the Front (circa 1920s).
   Provincial Archives of Newfoundland and Labrador.

2. Ringed seal.
   F. Bruemmer.

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1. Stretching sealskins (Northwest Territories).
   SSC – Photo Centre Library – ASC

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1. The *Rainbow Warrior* in the Gulf.
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4. Atlantic whitecoat hunt.
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5. Inuit skinning bearded seal.
   Arctic Biological Station, Ste-Anne-de-Bellevue.

SEALS AND SEALING IN CANADA

REPORT OF THE
ROYAL COMMISSION

Volume I

Cover: "Seals gather for spring" by Thomassee Alibatuktuk / Jeeva Maniapik, reproduced by permission of the Pangnirtung Eskimo Co-operative, Pangnirtung, N.W.T.

PART I

Summary

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Chapter 1

Introduction

Establishment of the Royal Commission

Order in Council P.C. 1984-2242 of 22 June 1984 created a commis- reco pec nd sealing in Canada, including the social, cultural, ethical, scientific, economic, resource management, and international implications.

The Mandate

In particular, as set out in the Mandate, the Royal Commission was called upon to inquire into and report on the following matters:

(a) the social and cultural impact and economic benefits and costs, including regulatory costs, of sealing in Canada;

(b) the ethical considerations relevant to the harvesting of seals;

(c) the status of Canadian seal stocks and measures currently in force in Canada to conserve, manage, protect and regulate the harvesting of seals, including the adequacy of such measures;

(d) the interactions between seals and commercially exploited fish populations that may affect food supplies or contribute to parasite transmission;

(e) the interactions between seal populations and commercial fisheries, including, inter alia, competition between seals and fishermen for fish stocks; interference in fishing activity by seals, including damage to fishing gear and catches; and the effects and related economic costs on the

quality of fish catches by transmission of parasites by seals;

(f) the principles necessary to manage seal stocks for conservation purposes, including *appropriate cull levels, so as to • neure the continuing abundance and health of eeal stocks and to* minimise *adverse interactions* between *seals and Canadian fishing resources and operations;*

(g) *the methods for harvesting seals commercially and their* suitability;

(h) the domestic and international *opportunities for and constraints* on *the processing and* marketing *of Canadian seal products;*

(i) *the* availability *of* alternative *sources of income and opportunities for adjustment for individuals* and communities currently *dependent* on *the seal harvest;*

(j) the *concerns of individuals and groups* with a direct, indirect or declared *interest* in sealing in Canada, including an assessment *of such interests;*

(k) the public awareness and attitudes in Canada and abroad on sealing *policies and activities* in *Canada and the extent to which such attitudes could constrain future revitalization of commercial sealing, or adversely affect other commercial interests and activities,* and *recommended approaches for removing those constraints;*

(1) *the International comparisons, as appropriate, for the preceding ● lemente; and*

(m) *the possible* new *international initiatives for managing Ca*'88ml resources, for* harvesting *seals and for related activities.*

Mr. *Russel L. Barsh*

of Seattle, United States. He taught law and public policy at the University of Washington until 1984, when he returned to the practice of public international law and environmental management with indigenous communities in the United States and Canada. He has published works on Indian history, government, law and economic development.

Dr. John A. Gulland

of Cambridge, England. Presently Senior Research Fellow, Centre for Environmental Technology, Imperial College, London. Until 1984 he was with the Deportment of Fisheries, FAO, Rome, His particular concern has been with the population dynamics and management of marine living resources, including fish and marine mammals.

Professor Ian McAllister

of Halifax, Canada. Professor of Economics, Dalhousie University, since 1971, and Chairman, Lester Pearson Institute for International Development. He has advised a number of governments and published books and articles on regional development, foreign aid, energy and industrial policy issues, especially relating to Canada, Africa and the European Community.

Dr. Wilfred Templeman

of St. John's, Canada. Formerly Director of the Biological Station, Department of Fisheries and Oceans, St. John's, Il is scientific papers include a review of the living marine resources of Newfoundland, including seals and whales, a study of the infection of cod and other fish of the Canadian area by the seal nematode, and a study of the life history of the capelin, probably the principal food of the harp seal.

Dr. Patrick A. Geistdoerfer

Responsible for research in marine biology at the Centre National de Recherche, Paris, France. Following his appointment as a Commissioner, Dr. Geistdoerfer attended the opening meeting of the Royal Commission held in Montreal on 24 September 1984, but did not participate further in tha activities of the Commission, and subsequently submitted his resignation.

Harp seals in the Gulf of St. Lawrence

- public submissions either as written briefs or in personal presentations to the Commission;
- studies undertaken by expert consultants engaged by the Commission to examine particular topics;
- information and opinion provided by experts in particular fields at the request of the Commission;
- published scientific and technical literature;
- personal knowledge, experience and research of Commissioners and staff.

Public Hearings and Visits

The Royal Commission sought to provide all members of the public interested in its Mandate with the opportunity to present briefs and appear before it at their common convenience. At the same time, faced with constraints of time and budget, the Commission had to strike a reasonable degree of balance.

With this in mind, it was necessary for the Royal Commission to hold its public hearings over a fairly short period of time and in Canada's large urban centres accessible to the public, the major newspapers, and radio and television stations. The Commission was also obliged to keep in mind the importance of hunting, trapping and fishing to the indigenous population, and the importance of seals and sealing to the inhabitants of the Arctic, the Atlantic region and, to a lesser extent, the Pacific communities. Montreal, Toronto, Vancouver and St. John's were accordingly selected as the cities for the public hearings held in Canada.

Many Inuit associations and Inuit individuals expressed a desire that the Royal Commission visit their particular communities. In view of the large number of such requests, the Commission asked some of the associations to co-ordinate their activities and help it to choose the most appropriate areas for it to visit and receive presentations from persons residing in and around the communities chosen.

As a result, the Commissioners visited Holman on Victoria Island in the western Arctic (N.W.T.), Pangnirtung in the eastern Arctic (N.W.T.), and Kangiqsujuak in northern Quebec.

Because of the international interest in the sealing question, the Royal Commission also held public hearings in Europe and the United States; these hearings took place in London and Washington. The localities and dates of hearings and other public sessions of the Commission were:

Locality	Date
Montreal	22–25 January 1985
Toronto	28–31 January 1985
Vancouver	4–5 February 1985
London	9–10 April 1985
Washington	17 April 1985
Montreal	22–23 April 1985
St. John's	21–23 May 1985
Kangiqsujuaq	27 May 1985
Pangnirtung	28–29 May 1985
Holman	18 June 1985

A total of 156 witnesses gave oral testimony on these occasions.

Written Submissions

in addition to oral representations, the Royal Commission received a total of 137 writtan briefs. The sources of written briefs and oral testimony included sealers; the sealing industry; the fishing and fish-processing industries; tha fur industry; representation of the aboriginal peoples; conservation, animal-welfare and animal-rights groups; veterinarians; ● cademics in such fields as biology, economics, sociology, nutrition, philosophy and law; local development groups; elected representative% government departments; representatives of foreign government; ● nd concerned individuals. The names of the persons, groupa and associations who submitted briefs, as wel I ● a tha names of witnesses who appeared before the Commission, are set out in the Administrative Appendix.

Consultant

The Royal Commission frequently required information which was not available from witnesses, and which could not be obtained with its own staff resources. For this reason it retained a number of consultant to carry out special studies in its behalf. These consultants are listed in the Administrative Appendix.

Expert Inquiries

The Royal Commission haa also drawn heavily on the help and ● dvice of people who had particular knowledge and skills in matters with which it was concerned. This help, which has heen readily given, has rangad from the provision of basic facts to discussion of complex scientific issues, and *even to* review of preliminary drafta of technical sections of its Report. In the Administrative Appendix the names of the persons who have helped the *Royal* Commission in this way are listed.

Organization of the Report

The Report of the Royal Commission is published in a series of volumes.

This introductory volume conveys in • compact form tha essential features of the Royal Commission's work, These featurea include the

establishment of the Commission, its method of operation, a general account of the issues which the *Commission* had to examine and, most important, the principal conclusions reached and the recommendations based on them.

The subsequent volumes provide detailed discussion of the issues that the Royal Commission has examined; they present the data available to the Commission on each issue, and the reasoning by which the Commission haa reached its conclusions and recommendations. 'I'he final volume also includes an Administrative Appendix, which contains additional information about the operational details of the Commission, supplementary to that given in this volume.

Finally, there is material accumulated by the Royal Commission in the course of ita studies which should be preserved to make it ● vailable to interested parties. This material, in the form of technical reporte, is listed in the Administrative Appendix, It has been deposited at the headquarter library of the Department of Fisheries and Oceans in Ottawa and at the Pinniped Bibliography, Department of Zoology, University of Guelph, Ontario, Canada, and access to it may be obtained on application.

Chapter 2

Seals and Sealing in Canada

Ten species of seal inhabit Canadian waters, and most of them have been hunted on some occasion or another, for a variety of purposes: for food and clothing, for commercial sale, or to protect segments of the fisheries. In the public eye, sealing has been especially associated with the hunting of young harp and hooded seals in the early spring in the northwest Atlantic.

The Atlantic Seal Hunt

Sealing plays an important port in the seasonal cycle of activities of many small communities *along* the Atlantic coast. It comes at a time of year when there are few available income-earning activities, and when cash is needed to overhaul the boats ● nd gear for the summer fishing. Its significance is therefore greater than the relatively small dollar returns to most participants that the sums earned might suggest.

The harp seal *1s* the species mainly involved. About two million of these seals now inhabit the northwest Atlantic. They migrate couth in winter, to breed in late February and March on the ice in the Gulf of St. Lawrence and at the Front - the area east of Newfoundland and southern Labrador. They then return north to their main summer feeding grounds, along the west coast of Greenland and in waters of the eastern Canadian Arctic as far north as Ellesmere Island. During the 1970s, acme 130.000 "whitecoats" - pups a few days old - were taken annually. Even larger numbare were killed in the 19th century ● nd the earlier part of the 20th century. In addition to pups, come adults were killed on the breeding grounds. Older ● nimale are also taken in migration through Canadian waters and on the summer feeding grounds In the Canadian Arctic and off Greenland.

Since a quota wae imposed in the early 1970s, the population has probably increased slightly, and now that hunting has been substantially reduced, the population can be expected to increase more rapidly. This possibility causes wme concern to the fishing industry because of the effects It might have on the abundance of commercial fish and on the incidence of nematode parasites, which have a life-cycle involving the reproductive stage

in seals and an earlier stage In fish, where they cause economic losses to the fishing industry.

Sealers on the ice at the Front (Circa 1920s)

The hooded seal also breeds on the ice off the east coast of Canada, ● lmoet entirely at the Front and in Davis Strait; its distribution is rather more northerly ● nd offshore than that of the harp seal. It is less numerous "than the harp seal; the population in the northwest Atlantic numbers about 300,000. Pups (called "bluebacks") and come adults have been hunted ● t the Front by the same large vessels that take harp seals.

Between 1978 and 1982, an annual average of about 10,000 pups and 2,600 adults were taken by Canadian and Norwegian sealers, ● nd about 3,800 seals of all ages were taken ● t Greenland. Doubts have been raised o n to whether hunting was depleting the population; it now seems possible that the numbers were increasing even before the drop in catches in 1983.

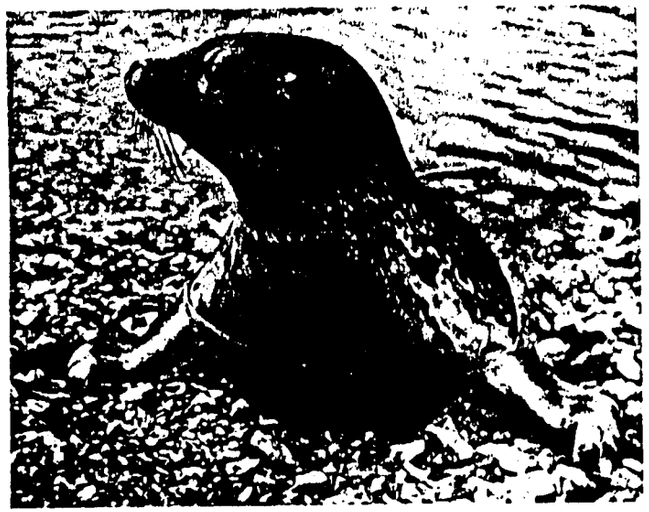
Pups of both harp and hooded seals have been caught primarily by sealers in large vessels, but they have oiso been taken by men going aut from shore on foot or in small boats (landsmen) rind, to a lesser extent, by small groups of sealers in medium. sized vessels (longliners). Between 1946 and 1982, Norwegian vessels also took part in the hunt at the Front In the early years of the hunt, the main product was oil from the blubber, but in recent years the greatest part of the gross return in the commercial hunt has come from the skins. Theee underwent preliminary processing in Canada before being exported, mainly to Norway, for further processing and sale to the international fur trade. Until recently the main final market was Western Europe, but thin market hae naw collapsed. Some income is still obtained from oil, Although there is little meat, apart from the flippers, on young pups, there ie much on the older animals. Most seal meat is either used by the sealers themselves or is sold fresh, frozen or canned.

Seals in the Arctic

Sealing is important for many communities of aboriginal peoples of the Canadian North. The main species hunted is the ringed seal, but some bearded seals are also taken. In addition small numbers of harbour seals are caught, as well as some harp seals during their summer migration. The chief usc of the seals is for food, and to a lesser extent for clothing, by the sealers themselves and their families, but some skins are sold for cash. The importance of these sales has increased with changes in hunting practice. Hunters now rely more than formerly on rifles and snowmobiles, and hence need caah for ammunition and fuel,

The ringed seal is the most abundant of the arctic species. Little is known of its population biology, but in the Canadian Arctic its numbers probably run to seven figures. The catch in recent years has amounted to a few tens of thousands annually. The population as a whole seems to be in a healthy state, but there is concern that some local stocks may be over-exploited.

The larger bearded seals are much less numerous and even less known than the ringed seal; the population in the Canadian Arctic may possibly be of the order of 200,000 animals.



Ringed seal

Other Atlantic Seals

The grey and harbour seals also inhabit Atlantic watera; neither species has been hunted commercially to any extent in recent years. Both species, but particularly the grey seal, cause concern to the fishing industry because they damage nets, compete for fish and play a roie in the transmission of nematode parasites (codworm/sealworm). Both have therefore been subject to bounty schemes, and grey seals have also been subject to culling operations

The grey seal is found on the Atlantic coast roughly, between Nantucket Island in the United States and, in summer, northern Labrador. The present population, which is centred on Sable Island and the southeastern Gulf of St. Lawrence, probably numbers about 70,000. In common with most other grey seal stocks in the north Atlantic, the Canadian stock had been greatly reduced by the beginning of the 20th century, but is now

recovering, Tho group breeding on Sable Island is currently increasing at about 13% per year. About 1,700 animals, on average, have been culled annually in recent years as a population control measure.

The harbour seal ie widely distributed on both the Atlantic and Pacific coasts; the Atlantic population numbers about 13,000.

Seals on the Pacific Coast

The northern fur seal is the most abundant seal in the north Pacific Ocean. It does not breed in Canadian waters, but mainly on islands in the Bering Sea, although come thousands of females and young males visit the B.C. coast each summer. It was harvested until 1984 under the management of the international North Pacific Fur Seal Commission, of which Canada was a member, although Canadians have not been directly involved in the hunt for many years. The pert of the herd from the Pribilof Islands, from which the Canadian visitors come, now numbers ❑ bout 800,000, but it is declining by about 8% per annum. The annual kill on the Pribilof Islands averaged about 26,000 during the 1970s and up to 1984, although the United States government has now limited the take 10 the subsistence needs of the Pribilof Islanders. Much of the evidence suggests that the recent decline *in* the population has not derived from the hunt, but is more likely to be the result of juvenile seals becoming entangled in diecardad and lost fishing nets and other plastic debris.

Two kinds of sea lions are found on the B C. coast. The Steller sea lion ranges in the eastern Pacific from Alaska to California, but only about 6,000 out *of a* total of 200,000 now inhabit Canadian waters. There has been no commercial hunt since 1966, but between 1913 and 1968, culling operations killed up to about 2,000 sea lions annually. The present population is well under half the original level and does not appear to be increasing, possibly as a result of competition from a large population, breeding just across the Alaskan border.

The California sea lion breeds mainly off the southern part of the U.S. west coast, but recently about 4,500 males hove visited the southern B.C. coast each year in late winter and early spring, This species has not been hunted anywhere for many years.

The harbour seal is also widely distributed on the Pacific coast, with a population of about 50,000, It has not been hunted commercially, but

bounty and other hunting during 1914-1969 probably accounted for an average of 3,000-6,000 kills annually. Since hunting ceased in 1969 the harbour seal has been increasing ● t a rata of about 10% par annum.

The northern elephant seal is the only other seal found in Canadian Pacific waters. It breeds off southern California, rrnd appears In Canadian waters only in very small numbers.

Chapter 3

Issues Arising from the Mandate

The Mandate given to the Royal Commission was complex. In broad terms the issues can be summarized as follows:

> *Under what conditions, if at all, is* it *acceptable for mankind to* utilize *or manipulate the seal populations for human bene/its; how far have recent and present Canadian seal hunts satisfied these* conditions; *and what steps should be taken to ensure the acceptability of any future Canadian operations involving the killing of seals? In addition, how significant has* sealing been *to* Atlantic and *Arctic* communities; *what effect has there been on these* communities from *the* decline in *the markets for seal products; and what need, if* any, *is there to provide compensatory assistance?*

To execute its Mandate the Royal Commission addressed these questions by grouping the items in the Mandate into four main categories:

- public concerns about sealing;
- economic, social and cultural issues;
- biological issues;
- management issues.

Public Concerns about Sealing

Views on humanity's relations with animals are very diverse, ranging from a totally utilitarian view that humanity may da what it wishes to animals regardless of the effect on them, to the view that the rights of ● nimals should be recognized as entitled to at least as much respect as those of human beings. The Royal Commission hae surveyed a cross-section of public

inion polls, both in Canada and in several other countries
prominently in the sealing controversy. In so doing, it
ctors that were considered by one group or another as
rmining whether or not a particular type of seal hunting

cal climate surrounding the seal debate has been largely
e active campaigns directed since the mid-1960s towards
nt. The Royal Commission has examined the origins and
t for these campaigns and the methods which have been
mmission has also examined the nature and extent of the
ns which have supported continuation of the hunt.

nportant political event, which resulted in large part from
ainst sealing, and which had a major effect on the sealing
efore on the hunting of seals, was the ban on the importa-
products by the European Community. The Commission
manner in which this ban came into being, its effect on
, the response by the Canadian government, and likely
nts.

nich are clearly important to the public in forming a view
y or unacceptability of any part of the seal hunt are:

cruelty, if any, involved in the killing of seals;

the seal population, especially whether its survival is en-

nce of the hunt to the economic well-being and culture of
gaged in it;

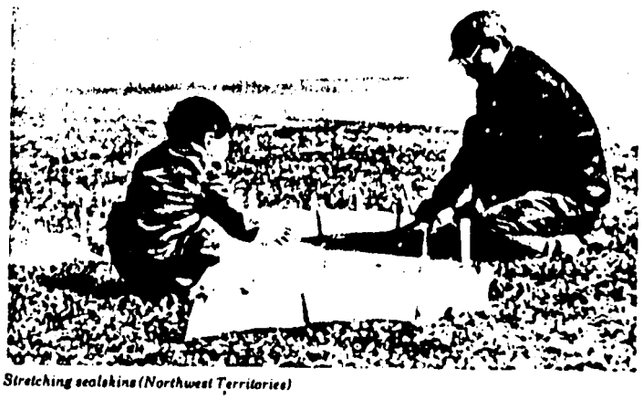
ce of the use to which the seal products are put.

ssion has examined all these aspects.

Social and Cultural Issues

s of Canadian communities depend strongly on seal hunt-
and for an important part of their cash income. Many of
mmunities of the North and many small non-aboriginal
ne Atlantic coast constitute these groups. These communi-

ties seem to have been seriously affected by the collapse of the European market for seal products that occurred in 1982–1983. The Royal Commission has carried out direct studies in both groups of communities to determine the extent to which they depend on seals, and the effects produced by the loss of a commercial market for seal products. It has also assessed the possibilities of alternative employment or other compensation for lack of employment in sealing, and the consequences of various forms of compensation for the cultural and economic life of the communities.



Stretching sealskins (Northwest Territories)

The overall contribution of the sealing industry in its various forms to the Canadian economy has been examined. In this connection it is necessary to consider not only the direct economic costs and benefits of the industry itself, but also the effects on international status and trade resulting from the adverse image of Canada that has been generated by the anti-sealing campaign.

Future prospects for any sealing industry would depend on the possibility and acceptability of developing other markets, both in Canada and

elsewhere, for seal products, including not only skins, but also meat und oil. The Commission has examined these possibilities.

Biological Issues

In view of' the importance attached to the question of humaneness or cruelty in tho killing of seals, the Royal Commission hne examined the methode used in the various hunts and sought expert advice on the level of suffering involved in each of these methods. It has also looked at proposals for alternative methods of killing which might be more acceptable. To provide standards of comparison, it has reviewed information on the level of humaneness in two other circumstances in which groat numbers of large mammals are killed, slaughterhouses and big game hunting.

To determine whether any of the Canadian seal populations have been seriously reduced, and particularly whether survival of any species hne been endangered by hunting, the Commission hae reviewed and sought expert opinion on the available information *on* the sizes and compositions of the seal populations, and how they have changed in recent years as a result either of hunting or of *other* causes.

Other human activities could have adverse effects on seal populations. These include the passage of large ice-breakers through the arctic ice and pollution by toxic chemicals. Seals can also become entangled in active or abandoned fishing gear. The Royal Commission hae reviewed what is known of these effects.

Three aspects of the interactions of scale with commercial fisheries have been examined. Using the available information on the sizes of the seal populations, the Royal Commission has assessed, as far as possible, the quantities of commercially important fish and other marine animate consumed by seals, and the effect that this consumption is likely to have on the amount and value of the catch of commercial fisheries,

Another complaint raised by fishery interests concerns the transmission of nematode parasites (codworm/sealworm) by seals. The Royal Commission has studied the incidence of parasites, the costs of removing them from fish flesh, and the reduction in value caused to the product. [1 hae also, to the extent possible, examined the relation between seal numbers and parasite frequency, and the degree to which the parasite-related costs could be reduced by reducing seal stocks.

Hooded seal and blueback pup

The Commission has also assessed the available information on the direct losses which seals cause fishermen by robbing their catches and damaging their gear.

Management Issues

Management issues arise at several levels. The current controversy emphasizes the need for the identification and adoption of principles and objective for the management of seal populations which are widely acceptable to the Canadian people and 10 the broader international community. If these goals are to he achieved, there ie need both for a higher level of public knowledge about seals and seal hunting, and for the establishment of machinery to work out these objectives through wide and reasonably public consultation. The Royal Commission has considered waye in which these processes of public education and consultation could be more effectively advanced.

once suitable objectives have been identified, their achievement for any particular seal population will require both adequate knowledge of the biological factors involved and efficient administrative mechanisms. Basic to the biological problems are the general principles relating the size and

structure of animal populations to numbers removed by exploitation or predation. These principles apply directly when seals are taken, either by commercial or subsistence harvesting, or by culling with the aim of reducing adverse effects on the fishing industry. Essentially the same principles also apply when seals are preying on commercial fish stocks. In addition to knowledge of these basic principles, management requires knowledge of the population parameters of the particular seal and fish stocks where the problems arise. The Royal Commission has reviewed much of the available information on these biological problems and drawn such conclusions as it could on their implications for management. The Commission has, however, found great deficiencies in the present level of knowledge and hae identified requirements for further research to provide a more effective basis for future management.

The Royal Commission has also commented on a number of possible administrative arrangements and practices which might be considered with a view to improving the efficiency of management of seal stocks.

Chapter 4

Summary of Findings

The Canadian commercial seal hunt, which involved the use of large ships and the clubbing of seal pups on the ice, has been n focal point of international attention for more than 20 years. Because of massive negative publicity, the prices of sealskins and other seal products fell dramatically. The international markets for all Canadian sealskins, largely located in Weetern Europe, virtually disintegrated over a one-year period in 1983-1983. In 1983 the European Community (EC) issued a Directive banning the importation Of products made from harp and hooded seal pupa, Marketa have not recovered.

Theee changes have had a dramatic impact on the way of life of many Canadian Inuit, as well as substantial effects on the incomes and ways of life of many Canadians living in small communities on the more northerly parts of the Atlantic coast. The drop In prices of seal pelts has resulted in large reductions in the number of seals killed in all types of hunting, and has altered the nature of many of the questions that the Royal Commission has had to address. In this chapter, tha Royal Commission summarizes its findings according to four main categories: ethical issues; biological issues; management Issues; and economic, social and cultural issues. The chapter concludes with a commentary on the possible future of Canadian sealing communities.

Ethical Issues

There is no agreement *on* whether it is ethical or moral to kill seals. The choice is a matter of personal conviction. There in, however, substantial weight of opinion that If the killing of any wild animal is to be accepted as ethical, it should satisfy the following condition:

- The existence of the species should not be threatened.
- No unnecessary pain or cruelty should be inflicted.
- Tha killing should serve an important use.
- The killing should involve a minimum of waste.

The Royal Commission recommends that any killing of wild animals should minimally satisfy these conditions.

An will be shown later, most present-day Canadian sealing satisfies all four conditions. Sealing operationa pose no significant risks to any stocks. There is little cruelty or unnecessary suffering inflicted in most sealing operations. Some people have attacked the triviality of the ultimate uses of seal products (e.g., in fashion furs), but the critical issue ia the importance of the income generated to those hunting seals. This income ie of considerable importance to sealers living in conditions of limited economic opportunities. In most sealing operations there is little or no waste of any usable seal product.

Analysis of opinion pulls and other information showed that the public la not always well informed about seals and sealing. Many present opponents of sealing give as their reason for opposition one or another of the four points listed above. Their opposition might be reduced or eliminated if they were made more aware of the degree to which these conditions are satisfied in present-day sealing. The government should assist in providing belter information to the public, especially through the media. It should also keep itself well informed about public opinion concerning seals.

The Rainbow Warrior *in the Gulf*

If the four points listed above are Indeed satisfied, the ethical case against sealing as it was carried out in most recent years comes down to the argument that any killing of en animal is wrong. Some people clearly hold this view, but opinion polls chow that they constitute a small minority in Canada, as well as in other countries in which polls have been conducted. Other killing of animals, such as the slaughter of domestic animals for food or the hunting of wild animals for sport, ie widely accepted, although the ethical arguments against them seem, on logical grounds, to be as strong as the ethical arguments against sealing.

The killing of seals should not, therefore, be prohibited as a matter of principle. Nevertheless, opinion polls, letter-writing campaigns and other measures of public feeling chow that there ia considerable opposition to the clubbing of seal pups. While this opposition may be largely an emotional response to the attractive picture of a white, dark-eyed "baby seal", or to the brutal image of one being clubbed and skinned on the ice, it is a very strong response, and it is unrealistic to consider any resumption of the whitecoat harvest. Whatever the facts about conservation or cruelty, a renewal of large-scale commercial hunting of seal pups would make sealing once again a matter of divisive public controversy, Consequently, the killing of the pupa of harp seals (whitecoats) and hooded seals (bluebacks) for commercial purposes should not be permitted.

Biological Issues

These issues are concerned with the conservation of the stocks, the possible cruelty of the killing methods, and the interaction of seals with fisheries. Following the collapse of the market for sealskins, Canadian harvests, with the possible exception of some small local groupa of ringed seals, are much leas than the sustainable yields. The populations of most species of seals are therefore increasing. In fact, it is likely that the abundance of harp seals hae been increasing ever since the application of effective quota regulations in the 1970s, [n some cases the rate of increase is fairly rapid - grey seals on Sable Island are increasing by come 13% per year. These increases will probably intensify the seriousness of the impact of seals on fisheries, • e is discussed below. Even if markets recovered and harvests of older harp ● *nd* hooded seals increased, there should be no coneervotion problem caused by harvesting, provided that the system of monitoring the stocks and impoeing catch limits and other controls is as effective as was that for harp seals during the last decade.

Adult harp #inland whitecoats

Northern fur seals of the Pribilof Islands of the north Pacific are not hunted in Canada, although come visit Canadian waters during their migrations. Their numbers are declining, possibly because of entanglement with pieces of old fishing nets and other waste material. Canada should continue to collaborate with the other countries concerned to tackle this problem. With this exception, human activities that indirectly affect seals, such as the depletion of fish stocks and pollution, currently pose no significant threat to seal stocks. However, if year-round large-vessel shipping traffic develops among the arctic islands as a result of mineral or oil development, it could pose threats to seals, especially because of the break-up of the patches of Ice on which ringed seals have their breeding dens.

Any killing of large numbers of animals, whether the clubbing or shooting of seals, the shooting of wild animals for food or sport, or the slaughter of domestic animals for food, will involve some pain and suffering. Sealing in no exception. There are two types of sealing where suffering is considerable: netting, and deliberate wounding of *scale* in open water to facilitate their retrieval. These types of sealing should be phased out • s soen as possible. Other types of sealing, when properly conducted, involve little or no cruelty. Young harp seals, for example, suffer no stress as the sealer approaches; proper clubbing produces unconsciousness or death virtually instantaneously; and In most cases – indeed, in ● // cases for older pupa after weaning - there is little evidence of stress being caused to the mother or to other seals in the vicinity.

In the print, some sealing was conducted in ways that did involve some cruelty and suffering. Since the 1960s, however, stricter regulations on sealing methods have been introduced. particular attention has been paid to the whitecoat hunt, where the regulations, for the most part, have been vigorously enforced. The cruelty involved in present-day sealing is probably less than that inflicted in hunting deer or other wild animals, or in many forms of rearing and slaughtering domestic animals. This sets the killing of seals in the context of killing other animals, but it does not justify any cruelty in the killing of seals. There should be no relaxation of the efforts to maintain and improve the standards of humaneness in all aspects of the various seal hunts.

Many questions remain concerning the interactions of seals with fisheries. The impacte of seals on fisheries are very real, but they are also very difficult to express in reliable, quantitative terms. Fewest doubts concern the losses caused by removal of fish from, ond damage to, fishing gear, which are usually clearly visible. Losses from these sources are estimated to run to a few million dollars annually. Losses resulting from competition between seals and fishermen for commercial species of fish, and from the spread of parasites, are almost certainly much higher. Estimates of these losses are given in the Royal Commission's Report, but should be treated with caution. They have been produced to illustrate the likely extent of the problem, and the logical and arithmetical steps that need 10 be taken to produce quantitative estimates. Even the lower bounds of the rangee of losses, which are believed to be conservative, are substantial when compared with the total value of the fishing industry. These problems are most acute in the Atlantic region, but there are also problems in the Pacific.

While changes in seal numbers are unlikely to be reflected in exactly proportional changes in the losses caused to fisheries, these losses will increase as populations of seals, especially grey and harp seals, continue to increase. Even if there is no direct human intervention, these increases will not continue forever, but the levels at which different seal populations will stabilize are not known. and they are probably well above present levels. Many uncertainties surround the estimates of the current impacts of different species of seals on fisheries, and how these impacts would change an the numbers of seals change. Regardless of the policy adopted towards possible control of seal populations, further biological research on seals ● nd on their interactions with fisheries is greatly needed

Management Issues

The changing attitudes of Canadians towards seals and sealing, and the growing number of people who believe that seals should be considered as more than just another potentially harvestable resource, require modifications In the methods of formulating and Implementing Canadian sealing policy. The Royal Commission is therefore recommending that the Department of Fisheries and Oceans should be assisted by a broadly representative advisory group charged with drawing up the basic Canadian policy on seals. This policy should include scientifically based, long-term management plans for seal species, and it should take into account the interests of those provinces and communities that are particularly dependent on sealing, as well as the views of major conservation and animal-welfare groups, and the probable impact of seals on commercial fisheries. In the Arctic, formulation of policy on sealing should be a co-ordinated process between the aboriginal peoples, and the Governments of Canada and the Northwest Territories. These governments should encourage and formalize self-regulation of harvesting by the aboriginal peoples.

The management issues which were in the forefront before 1983- conservation of the stocks, and elimination of unnecessary cruelty - are now much less urgent. They were, in any case, largely resolved by the applications of various regulations (closed seasons, quotas, restrictions on killing method.v) in the late 1960s and the 1970a, and the great reduction of catches, following the collapse of the market for sealskins, has eased any remaining problems.

At present, the crucial management question arises from the relation between seals and fisheries, including damage done to fishing gear, the transmission of parasites, and competition between seals and fishermen for fish. At issue Is tho question of whether or not to cull the increasing populations of grey seals and harp seals in the Atlantic and harbour seals in the Pacific. (The question of a possible harp seal cull assumes that, as seems likely, there will be *no* large-scale commercial harp seal hunt in the immediate future.) Though the total loss caused by seals to Canadian fisheries is not accurately known, it is ● lmost certainly appreciable and is likely to Increase, The method of reducing these impacts that shows the moat promise of being effective is the control of total seal numbers by some form of cull, although in some cases, such as harbour scale in the Pacific, the killing of individual seals at places where fisheries are especially vulnerable may be effective.

Grey seals

The choice of whether or not to cull should take into account the estimuted scale of cull required to have any substantive impact, and the costs of such a cull. It should also take account of the uncertainties that surround such estimates, the degree to which these uncertainties could be reduced by further research, and the likely public reaction to a cull.

For harp seals the balance between these factors is such that no government-operated cull would be justified at present In particular, the extent of the impacts on fisheries is known much less accurately than itisforgrey seals. Further research should enable more precise estimates to be available in a few years' time, when the matter should be carefully re-examined.

For grey seals, which have the greatest per capita impact on fisheries, the arguments are more evenly balanced. The long-term benefits to fisheries from all causes, for each grey seal killed, would greatly exceed the costs of carrying out a cull. It is not clear, however, whether a large annual cull of several thousand grey seals, which would be required to stabilize the population, would be generally acceptable to the Canadian public The public reaction to a cull *mny* become clearer, and the choice of whether or not to cull may become simpler after this Report has been published.

Economic, Social and Cultural Issues

The direct economic benefits from commercial sealing are extremely small compared with the Canadian gross national product (GNP) or even

with the total output of the Atlantic provinces. Because there are practically no alternative employment opportunities in or near sealing communities during the sealing season, the benefits to sealers of the seal hunt are more significant than might be concluded from a narrow assessment of the direct costs of the hunt and the incomes earned from sealing.

Fishing, an occupation of which sealing is often a major component, is the main economic activity in many of tho outports of Newfoundland and Labrador, and in many of the small settlements along the lower north shore of the Gulf of St. Lawrence and in the Magdalen Islands. Government-financed community services are the other major contribution. [n some of the northern parts of Newfoundland, income from sealing can, in good years, amount to 20%-30% of the total earnings from all typos of fishing.

Even this percentage tends to under-represent the importance of sealing to these Atlantic communities. In addition to providing cash income, sealing also provides high-quality food, and plays an important role in the social and cultural life of the communities. Furthermore, sealing occurs In the late winter and spring, when there is very little else to do. The income from sealing provides, in addition to day-to-day expenses, the money for preparing the boats and gear for summer fishing. The success of all types of fishing and scaling is highly variable from year to year, and a variety of activities is thus needed to provide security in years when one or another activity fails. The loss of income from sealing weakens the whole annual cycle of activities and thus threatens the survival of some of these communities. Alternatives to sealing have been considered by tha Royal Commission, but the prospects are not good. Few show much economic promise, and none provides seasonal employment in late winter and early spring, which is necessary to fill the gap in the seasonal cycle that is left by the absence of sealing.

The main income from sealing has come frcm the sale of skins. Much of the meat on the seals caught ie eaterr by the sealers and their families or cold locally; the flippers of young seals are considered a delicacy in Newfoundland. A small proportion is canned and sold elsewhere in Canada. The oil from the blubber is also sold.

The market for sealskins has collupsed, and sealskins re virtually unsaleable in the former main market, Western Europe. In the mind of marry sealers, the loss of this market is clearly linked with the Directive issued by the cc in October 1963 and renawed in 1985. The Directive called on members of the cc to prohibit the import of skins and products made from harp and hooded seal pups (whitecoats and bluebacks). The products from

Atlantic whitecoat hunt

older seals were not Included in the EC ban, and for Inuit products this non-inclusion was explicitly staled. The collapse in the markets for all types of sealskins was more the result of changing demand than of any legal barriers. However, the drop in demand was largely the result of a strong, well-publicized campaign against sealing. The European discussions, especially the debates in the European Parliament at Strasbourg, provided useful occasions for this campaign to focus public awareness on seals and sealing. The large anti-scaling majorities in the European Parliament and the later formal Directives were probably influential in strengthening public opinion against buying any type of seal product.

Sealing wae, and remains, even more important for the people of the North. No crops will grow in the North, and inhabitants must rely on harvesting wildlife. The mix of seals, fish, caribou and birds in their diet varies from area to area. In no area can the hunters depend on a single species; instead they must change with the seasons. There are many areas where for months seals, principally ringed seals, are virtually the only food resource, or where, taking the year as a whole, seals supply the most important single source of food. Even when they are able to earn standard wages, Inuit cannot afford to eat as nutritious or as healthy a diet based on relatively expensive foods imported from the south, as that obtained from hunting.

Over the years the pattern of hunting has changed from travelling with dogs to greater use of snowmobiles, and from harpooning the seals to shooting. This change has probably decreased the amount of suffering because more seals are killed outright, but it may have increased the proportion of seals that are killed but not recovered. The use of snowmobiles has made it possible for Inuit to live in centralized townsites and continue to go hunting, but it has also increased their need for cash to pay for fuel and spare parts. In addition to providing food and clothes for people (and, where they are still used, food for dogs), sealskins have been cold, and the cash has *been* used to buy hunting equipment. The collapse of sealskin markets hae reduced the caah income of Inuit hunters by as much as two-thirds, resulting in decreased hunting which has ied to poor nutrition,

The Future of Commercial Sealing

Since 1982, the context of the scaling controversy hae changed dramatically. The seal hunt as It Is commonly understood - the large-scale killing of whitecoat harp seal pups on the ice - has ended. At the same time the market for all other seal products has collapsed.

'I'he effect on other sealing has been largely Inadvertent; it was not the objective of most of those who have worked fnr the end of the whitecoat hunt. Public opposition to the killing of older seals is much less widespread than is that to the killing of seal pups, and there is considerable public sup. port for Inuit hunting,

The collapse of the markets for seal products in 1982-1983 has been very serious for many communities in the Arctic end in Atlantic Canada. The Royal Commission has therefore examined possible actions that might be taken to relieve the economic and social distress in these communities. The outlook for markets for seal products is not good. There is no immediate prespect for a revival of the market in Western Europe, and the markets in other areas outside Canada have always been, and are likely to remain, very limited. There is also a very large existing inventory of sealskins and a continuing supply of some terse of thousands of skins from Norway and Greenland. 'f'he prospects for marketing Canadian skins outside Canada are therefore extremely poor. On the other hand, there is an existing market in Canada for some 20,000 sealskins and fer the meat from some 40,000 seals. The Canadian market could probably be increased, provided that pricee do not escalate.

Because many of those protesting against the commercial seal hunt • re sympathetic to the Inuit, and because the products from Inuit hunting were specifically not Included in the EC Directive, the possibilities for revival *of* an expert trade in Inuit products are much better than those fnr the products from commercial sealing. These possibilities will be increased if the products from Inuit sealing can be clearly identified with a distinctive trademark.

Apart from the skins of wildlife, and some carving and other art. work, the Arctic produces little other than minerals and oil. Extraction of minerals or oil could threaten the fragile arctic ecosystem, and both activities offer limited long-term employment to local people. If the human population is not to depend largely on government handouts, the beet possible use must be made of wildlife, as a source of food and cash. This is not likely to happen unless the Inuit can receive a reasonable cash return from those skins not needed for their own subsistence. This implies some restoration of the market for sealskins to about the pre- 1983 level. To accomplish this, encouragement needs to be given to the development of co-operative enterprises in Inuit communities, for improving the processing ● *nd* marketing of clothing and other seal products. Efforts to restore the markets for Inuit products would be helped by *a* more direct dialogue and exchange

Inuit skinning bearded seal

of information between representatives of Inuit peoples and the more responsible conservation and animal-welfare groups.

It is also possible that the current legal barriers, under the United States Marine *Mammal Protection Act of* /972, to the importation of Inuit seal products into the United States might be removed by seeking an exemption for Inuit products. There moy be legal grounds for such an exemption under the 1794 Treaty of Amity, Commerce and Navigation.

Even with good marketing it will be come time before conditions relating to Inuit sealskin products *are* restored to the level of those occurring before the market collapse. In the intervening period considerable economic and social distress is likely to continue In many communities. The Royal Commission is therefore proposing that there should be a fund of $4 million annually for at least five years, to support Inuit engaged in subsistence hunting, and to provide them with a cash income approximately equivalent to that accruing before the market collapse.

The situation on the Atlantic coast is quite different. There could be a future for some types of seal hunting but not for others. The whitecoat hunt aroused widespread opposition and should not be allowed In the future. There appears to be less opposition to the killing of older seals and some sympathy for the people in the small isolated communities in northern Newfoundland and elsewhere.

The possibility of alternative activities, including increased fishing and the development of aquiculture, should not be ruled out, but the only identified activity that seems capable of partially filling the early spring gap in the cycle of seasonal activity, and thue reducing the economic problems of the most seriously affected communities, is a modest sealing industry based on taking older seals. The prospects for this development differ for the three major groups of sealers.

The end of whitecoat hunting means the end of large-vessel sealing. Only in breeding areas do the large concentrations of seals occur that can support thie kind of large-wale sealing, and hunting on these patches only for adults would not be economically viable, even if it made biological sense.

Longliners take older seals and do not ordinarily harvest whitecoats. The fish catches of these vessels provide the principal economic support of communities in northern Newfoundland and the Magdalen Islands, and participation in the seal hunt has been necessary for the financial viability of longlining enterprises. If markets for products from older seals could be improved, the economic problems faced by those communities would be marginally lightened.

Landsmen include a number of people, especially in the small outports, for whom catching older seals is an important part in the seasonal cycle of activity, as well as people who only go sealing very occasionally, and for whom sealing is not economically important, Past catches by landsmen in northern Newfoundland and especially at the Magdalens huve included significant quantities of whitecoats. The permanent loss of the whitecoat harvest would involve considerable economic loss for these people.

In the years immediately preceding the EC ban, landsmen and longliners ueed to take some 40,000–75,000 older seals annually. The recent Canadian market hae been perhaps half or less of this number, but It might be possible over time to develop the domestic market to the level at which It might be capable of ● beorbing these quantities, This development would, however, be subject to three conditions:

- Primary processing facilities for this quantity of skins would need to be ● vailable.
- Effective market development work would need to be implemented.

- Prices and costs would need to be favorable.

As in the Arctic, it is not expected that restoration of modest seal product markets would resolve moat of the economic and social problems. The Royal Commission is therefore proposing direct financial support. This should take two forms. A training ● nd development fund of the order of $50 million should be made available to sealing communities to help them in general economic development. [t is possible that a proportion of the fund might be ueed to support industry feasibility studies regarding the processing and marketing of the products from older seals. Another fund, of about the came value, should be ueed to compensate sealers for lost income ● nd other losses associated directly and exclusively with the disappearance of the markets for seal products. This compensation should be given in the form ofe single grant payment to individuals judged to have been aggrieved.

Chapter 5

Conclusions and Recommendations

As a result of its studies and deliberations, the Royal Commission has reached a number of recommendations, which it hopes the Government of Canada will find useful in developing its future policies and actions pertaining to seals and sealing in Canada. For a fuller discussion of the rationale underlying each of these recommendations, the reader is urged to consult the relevant chapters of the Report.

However, in order to provide an overview, in which all recommendations can be read quickly and related to the principal conclusions on which they are based, this summary chapter hae been compiled.

The conclusions and recommendations are organized under the following general headings:

- Should Harvesting Be Continued?
- Killing Methods,
- Marketing and the European Ban,
- Aboriginal Sealing Communities,
- Atlantic Scaling Communities,
- Impacts on Fisheries and Population Control,
- Environmental Protiction,
- Public Information,
- Canadian Management,
- International Management.

In the few cases where a conclusion under one heading leads to a recommendation that appears under e different heading, this ie noted. At the end of the chapter, an index is provided that lists the relevant recommendations for each chapter.

Should Harvesting Be Continued?

(See Chapters 8,9,11,12,21,22, 30.)

Conclusions

- The question of whether it is ethically right or wrong to kill animals generally, or seals specifically, is a matter of personal conviction. The policies adopted by Canada on euch matters need to take into account the opinions of the public. (Recommendations 37, 38.)

- Public opinion on the killing of animate ranges between the extreme views that any utilization of animals ie permissible and that all use by man ie wrong. The great majority of those polled in Canada and a number of other countries hold intermediate views, and accept the killing of animals, provided that harvesting does not threaten the species, the killing is acceptably humane, and it is carried out for important social and economic benefits without appreciable waste. (Recommendation 36.)

- Recent harvesting of seals in Canada has generally met the criteria specified in the atrove conclusion. Although the final use of come seal pelts in fashion markets ie viewed by came people as a trivial use of seals, the income generated from seal hunting and the primary processing of the products has been very important to many of those involved.

- There is considerable sympathy with the traditional hunting of scale for food and clothing, by both aboriginal and non-aboriginal peoples, and eomewhat less for hunting seals to provide cash to support other subsistence activities.

- There is very strong public opposition to the clubbing of harp seal pupa (whitecoats) and hooded seal pupe (bluebacks). This hunt is widely viewed as abhorrent both in Canada and abroad. The resulting public protest cannot be effectively countered by ● ny technical arguments about the facts of the issue.

- Non-commercial hunting of seal pups is usually on a very small scale ● nd would be very difficult to halt ● ltogether.

- Harp and hooded seals:
  The Canadian stocks were reduced by large-scale commercial hunting through most of the 19th and 20th centuries. Theee declines continued in the years 1950 to 1970 but were halted by the quotas imposed since 1971. The stocks of harp seals, and most probably also hooded seals, have al moat certainly been increasing since the collapse of the market. Harp seals in the western Atlantic number about two million. The total number of hooded seals is not w well known, but may be around 300,000.

- Grey seals:
  Grey seals appear to have been quite common on the Atlantic coast when the Europeans first came to Canada. They declined in subsequent centuries, presumably due to overexploitation, and were scarce at the beginning of the 20th century. They are now rebuilding rapidly, and number around 70,000.

- Harbour scale:
  Little is known about the past history of the hunting of harbour seals. In the quarter-century up to 1976 they were decreasing in Atlantic Canada. In 1976• bounty program was discontinued, and numbers of harbour seals are now increasing slowly. They number about 13,000. On the B.C. coast there are about 50,000 harbour seals and their numbers are increasing by about tO% per year.

- Steller and California sea lions:
  About 5,000 Steller eea lions are resident on the Canadian west coast; there is no clear trend in numbers at present, but they are substantially fewer than early in the century. About the name number of male California aea lions visit the Canadian weat coast in winter; there haa been a substantial recent increaee *in* numbers, but the long-term trend is not clear.

- Northern fur seals:
  This species only occurs in Canadian Pacific waters on migration. Its numbers have undergone considerable fluctuations as a result of earlier overexploitation ● nd ● ubaeqwent corrective management measures. Improved management enabled the population to build to a peak in the 1940s and 1950s. [t hae since been declining for reasons that are not clear, but entanglement in pieces of netting and other marine debris is probably • major factor. Current numbers in the eastern Pacific are• little under a million. (Recommendation 28, 43.)

- Ringed and bearded seals:
  Ringed seals are widespread in the Arctic and probably number over a million in Canadian waters. The population as a whole is probably stable, but it is possible that local stocks in areas that were heavily hunted may be depressed. Management measures are necessary to assure the continued stability of ringed seal stocks in some of the areas where they are an important resource far humans. (Recommendations 13,40.)

  Bearded seals are much less numerous than ringed seals and correspondingly fewer are killed, but local overexploitation is also possible.

- Since the application of quotas to harvests of hnrp and hooded seals, Canadian management of seals satisfies the criteria laid down In the World Conservation Strategy of maintaining essential ecological processes and ensuring sustainable utilization.

- For all species of seals in Canadian waters there are come uncertainties *in* the estimates of numbers and population trends. Regular monitoring is necessary to provide reliable information on the current status. This information is needed both for the management of those stocks, which are still exploited, and for development of policy in respect of those stocks which are seen to be, actually or potentially, a threat to commercial fisheries.

Recommendation

1. The killing of seals should be permitted only when subject to appropriate controls on the numbers killed, the methods of killing, and the purposes for which they are killed.

2. The commercial hunting of the pupe of harp seals (whitecoats) ● nd hooded seals (bluebacks) is widely unacceptable to the public and should not be permitted.

3. Non-commercial hunting of pups of harp seals (whitecoats) and hooded seals (bluebacks), to the extent that it occurs at all, should be carefully regulated and strictly limited.

4. The Canadian Government should regularly monitor the stocks of seals.

Killing Methods

(See Chapter 20.)

Conclusions

- Judged by the criteria of rapidity of unconsciousness and particularly the absence of pre-slaughter stress, the clubbing of seal pups in, when properly performed, at least an humane as, and often more humane than, the killing methods used in commercial slaughterhouses, which are accepted by a majority of the public,

- If killing of seal pups of any species is ever deemed necessary, the special pistol developed by T.1. Hughes may prove to be more humane and less repugnant than clubbing. It is probably safe to use but requires further testing under field conditions.

- Catching seals in nets unavoidably causes slow and probably painful death.

- Shooting seals in Canada for subsistence or commercial purposes is generally more humane than the shooting of animals for sport, except that

  (a) the practice of deliberately wounding seals in order to facilitate retrieval must lead to considerable suffering; and

  (b) the use of small-calibre low-power ammunition can cause a high incidence of wounding unless shooting is very accurate.

- No methods of killing which have come 10 the notice of the Royal Commission, other then clubbing and shooting, achieve acceptable standards of humaneness.

Recommendations

5. If any killing of seal pups on the breeding grounds is to be done In the future, for example, as a measure of population control, further tests of the Hughes pistol under operational conditions should be undertaken.

6. In view of the suffering Involved, the government should take action with a view to phasing out, as rapidly as possible, the netting of seals In those communities which now rely largely on thie method to take harp seals both for subsistence and to provide • au bstantial part of their income. Netting of seals In other areas ● houid be prohibited immediately.

7. Discussions should be heid with sealing communities with the aim of making clear that the practice of deliberately wounding seals to facilitate retrieval is not condoned, ● nd of finding ways of reducing It as far as possible.

6. Discussions should be held with sealing communities with a view to ensuring the use of rifle ● mmunition that produces • high proportion of instantaneous kills under the conditions normally encountered in hunting each species of seal.

9. No new methods of killing seals for purposes of either harvesting or population control should be used in Canada unless they are clearly demonstrated to be ● cceptably humane.

Marketing and the European Ban

(See Chapters 10,13,16, 18.)

Conclusions

- In 1983, the Council of the European Communities issued a Directive banning the impart of raw, tanned or dressed skins of pupa of harp seals (whitecoats) and hooded seals (bluebacks). A second Directive in 1985 axtended this ban to 10ctober 1989.

- The Directives reflected public concern over the killing of beby seals rather than the scientific evidonce regarding the survival of the seal stocks and the humaneness of the method of killing, The discussions in the European Parliament, Commission and Council leading up to the Directives provided occasions for well-orchestrated anti-sealing campaigns by protest groups. Most markets for seal products had already collapsed prior to the issuance of the European Council's initial Directive.

- If the Royal Commission's Recommendation 2, to end the commercial hunt for harp seal whitecoats and hooded seal bluebacks, is followed, sealing in Canada would be fully consistent with the declared intention of the European Council's Directives. Canada has nothing to gain, and much to lose, by continuing argument with the European Community on this matter. (Recommendation 45.)

- Although the European Council"s Directives have explicitly not been aired at the Inuit traditional hunt, the collapse of the market for seal products which are surplus to tho Inuit domestic requirements has been a traumatic experience and many Inuit hove viewed the European Council's Directives as the cause. The European Commission has increasingly recognized this problem.

- Western Europe has traditionally been the largest market in the world for sealskins, accounting for about 60% of the world trade. in order, the five major seal product consumers in Europe have been Weet Germany, Denmark, Italy, France and Greece. in 1981, the European Community imported come 460,000 sealskins of all species (raw and dressed); by 1984 it was down to come 120,000 and 1985 estimates are of the same order. Prices have been sharply depressed; a backlog of pelts appears to be still in stock and there seems no likelihood of any significant market recovery over the next few years in Western Europe.

- On the basic of a market survey the Royal Commission found that present markets for seal products in the Far East are extremely small, and major new market development seem unlikely in the near future. The Royal Commission did not undertake a market development study, which would have been beyond ita mandate.

- Markets in South Africa and Latin America are very limited and are supplied from local sources. There is a legal ban on importation of seal products into the United States.

- The market for sealskins in Canada was, in 1985, not more than some 20,000, mostly in the footwear industry, but ● laa in tha garment and souvenir industries. Currently, thorn appears to he no Canadian market for fashion garments using sealskins. Atlantic Canada has been estimated to have a market for the meat of at least 40,000 seals per year provided the prices are competitive and the quality good. There is considerable aympethy for the plight of the sealing communities in Atlantic Canada and resistance to seal products is probably less strong in this region.

- 'There is widespread interest in articles made by aboriginal peoples following their traditional handicrafts. It would assist the Inuit in finding markets both in Canada and abroad if a distinctive trademark were developed to identify their products. Such a trademark could be applied to all handicraft products, not only those derived from seals. This might be more effective if product marketing and development were dune in co-operation with the Inuit in other countries (e.g., Greenland).

- Canadian government support of Inuit efforts 10 market their surplus products in Europe and elsewhere is desirable.

Recommendations

10. **The Canadian government should assist in the development of potential markets within Canada** for products from seals other than **whitecoats and bluebacks.**

11. The Canadian **government,** recognizing **that** the European Council's **Directives** were explicitly not aimed et **Inuit seal** products, **should assist Inuit** organizations in **exploring opportunities** for marketing their **products in** the European Community end elsewhere and **should** encourage co-operation among the **Inuit** of Canada and Greenland, and between **Inuit** and European authorities,

12 The **Canadian** government should encourage the development of community and cooperative enterprises in **Inuit** communities for processing and marketing clothing and other products. It should also encourage establishment of a **recognizable trademark to** Identify products directly derived from trad i **tional Inuit activities and promote its** widest **possible** public recognition in Canada and elsewhere. Care should be taken, however, not to encourage any commercial hunt that would endanger the traditional hunting **for subsistence needs.**

Aboriginal Scaling Communities

(See Chapter 13.)

Conclusions

- Scala are a vital resource for the Inuit for economic, social ond cultural reasons. Scaling is the most economical means of maintaining adequate nutritional levels in most northern communities. Increased use of imported foods will result in substantially poorer health and extra costs which the Inuit can ill afford.

- Centralization of Inuit communities in recent decades has resulted in many Inuit living considerable distances from their hunting areas. Motor transport, especially snowmobiles, increased in response to this development,

- Northern communities have suffered considerably from the loss of commercial sealskin markets. The virtual disappearance of the commercial market currently threatens the subsistence hunt since the cash income gained from the sale of seal products could be used for Lhe purchase of the equipment necessary to enable the Inuit 10 carry on traditional hunting. For some communities the total cash income has fallen to a small proportion of the pre-1982 level. The sale of seal products remains the moat feasible and environmentully appropriate means of meeting the cash requirement.q of motorized hunting.

- Northern communities also suffer from high transportation costs, from gasoline prices which are much higher than those in other parts of Canada, and from high prices for lubricants, spare parts and ammunition. One factor in the high prices of all goods, including store food, in the North may be the lack of competition in the retail market in many communities,

- Activities such as fur harvesting, tourism and commercial fishing appear to have limited potential In the Arctic and would probably provide additional income fur only a few Inuit. Arctic mineral and oil/gas exploration and exploitation might reduce the availability of marine mammals without leading to the development of a more prosperous northern economy in the long term. (Recommendations 29, 30.)

- In the absence of a sealskin market to provide them with cash, Canadian Inuit would need up to $4 million annually for at least several years to maintain subsistence hunting at the came level as before the European Council's Directive. Local hunters and trappers associations hava tha capability to manage such funding electively.

- In ite 1794 Treaty of Amity, Commerce and Navigation with the United Kingdom, the United States promised to allow aboriginal people. free passage and trade across the Canadian border. The United States *Marine Mammal Protection Act of* 1972 nonetheless restricts the importation of aboriginal Canadian products derived from marine mammals, while protecting the right of U.S. Inuit and Indians to produce and cell crafts of this kind.

- Present federal sealing regulations require that Labrador Inuit follow regulations that are intended primarily for the Atlantic harp and hooded seal hunt, and this is causing them unnecessary hardship. Aboriginal subsistence huntera in British Columbia, Quebec and other parts of the Atlantic provinces may encounter similar difficulties as a result of federal regulations that are designed for the management of commercial hunting,

Recommendations

13. The Canadian government **should** encourage and **formalize** self-regulation of **Inuit** marine mammal **harvesting.** Arrange. **ments** should also be made for the **necessary** research to provide **Inuit** with appropriate scientific advice **as• basis** for self-regulation.

14. The Canadian government **should provide** temporary **relief to Inuit hunters** through negotiate **arrangements with representative Inuit organizations, such as local hunters and trappers associations,** to ensure **that** wildlife **harvesting** can continue. Such relief should **consist** of annual **payments** of up to $4 million for **at least five** years, **after which** the need for **financial** support should be reviewed.

15. The Canadian government **should** initiate **discussions** with the United **States** ● uthorities with the ● im **of expanding** the **trading exemptions** contained in the United **States** *Marine Mammal Protection Act of 1972 to* **include** ● Il ● boriginal peoples **of** North

America without discrimination. Inuit representatives should be consulted throughout these discussions.

16. **Federal regulations** should be modified to **allow** residents of the Labrador **coast** north of **Fish** Cove Point to hunt **seals** In the same **manner• S aboriginal** peoples **of the** Canadian Arctic. The Canadian government **also should ensure, in consultation** with **representative local aboriginal** organizations. **that its regulations** do not Interfere with ● ubaistence hunting of **seals** by ● boriginmi communities **in British Columbia,** Quebec, and other **parts** of the **Atlantic provinces.**

Atlantic Sealing Communities

(See Chaptera 14,15, 16, 17, 18.)

Conclusions

- in 1982, a typical year prior to the collapse of the market, the gram value of commercial sealing in the Atlantic region was about $7 mil lion. The net economic benefits, after subtracting the costs involved, were come $2.6 million. These benefits• re extremely small in relation to those from many large Industries in the Atlantic region, although it may be noted that, when government subsidies• ro deducted from even quite large projects, the net economic benefits can be very small or even negative.

- Sealing makes a very important contribution to the economies of perta of coastal Labrador, northern Newfoundland, the Magdalen Islands ● nd the Quebec north ahore of the Gulf of St. Lawrence. Its importance cannot be narrowly measured oniy in dollars; there • re also major social, cultural and nutritional benefits, ● nd it provides • critical infusion into the economies of many poor communities.

- Except far the very limited meat on whitecoats, the seals killed have been fully utilized. The skins and some meat have been said to processing plants, but most of the meat has been consumed locally.

- There are no full-time sealers In Atlantic Canada. Sealing, like the various forma of fishing in the communities concerned, fits into• sea-

sonal cycle of activities. It is particularly important because it comes at a time when there are few other income-earning activities available in the areas and when cash is needed to prepare boats and gear for the fishing season. Where, as was the case in several locations, the economic viability of communities was already marginal, the loss of a key seasonal activity is extremely serious.

- In many coastal communities a substantial proportion of the population hae been seriously affected by the collapse of the market for sealskins, including those people who have traditionally earned income from the hunt, those who had access to the meat and those who earned income from the primary processing of the pelts.

- A deep sense of frustration hae been felt by many of the people affected by the demise of seal markets. They have seen an important beee to their livelihood lost due to the campaign which has heen waged against sealing. They feel aggrieved economically, socially and culturally. There is a need for financial compensation for these losses.

- The alternative employment opportunities in most of these coastal communities do not appear very promising although • number of ideas have been generated by background studies for the Royal Commission. It is concluded that support should not be confined to compensation, but should also include a serious effort to help develop new employment opportunities. In many taxes, eeme training elements are likely to be necessary, as well as modest public works, small industry support and market development studies.

- Some form of sealing activity appears more promising than most other identified options, in large part because of the seasonal timing and the relationship with the fisheries.

- The hunta by landsmen and longliners in the yeare before 1982 produced around 40,000-75,000 older seals ● nnually. Provided costs are kept within bounds, the markets within Canada could possibly, with a little development, absorb this volume of skins and meat. This would, however, only be practicable if there were adequate facilities for primary processing of seal pelts in Atlantic Canada. (Recommendation 10.)

- [f a cull of harp seals is undertaken, the employment of ex-sealers could help relieve some of the economic distress in the most seriously affected communities. (Recommendation 26.)

Recommendations

17. The federal government should assist the victims of the very unusual circumstances that have led 10 the demise of commercial sealing. Within the constraint noted elsewhere In this Report regarding seal hunting, the Canadian government should support private Initiatives aimed at reviving an industry baaed on older seals.

18. There is• need for support for training and development as well as compensation.

(a) A new fund of the order of $50 million should be made available by the federal government to sealing communities for development and retraining within tbe framework of Economic and Regional Development Agreements (ERDA). Sealing communities themselves should be given • clear role In tbe detailed shaping and monitoring of the fund. The most ● ppropriate federal sponsoring department would ● ppear to be the Department of Regional Industrial Expansion. A proportion of this fund could well be used to support tbe processing and marketing of " products from older seals.

(b) A new fund of the order of $50 million should be established to compensate sealers for lost income ● nd other losses associated directly and exclusively with the demise of markets for seal products The fund, under the ● ponaorabip of the Department of Fisheries ● nd Oceans, should probably be ● dmlniatered by two committee, one for Newfoundland ● nd Nova Scotia, and the other for Quebec. Beneficiaries should be individual sealers, sealing operators who retied on sealing to finance their vessels, Individual workera in seal processing plants, and the owners of processing plants.

Impacts on Fisheries and Population Control

(See Chapters 24,25,26,29, 30.)

Conclusions

- Seals cause financial losses to the fishing industry through competition for fish, damage to gear ● nd catches, and contamination of fish with nematode parasites.

  (a) The quantity of commercial fish consumed by seals is certainly large. The value of the resulting loss of catch can only be estimated very approximately, but on the Atlantic coast it is probably significant in comparison with the value of the present catch. On the Pacific coast the value of the lost catch is probably very small compared to that of the present catch.

  (b) Seals damage gear and remove fish from nets. The total annual losses from theee impacts may be ● t least $2 million on the Atlantic coast. No estimate is available for the Pacific coast, except for • loss of $700,000 for salmon gill-netters.

  (c) Nematode parasites (codworm / sealworm) have been increasing in commercial fish on the Atlantic coast In recent years. Present losses due to the costs of removing worms ● nd the reduced prices paid for infected fish are probably ● t least $30 million ● nnually. Losses on the Pacific coast appear to be much smaller.

- The species of seals differ considerably in their impacts ● nd in how theee impacts might change in the future.

  (a) Ringed, bearded and northern fur seals probably have, at meet, very small impacts.

  (b) Hooded seals may cause came losses due to competition for fish, but it is possible that their main feeding grounds are toe deep ● nd toe far north for hooded seals to constitute • serious threat to Canadian fishermen.

  (c) Harp scale eeem to have, ● t present, • n impact only through competition for commercial fish; thie impact could be significant.

In the absence of • hunt the harp seal stock will increase. The effects due to competition and perhaps aloe damage to gear or transmission of parasites may possibly increase to the level ● t which they have serious impacts on the fishery.

(d) Grey seals, which are increasing rapidly, are the major source of infection with parasites, and also probably contribute significantly to the losses due to competition for fish, and to gear damage. Theee impacts are estimated to be between $60 million ● nd $115 million annually. Though far from precise, these estimates are known with greater precision than is the case for harp seals.

(e) Harbour seals on the Atlantic coast cause losses that are very small compared with those due to grey seals; in ● ddition, the population is expanding only slowly, if ● t all. On the Pacific coast harbour seals are increasing quite rapidly, end appear to cause significant losses of herring and salmon. On both coasts damage seems to be localized near seal colonies and areas of fish concentration.

(f) Sea lions may have • small Impact through competition for fish ● nd damage to gear, although came *of* these losses may be highly visible.

- These losses could be reduced, or ● t least prevented from increasing, by reducing or stabilizing seal populations. Based on present information, the only effective method of controlling the numbers of seals is through a cull, though other methods cannot be completely ruled out. For eeme seals the financial savings from such actions could be several times greater than the costs involved. If the seal stocks are Increasing, as is the caee for harp and grey seals, there would be disadvantages in postponing • cull if control measures are desirable. The longer • cull is postponed, the greater the impacts on fishermen and the larger the numbers that would ultimately have to be killed. (Recommendation 38.)

- In *name* circumstances the extent of the impact can be reduced without affecting the seal populations. The damage to fixed gears or aquiculture establishments may be reduced if effective methods of nearing seals away from these operation can be developed. It may ● lza be possible to develop cheaper techniques for detecting ● nd removing parasites from fish fillets.

- There are considerable uncertainties about the magnitudes of many of these impacts, especially in relation to the effects of competition. There are also very large uncertainties concerning the extent of the changes in the impacts, especially the impact of parasites, that would result from changes in the numbers of seals. These changes are unlikely to be exactly proportional. (Recommendation 42.)

- In view of the many uncertainties about the costs and benefits of population control, any such operations would need to be regarded ae experimental and be supported by • n expansion of relevant research programs.

- Operation by government-employed hunters are generally superior to a bounty echeme on the basis of their effectiveness in meeting the objectives of the cull, their better collection of data on the kills, their lower cost, and the greater humaneness of controlled operation.

- Where seals cause serious local losses which cannot be prevented In other ways, consideration maybe given to allowing fishermen to kill "nuisance" seals under strict controls.

- Public attitudes towards killing seals, and regarding the relative values of seals and commercial fisheries, are factors to be considered before ● ny decisions on culling • re made.

- The chosen balance between the interests of fishermen ● nd the views of thoee opposed to any killing of seals needs to be expressed in explicit guidelines for each seal population, determining whether they should be allowed to increase, be reduced or be stabilized.

- For only four species - harp, gray ● nd harbour seals ● nd Steller sea lions - do current total impacts, or marginal impacts per seal, appear sufficiently large to make it necessary to consider measures of population control.

- For harp seals the present marginal impact per seal may be quite small, ● nd might possibly be Icon than the cost of a government-operated cull. Large numbers would need to be killed for effective control, and there • re many uncertainties that might be significantly reduced in a few years if there is• n effective research program, A government-operated cull doee not ● ppear justified ● t the present time.

- The net economic benefits of a cull of harp seals would be greatest if it were carried out hy existing sealers under a program of price supports for sealskins. In addition, such an operation would help to relieve come of the economic and social problems being felt in the traditional sealing areas. A large-scale cull of this kind would, however, almost certainly involve very considerable public protest. (Recommendations 37, 38.)

- For grey scale the economic benefits of a cull to the fishery would, even on conservative estimates, be several limes the likely cost of a cull, Culls of grey seals were carried out in the years up to 1983 without significant public protest. About 7,ooo grey seals would need to be killed annually in order to maintain the population at its present abundance. This is more than were killed in the pre-1984 culls. Culls of this magnitude would almost certainly require operations on Sable Island, and these might generate increased public protest.

- For harbour seals the total impact is relatively small, and the most serious effects concern limited areas. The problems might be resolved by allowing fishermen to kill "nuisance" seals under strict controls, or by localized government tulle,

- For Steller sea lions the damage from attacks on fishing operations tends to be relatively conspicuous; however, the greatest impact on the fishery ie probably due to competition for salmon. Losses due to ● ll causes eeem to be small compared to those on the Atlantic coast. The population is probably no greater than it was in 1913, and is not increasing. There seems to be no technical justification for instituting a cull at this time, although it will be necessary to keep a watch on population trends.

Recommendations

19. The Department of **Fisheries and Oceans** should, with **appropriate** ● dvlae **(see Recommendation 37),** ● otabllah ● xpllolt **guidelines** for determining which seal **populations** should, In **principle, he** ● hawed to **increase,** or he **reduced** rrr ● tahlllsd, No population control **activities should** be **undertaken unless clearly favoured by the balance of social and** economic b**enefits, and then only under a** carefully monitored long-term program **of evaluating their efficacy.**

20. **Any population** control operation **should be done under government** supervision.

21. Fishermen operating **fixed gears,** including **aquaculture establishments,** maybe given **licences** to kill "nuisance" ● ealc in the **vicinity** of their gears under **strict controls,** with provision **for a recompense** for **return** of biological material of value to **research programs.**

22. Any population **control** programs should **be:**

(a) designed to provide detailed data on such matters ax the **number,** ● ge, **sex,** location and **parasite** load of tha animato killed: ● nd

(b) associated **with** continuing ***monitoring of*** the ***popu lation*** concerned to determine • n y **changes** in the numbers, structure ● nd principal biological parameters of the **population, as** well **as** the efficacy of the population **control measures.**

23. The Canadian *government* should promote further studies aimed to **establish** more **precisely the** impact of **seals** on **fisheries** through **competition,** damage to **gear,** ● nd **transmission** of **parasites.** Particular ● ttention ● houid be given to the relation. ship between changes in ● eal **numbers** ● nd changes **in impact,** especially in relation to **parasites. Research programs** should ● lso be undertaken to determine the **effects** of any **control** operation, both on **the seal** populations and on their **impacts.**

24. Studies should be made of **possible methods** of controlling the abundance of ● ealh other **than** by **culling. Studies should also** be made of **possible methods** of reducing **impacts** other than by **a general** reduction **in** ● eal **numbers. These** might include **seal**-scaring **devices** and improved technique for detecting ● nd removing **parasites.**

25. There **should** not be • cull of **harp seals** in 19S7, but **the** impact of **harp seals** on **fisheries will increase,** and the possibility of • **cull in later years** must be **seriously** considered.

26. If • cull of harp **seals is** found to be **biologically** and **economically desirable** and **publicly** ● cceptable, **consideration should** be given to the **use, in** the implementation of the **cull, of ex-sealers** from the communities most severely affected by the **collapse** of the **seal markets.**

27. The **Royal Commission believes that biological** ● nd ● conomic consideration indicate **that su bstan tial** ● dvantages **would** be gained by • **cull** Of **grey seals.** Nevertheless. before **deciding** whether to **implement such** a **cull, the Canadian government should** take account of public opinion and **should** make use of the advisory **processes discussed** in Recommendation. **19** ● nd **37** for **this purpose.** Because grey **seals** are increasing **rapidly,** • decision needs to be made • s ***soon as*** practicable.

Environmental Protection

(See Chapters 13,22, 23.)

Conclusions

- Reduction in **numbers** of many **species of fish** by commercial fisheries **will** have come **effects** on **seal** populations. Because of the wide variety in the diet of meat **seal** species these **effects** are believed to be **generally small** and • re **not necessarily adverse.** in ● ny **case they** • re very **difficult** to determine.

- Some **seals** • re **killed** by becoming entangled in active **fishing** gear, either ● ccidentiiiy or when trying to take **fish** from the gear. The **limited** evidence **suggests** that the **numbers** dying in **this way** • re **small** compared **either** to some past commercial **kills** (harp **seals**) or the **natural** rates of **increase** of come populations (harp **seals** and grey **seals**).

- Loet or **discarded fishing nets** ● nd other plastic **debris cause** the deaths of many ***seals.*** It **is likely** that they are the principal **cause** of the decline in the northern fur **seal** population **since** the **1960s.** There **is** need for active **steps** to try to **alleviate** thie problem.

- There **is** no evidence of any **adverse effects** of **chemical** or radioactive **pollution** on **seals** in Canadian **waters. DDT, PCBs** and **related** organo-

chlorine compounds have caused harmful effects elsewhere, Including the United States Pacific coast, and there are come indications of harmful effects on belugas in the lower St. Lawrence River. There are ● lea, however, come indications that the quantities of DDT in the sea are diminishing.

- The principal danger to seals in the event of a major oil spill would be to northern fur seals as a result of low of thermal insulation due to oiling of the pelage. All other Canadian seals, which depend mainly on their blubber for insulation, • re less vulnerable in this respect. However, ringed seals could be vulnerable if oil accumulates at their breathing holes.

- Serious adverse effects on seals, particularly ringed scale, in the Arctic could result from arctic development activities such as surface mining for minerals, petroleum expiration and exploitation and, particularity, iarge-scale sea transport through the ice in association with these ● ctivities.

Recommendation

28. The Canadian government should work both domestically ● nd internationally to reduce the amount of netting and other plastic material being discarded ● t • ea. It should also support studies aimed ● t developing modifications to fishing gear which will reduce the hazard to seals end other marine life caused by the lost nets.

29. The Canadian government should not permit development *in* any pert of the Arctic without • thorough investigation ● nd disclosure of the potential environmental impacts on seals and sealing communities, and the consent of any ● boriglrrai community whose legal rights *are* affected.

30. In addition, arty significant increase of ice-breaker traffic in the Arctic may affect the numbers and distribution of ringed seals as well as the mobility of hunters, ● nd therefore should be conditional on (a) consultations with communities that uee the sea Ice to ascertain the extant to which their ● ctldtlee may be ● f-fected, (b) routing designed to mitigate effects on seals ● nd hunters, end (c) compensation to hunters for any unavoidable effects.

Public Information

(See Chapters 9, 11, 30.)

Conclusions

- The public attitude to scale end sealing has sometimes been based on incomplete and inaccurate information, including matters such as the trends in population numbers and the importance of sealing to local communities.

- Organizations opposed to commercial sealing were more effective than sealers or the Canadian authorities in presenting their viewe to the public at large and to the European authorities. Reasons for thie included the nature of the issue, the lack of public awareness of the biological, social or economic background, and the isolation and lack of resources of the waling communities.

- The public obtains nearly all its information from the media, rather than directly from protest groups or the government, but expects the government to be the primary source of this information.

- The government needs to be informed about public knowledge of, ● nd attitudes toward, seals and sealing in order to frame national policies that are responsive to those attitudes. Regular monitoring of public knowledge and opinion would also be valuable for checking the effectiveness of programs to keep the public fully informed about seals. (Recommendation 38.)

- Government restrictions on observation of the commercial seal hunt became an important source of conflict.

Recommendations

81. The Canadian government should ensure that the public is much more fully ● nd regularly informed ● bout the reasons for, ● nd background to, its policies regarding seals.

32. The Canadian government should facilitate greater balance in the public presentation of tbe views both of the sealing communities and of other interested grou pe.

33. The Canadian government **should make the most** effective uxe possible of the media In **disseminating information about seal** - ing.

34. The Canadian government **should** undertake regular **studies** to **examine** public **knowledge** ● nd **views** regarding **seals,** both to ● s-tat it in **taking** ● ccount **of these views** In **formulating** Curs. **dianseal** management **policies, and** to **enable it to ensure that its** ● ctivitfas **almed** at keeping **the public** fully **informed** ● bout the **issues** underlying **these policies** are **being effective.**

35. Observers ● hould be **permitted** to view ● ny **operations** In which teals are killed, **subject** to such legal **constraints** ox are **necessary** to protect personal **rights and** property.

Canadian Management

(See **Chapters** 8,9,11,12,13,17,27,29, 30.)

Conclusions

- Although there **was overexploitation** of the harp seal population up to Use 1980x, recent Canadian management **of seal stocks has** been generally **successful.**

  (a) Harp **seals** have very probably been **increasing in** recent years and it **is** likely that hooded **seals** have **also** been **increasing; quotas** eat since 1972 have beers in accordance with **the balance** of **scientific advice.**

  (b) Humane **hunting techniques** have been brought into effect.

  (c) With • few well-publicized exceptions, **regulations** have been **enforced** effectively.

- The moat widely **accepted objectives** for messaging wildlife are **those** eat out **in** the World **Conservation Strategy.** They **are:**

  (a) **to** maintain **essential** ecological **processes** and **life-support systems** on **which** human **survival** ● nd development depend;

(b) to **preserve** genetic diversity; and

(c) to ensure the **sustainable** utilization **of species** and ecosystems,

- The views of Canadians towards seals and sealing **vary.** Inadequate recognition by the government in **its** policy **making** of the width of this range of views **about seals** and sealing, **has probably added to** the **bitterness** of the harp seal controversy,

- Management of **seals** and sealing throughout **Canada is** presently entrusted to the Department of Fisheries and **Oceans (DFO). DFO has** the **necessary** technical competence In **data collection,** research into all **aspects** of marine **ecosystems,** and **enforcement. However,** many of **those** who view **seals as** other than **an** exploitable **resource** feel that their concerns are not **adequately reflected** in **policy** making. This concern would **be** reduced **if DFO** had • visible mechanism for taking into **account** all relevant interests when **setting basic** policy.

- In the Arctic, **research** into, and policy for, **seals** and **sealing** need to be **closely** integrated with **similar** activities in **respect** of polar bears and arctic foxes which are the major predators on **ringed sea** ls. Management of, and **research** into, polar **bears** and ● rctic foxes **are** presently the **responsibil ity** of the **Government** of **the** Northwest Territories, with the exception that the Department of **the** Environment **shares** responsibility for **research** into polar beam.

- The ***Constitution*** Act, ***1982,*** **sec.** 35, and federal **commitments** limit the **Government** of Canada's authority to **regulate aboriginal** wildlife **harventing except** in accordance with a **claims settlement** or came other form of ● boriginal **consent.** (Recommendation 13.)

- Aboriginal groups in the Arctic **are** in the process of finalizing **agreements** with the federal ● nd territorial governments under which they • re ● exuming a **certain** degree of **management responsibility** and control. (Recommendation 13.)

- **Considerable uncertainties surround many** ● apecte of **seals** and **sealing,** including the population **dynamics** of **the stocks** of **seals.** Particularly important uncertainties relate to the interactions between **seals** ● nd **fisheries** through competition for **fish** and **transmission** of **parasites.** Intensified **research is needed** to reduce these uncertainties, whether or not commercial **seal** hunting **is** continued. **(Recommendation** 23.)

- The non-consumptive uec of seals such as the viewing of seal herds can generate income in come • reaz in the Gulf. With ● ppropriate controls It can be carried out without harmful impacts on seal stocks, their environment or *any* sealing that might continue.

Recommendations

36. The minimal explicit objectives of Canadian wildlife resource conservation strategy should be as ● tatad in the World Conservation Strategy:

(a) to maintain essential ecological processes and life-support systems on which human survival and development depend;

(b) to preserve genetic diversity; and

(c) to ensure the sustainable utilization of species and ecosystems.

Two further objectives should be to • nsure that:

(d) wild ● nimsla are harvested with a minimum of suffering; and

(e) harvesting ● ctivities carve important human needs and involve minimum waste.

37. The Department of Fisheries ● nd Oceans, with the assistance of • representative advisory group, should explicitly establish for each seal stock both priorities for management and use that reflect social, economic and other values, and management plans hued on these priorities.

38. Management plans should be baaed on Information on seal numbers, on seal impacts on fisheries, and on public attitudes toward the killing of seals. They ● bould include proposals for target levels of populations in the medium term, ● nd for tbe number of seals, If any, that may be killed in population control programs, ● ubaiatenw hunting and commercial sealing.

39. The non-consumptive use of seals, such • s the viewing of ● eai herds, ● bould be encouraged subject to appropriate regulatory measures to protect the ● nimals ● nd their habitat,

40. Federal responsibility for seals in the Arctic should be closely co-ordinated with responsibility for the rest Of the arctic ecosystem. Policy formulation should be a co-ordinated process Involving a boriginal peoples, the Government of Canada ● nd the Government of the Northwest Territories..

4i. The Canadian government should consider transferring responsibility for seals on the Atlantic ● nd Pacific coasts to a section of the Department of Fisheries ● nd Oceans separate from those directly concerned with fisheries. The responsibilities of this section should include the protection of seals, management of ● ny utilization ● nd the interactions with fisheries.

42. Seal management policies should be supported by an ● ctive, well coordinated research program addressed to all tha relevant issues. Tbe financial and staff resources given to this program should be substantially greater than those given to seal research in recent years.

International Management

(See Chapters 10,22,28, 30.)

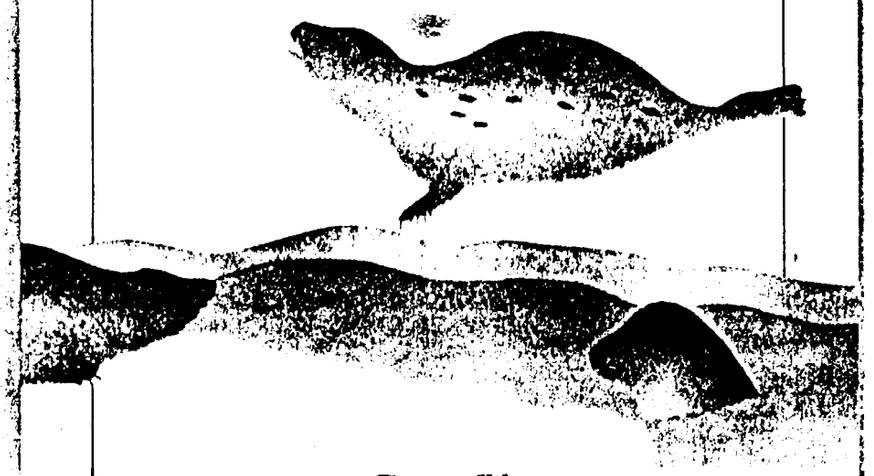
Conclusions

- Some species of seals inhabiting Canadian waters also move into waters under the jurisdiction of other countries ● nd, to a lesser extent. into international waters, In addition, many seal products enter international trade, and seals and sealing in Canada arouse a great deal of interest outside the country. Canada therefore needs to collaborate with other countries on seal matters, and to take account of views outside Canada in setting policies on seals. in particular, collaboration with Greenland, and with the Eurovan Community in relation to the Directive, is desirable.

- Canada belongs to one international organization ● nd is a party to one convention involved in the conservation ● nd management of seals.

Seals and Sealing in Canada

Report
of the Royal Commission
Volume 1



Canada

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Royal Commission on Seals and the Sealing Industry in Canada

Her Excellency the Governor General in Council
Privy Council
85 Sparks Street
Ottawa, Ontario
K1A 0A3

Your Excellency:

We are pleased to enclose herewith the Final Report of the Royal Commission on Seals and the Sealing Industry in Canada in accordance with the provisions contained in the Order-in-Council P.C. 1984-2242 of June 22, 1984, as revised and amended on September 26, 1985 by P.C. 1985-2905 and on December 20, 1985 by P.C. 1985-3769.

Respectfully,

Albert H. Malouf
Chairman

Kenneth Radway Aitken
Commissioner

Russel Lawrence Barsh
Commissioner

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September 1986

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It is time to take our *bearings* and *to chart the brood lines of public policy for the* coming *years.* Canadian domestic *issues* are unavoidably *bound up with* international *developments. Accordingly, the policies we develop - foreign and domestic - must address bath Canadian and international realities. The two are inseparable elements of* a *truly national* policy.

Rt. Hon. Joe Clark, Secretary of State for External Affairs

(Competitiveness and Security: Directions for Canada's International Relations. 1985. Dept. of Supply and Services, Ottawa.)

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FOREWORD

During the past 20 years the management of seals in Canada has changed from being viewed as essentially a technical matter that concerned a few fishermen on the east coast and a handful of' scientists and fishery administrators, to a responsibility which has aroused considerable interest, and sometimes strong feelings, among a great many Canadians. Canada's approach to seals and sealing has also evoked public interest in a number of other countries and given rise to actions which have had important impacts on Canadian international trade and, on occasion, threatened Canada's image in other countries. The controversial nature and the complexity of many of the issues involved have created substantial difficulties for successive government in their efforts to develop policies for the management and utilization of the seal populations which would be well balanced and acceptable to a wide spectrum of Canadian opinion.

The Royal Commission on Seals and the Sealing Industry in Canada was set up by the Government of Canada in August 1984. Its Mandate was to review all matters pertaining to seals and the sealing industry in Canada, to assemble relevant information, and to make recommendations on the implications of this information for the development of policy. The Royal Commission's considerations included social, economic and biological matters. The Government considered that such an Inquiry would do much to clarify the situation for the general public both in Canada and in other concerned countries. [t would provide an opportunity for all interested parties, Canadian and foreign, to put forward their views and to present any evidence they desired, and thus assist the Commission in drawing its conclusions and making ita recommendations.

The Royal Commission has now completed ita work, and the findings are presented in this Report. The first volume (Part I) describes the setting up of the Commission, the tasks with which it was faced, the way in which it attacked those tasks, the principal conclusions it has reached, and the recommendations which it is presenting to government on the basis of those conclusions. The subsequent parts of the Report contain detailed discussion of the issues that the Commission examined.

PART I

Summary

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Chapter 1

Introduction

Establishment of the Royal Commission

Order in Council P.C. 1984-2242 of 22 June 1984 created a commission to inquire into and make recommendations on all aspects of seals and sealing in Canada, including the social, cultural, ethical, scientific, economic, resource management, and international implications.

The Mandate

In particular, as set out in the Mandate, the Royal Commission was called upon to inquire into and report on the following matters:

(a) *the social and cultural impact and economic benefits and costs, including regulatory costs, of sealing in Canada;*

(b) *the ethical considerations relevant to the harvesting of seals;*

(c) *the status of Canadian seal stocks and measures currently in force in Canada to conserve, manage, protect and regulate the harvesting of seals, including the adequacy of such measures;*

(d) *the interactions between seals and commercially exploited fish populations that may affect food supplies or contribute to parasite transmission;*

(e) *the interactions between seal populations and commercial fisheries, including, inter alia, competition between seals and fishermen for fish stocks; interference in fishing activity by seals, including damage to fishing gear and catches; and the effects and related economic costs on the*

quality of fish catches by transmission of parasites by scale;

(f) the principles necessary to manage seal stocks for conservation purposes, including appropriate cull levels, so as to ensure the continuing abundance and health of seal stocks and to minimize adverse interactions between seals and Carradian fishing resources and operations;

(g) the methods far harvesting seals commercially and their suitability;

(h) the domestic and international opportunities for and constraints on the processing and marketing of Canadian seal products;

(i) the availability of alternative sources of income and opportunities for adjustment for individuals and communities currently dependent on the seal harvest;

(j) the concerns of individuals and groups with a direct, indirect or declared interest in sealing in Canada, including an assessment of such infer. ests;

(k) the public awareness and attitudes in Canada and abroad on sealing policies and activities in Canada and the extent 10 which such attitudes could constrain future revitalization of commercial sealing, or adversely affect other commercial interests and activities, and recommended approaches for removing those constraints;

(l) the international comparison, as appropriate, for the preceding elements; and

(m) the possible new international initiatives for managing Canada's seal resources, for harvesting seals and for related activities.

Mr. Russel L. Barsh

of Seattle, United States. He taught law and public policy at the University of Washington until 1984, when he returned to the practice of public international law and environmental management with indigenous communities in the United States and Canada. He has published works on Indian history, government, law and economic development.

Dr. John A. Gulland

of Cambridge, England. Presently Senior Research Fellow, Centre for Environmental Technology, Imperial College, London. Until 1984 he wae with the Department of Fisheries. FAO. Rome. His Particular concern has been with the population dynamics and management of marine living resources, including fish and marine mammals.

Professor Ian McAllister

of Halifax, Canada. Professor of Economics, Dalhousie University, since 1971, and Chairman, Lester Pearson Institute for International Development. He haa advised a number of governments and published books and articles on regional development, foreign aid, energy and industrial policy issues, especially relating to Canada, Africa and the European Community.

Dr. Wilfred Templeman

of St. John's, Canada. Formerly Director of the Biological Station, Department of Fisheries and Oceans, St. John's, Il is scientific papers include a review of the living marine resources of Newfoundland, including seals and whales, a study of the infection of cod and other fish of the Canadian area by the seal nematode, and a study of the life history of the capelin, probably the principal food of the hnrp seal.

Dr. Patrick A. Geistdoerfer

Responsible for research *in marine* biology at the Centre National de Recherche, Paris, France, Following hie appointment as a Commissioner, Dr. Geistdoerfer attended the opening meeting of the Royal Commission held in Montreal on 24 September 1984, but did not participate further in the activities of the Commission, and subsequently submitted his resignation.

Office of the Royal Commission

The Commission set up its office in the Palais de Justice in Montreal. A list of all staff employed in the Commission's office is contained in the Administrative Appendix.

Preliminary Report

in accordance with its Mandate, the Royal Commission submitted a Preliminary Report to the Governor in Council on 19 December 1984. This report dealt primarily with the work of the Commission in getting organized, as well as ite estimate of the coet and the duration of the Inquiry. It outlined the methods to be employed to gather the information required to fulfil the Mandate of the Commission.

Informing the Public

The Royal Commission wrote to groups and associations which had previously ahown an interest in the subject of the inquiry, advising them of its Mandate and the manner in which it intended to do its work. In addition, public notices appeared in newspapera across Canada and abroad, publicizing the Mandate of the Royal Commission and the public hearings which would commence early in 1985. To assist interested persons in approaching the Commission, a formal Statement of Policy and Procedure waa prepared, detailing the Commission's Mandate, its Commissioners, its terms of reference, the rules to be followed during the public hearings, and the manner of submitting briefs and obtaining access to documents in the possession of the Commission. This statement is reproduced in the Administrative Appendix.

Press kits were prepared and distributed to Canadian and foreign newspapers in Canada and abroad, and a memorandum dispatched to Canadian diplomatic posta and missions.

Sources of Information

In order to carry out its task, it was necessary for the Royal Commission to draw on all possible sources of relevant information and opinion. These sources included:

Harp seals in the Gulf of St. Lawrence

- public submissions either as written briefs or in personal presentations to the Commission;
- studies undertaken by expert consultants engaged by the Commission to examine particular topics;
- information and opinion provided by experts in particular fields at the request of the Commission;
- published scientific and technical literature;
- personal knowledge, experience and research of and staff.

Public Hearings and Visits

The Royal Commission sought to provide all members of the public interested in its Mandate with the opportunity to present briefs and appear before it at their common convenience. At the same time, faced with constraints of time and budget, the Commission had to strike a reasonable degree of balance.

With this in mind, it was necessary for the Royal Commission to hold its public hearings over a fairly short period of time and in Canada's large urban centres accessible to the public, the major newspapers, and radio and television stations. The Commission was also obliged to keep in mind the importance of hunting, trapping and fishing to the indigenous population, and the importance of seals and sealing to the inhabitants of the Arctic, the Atlantic region and, to a lesser extent, the Pacific communities. Montreal, Toronto, Vancouver and St. John's were accordingly selected as the cities for the public hearings held in Canada.

Many Inuit associations and Inuit individuals expressed a desire that the Royal Commission visit their particular communities. In view of the large number of such requests, the Commission asked some of the associations to co-ordinate their activities and help it to choose the most appropriate areas for it to visit and receive presentations from persons residing in and around the communities chosen.

As a result, the Commissioners visited Holman on Victoria Island in the western Arctic (N.W.T.), Pangnirtung in the eastern Arctic (N.W.T.), and Kangiqsujuak in northern Quebec.

Because of the international interest in the sealing question, the Royal Commission also held public hearings in Europe and the United States; these hearings took place in London and Washington. The localities and dates of hearings and other public sessions of the Commission were:

Locality	Date
Montreal	22–25 January 1985
Toronto	28–31 January 1985
Vancouver	4–5 February 1985
London	9–10 April 1985
Washington	17 April 1985
Montreal	22–23 April 1985
St. John's	21–23 May 1985
Kangiqsujuaq	27 May 1985
Pangnirtung	28–29 May 1985
Holman	18 June 1985

A total of 156 witnesses gave oral testimony

Written Submissions

In addition to oral representations, the Royal Commission received a total of *137* written briefs. The sources of written briefs and oral testimony included sealers; the sealing industry; the fishing and fish-processing industries; the fur industry; representation of the aboriginal peoples; conservation, animal-welfare and animal-rights groups; veterinarian; academics in such fields as biology, economics, sociology, nutrition, philosophy and law; local development groups; elected representatives; government department; representatives of foreign governments; and concerned individuals. The names of the pereone, groupa and associations who submitted briefa, as well as the names *of* witnesses who appeared before the Commission, are aet out in the Adminietrative Appendix.

Consultants

The Royal Commission frequently required information which was not available from witnesses, and which could not be obtained with its own staff resources. For this reason it retained a number of consultants to carry out special studies in its behalf. These consultants are listed in the Administrative Appendix.

Expert Inquiries

The Royal Commission has also drawn heavily on the help and advice of people who had particular knowledge and skills in matters with which it was concerned. This help, which has been readily given, has ranged from the provision of basic facts to discussion of complex scientific issues, and even to review of preliminary drafts of technical sections of its Report. In the Administrative Appendix the names of the persons who have helped the Royal Commission in this way are listed.

Organization of the Report

Tha Report of the Royal Commission is published in a series of volumes.

This introductory volume conveys in a compact form the essential features of the Royal Commission's work. These features include the

establishment of the Commission, its method of operation, u general account of the issues which the Commission had to examine and, most important, the principal conclusions reached and the recommendations based on them,

The subsequent volumes provide detailed discussion of the issues that the Royal Commission has examined; they present the data available to the Commission on each issue, and the reasoning by which the Commission has reached its conclusions and recommendations. 'i'he final volume also includes an Administrative Appendix, which contains additional information about the operational details of the Commission, supplementary to that given in thie volume.

Finally, there is material accumulated by the Royal Commission in the course of its studies which should be preserved to make it availableto interested parties. This material, in the form of technical reports, is listed in the Administrative Appendix. It has *been* deposit.ed at the headquarters library of the Department of Fisheries and Oceans in Ottawa and at the Pinniped Bibliography, Department of Zoology, University of Guelph, Ontario, Canada, and access to it may be obtained on application.

Chapter 2

Seals and Sealing in Canada

Ten species of seal inhabit Canadian waters, and most of them have been hunted on some occasion or another, for a variety of purposes: for food and clothing, for commercial stile, or to protect segments of the fisheries. In the public eye, sealing has been especially associated with the hunting of young harp and hooded seals in the early spring in the northwest Atlantic.

The Atlantic Seal Hunt

Sealing plays an important part in the seasonal cycle of activities of many small communities along the Atlantic coast. [t comes at a time of year when there ere few available income-earning activities, and when cash is needed to overhaul the boats and gear for the summer fishing, Its significance is therefore greater than the relatively small dollar returns to most participant that the sums earned might suggest.

The harp seal #the species mainly involved. About two million of these seals now inhabit the northwest Atlantic. They migrate south in winter, to breed in late February and March on the ice in the Gulf of St. Lawrence and at the Front - the area east of Newfoundland and southern Labrador. They then return north to their main summer feeding grounds, along the weat coast of Greenland and in waters of the eastern Canadian Arctic as far north as Ellesmere Island. During the 1970s, some 130,000 "whitecoats" - pups a few days old - were taken annually. Even larger numbere were killed in the 19th century and the earlier part of the 20th century. In addition to pups, some adults were killed on the breading grounda. Older animals are also taken in migration through Canadian waters and on the summer feeding grounds in the Canadian Arctic and off Greenland.

Since a quote was imposed in the early 1970s, the population has probably increased slightly, and now that hunting has been substantially reduced, the population can be expected to increase more rapidly. This possibility causes come concern to the fishing industry bec ause of the effects it might have on the abundance of *com*mercial fish and on the incidence of nematode parasites, which have a life-cycle involving the reproductive stage

in seals and an earlier stage in fish, where they cause economic losses to the fishing industry.

Sealers on the ice at the Front (Circa 1920s)

The hooded seal also breeds on the ice off the east coast of Canada, almost entirely at the Front and in Davis Strait; its distribution is rather more northerly and offshore than that of the harp seal. It is less numerous "than the harp seal; the population in the northwest Atlantic numbers about 300,000. Pups (called "bluebacks") and some adults have been hunted at the Front by the same large vessels that take harp seals.

Between 1978 and 1982, an annual average of about 10,000 pups and 2,600 adults were taken by Canadian and Norwegian sealers, and about 3,800 seals of all ages were taken at Greenland. Doubts have been raised as to whether hunting was depleting the population, it now seems possible that the numbers were increasing *even* before the drop in catches in 1983.

Pups of both harp and hooded seals have been caught primarily hy sealers in large vessels, but they have also been taken by men going out from shore on foot or in small boats (landsmen) and, to a lesser extent, by small groupe of sealers in medium-sized vessels (longliners). Between 1946 and 1962, Norwegian vessels also taak part in the hunt at the Front. In the early yeare of the hunt, the main product was oil from the blubber, but in recent years the greatest part of the gross return in the commercial hunt has come from the skins. These underwent preliminary processing in Canada before being exparted, mainly to Norway, for further processing and sale to the international fur trade. Until recently the main final market was Western Europe, but this market has now collapsed. Some income is still obtained from oil. Although there is little meat, apart from the flippers, on young pups, there is much on the older animals. Most seal meat is either used by the sealers themselves or is sold fresh, frozen or canned.

Seals in the Arctic

Sealing is important for many communities of aboriginal peopies of the Canadian North. The main species hunted is the ringed sea ; but some bearded seals are also taken. In addition small numbers of harbour scale are caught, as well as come harp seals during their summer migration. The chief uee of tha seals is for food, and to a lesser extent for clothing, by the sealers themselves and their families, but some skins are sold for cash. The importance of these sales has increased with changes in hunting practice. Hunters now rely more than formerly on rifles and snowmobiles, and hence need cash for ammunition and fuel,

The ringed seal ie the most abundant of the arctic species. Little is known of ite population biology, but in the Canadian Arctic its numbers probably run to seven figures. The catch in recent yeare has amounted to • few tens of thousands annually. The population as a whole seems to be in a healthy state, but there ie concern that some local stocks may be over-exploited.

The larger bearded seal is much less numerous and even less known than the ringed seal; the population in the Canadian Arctic may possibly be of the order of 200,000 animals.

ıtic Seals

and harbour seals also inhabit Atlantic waters; neither hunted commercially to any extent in recent years. Both cularly the grey seal, cause concern to the fishing industry— ımage nets, compete for fish and play a role in the ematode parasites (codworm/sealworm). Both have there- to bounty schemes, and grey seals have also been subject to s.

seal is found on the Atlantic coast roughly, between l in the United States and, in summer, northern Labrador. ulation, which is centred on Sable Island and the south- St. Lawrence, probably numbers about 70,000. In common grey seal stocks in the north Atlantic, the Canadian stock reduced by the beginning of the 20th century, but is now

recovering. The group breeding on Sable Island is currently increasing at about 13% per year. About 1,700 animals, on average, have been culled annually in recent years as a population control measure.

The harbour seal is widely distributed on both the Atlantic and Pacific coasts; the Atlantic population numbers about 13,000.

Seals on the Pacific Coast

The northern fur seal is the most abundant seal in the north Pacific Ocean. It does not breed in Canadian waters, but mainly on islands in the Bering Sea, although some thousands of females and young males visit the B.C. coast each summer. It was harvested until 1984 under the management of the international North Pacific Fur Seal Commission, of which Canada was a member, although Canadians have not been directly involved in the hunt for many years. The part of the herd from the Pribilof Islands, from which the Canadian visitors come, now numbers about 800,000, but it is declining by about 8% per annum. The annual kill on the Pribilof Islands averaged about 25,000 during the 1970s and up to 1984, although the United States government has now limited the take to the subsistence needs of the Pribilof Islanders. Much of the evidence suggests that the recent decline in the population has not derived from the hunt, but is more likely to be the result of juvenile seals becoming entangled in discarded and lost fishing nets and other plastic debris.

Two kinds of sea lions are found on the B.C. coast. The Steller sea lion ranges in the eastern Pacific from Alaska to California, but only about 5,000 out of a total of 200,000 now inhabit Canadian waters. There has been no commercial hunt since 1966, but between 1913 and 1968, culling operations killed up to about 2,000 sea lions annually. The present population is well under half the original level and does not appear to be increasing, possibly as a result of competition from a large population, breeding just across the Alaskan border.

The California sea lion breeds mainly off the southern part of the U.S. west coast, but recently about 4,500 males have visited the southern B.C. coast each year in late winter and early spring. This species has not been hunted anywhere for many years.

The harbour seal is also widely distributed on the Pacific coast, with a population of about 50,000. It has not been hunted commercially, but

bounty and other hunting during 1914-1969 probably accounted for an average of 3,000–6,000 kills annually. Since hunting ceased in 1969 the harbour seal has been increasing at a rate of about 10% per annum.

The northern elephant seal is the only other seal found in Canadian Pacific waters. It broods off southern California, and appears in Canadian waters only in very small numbers.

Chapter 3

Issues Arising from the Mandate

The Mandate given to the Royal Commissionwas complex. In broad terms the issues can be summarized as follows:

> *Under what conditions, if at all, is it acceptable for mankind to utilize or manipulate the seal populations for human benefits; how far have recent and present Canadian seal hunts satisfied these conditions; and what steps should be taken to ensure the acceptability of any future Canadian operations involving the killing of seals ? In addition, haw significant has sealing been to Atlantic and Arctic communities; what effect has there been on these communities from the* decline in *the markets for seal products; and what need, if any, is there 10 provide compensatory assistance?*

To execute its Mandate the Royal Commission addressed these questions by grouping the items in the Mandate into four main categories:

- public concerns about sealing;
- economic, social and cultural issues;
- biological issues;
- management issues.

Public Concerns about Sealing

Views on humanity's relations with animals are very diverse, ranging from a totally utilitarian view that humanity may do what it wishes to animals regardless of the effect on them, to the view that the rights of animals should be recognized as entitled to at least as much respect as those of human beings. The Royal Commission has surveyed a cross-section of public

ion polls, both in Canada and in several other countries prominently in the sealing controversy. In so doing, it ors that were considered by one group or another as mining whether or not a particular type of seal hunting

portant political event, which resulted in large part from inst sealing, and which had a major effect on the sealing fore on the hunting of seals, was the ban on the importa- roducts by the European Community. The Commission manner in which this ban came into being, its effect on the response by the Canadian government, and likely s.

ich are clearly important to the public in forming a view or unacceptability of any part of the seal hunt are:

ruelty, if any, involved in the killing of seals;

he seal population, especially whether its survival is en-

ce of the hunt to the economic well-being and culture of gaged in it;

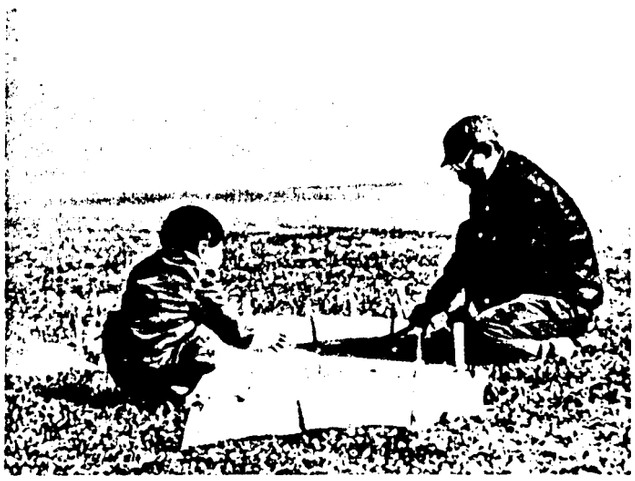
e of the use to which the seal products are put.

sion has examined all these aspects.

ocial and Cultural Issues

s of Canadian communities depend strongly on seal hunt- and for an important part of their cash income. Many of mmunities of the North and many small non-aboriginal e Atlantic coast constitute these groups. These communi-

ties seem to have been seriously affected by the collapse of the European market for seal products that occurred in 1982–1983. The Royal Commission has carried out direct studies in both groups of communities to determine the extent to which they depend on seals, and the effects produced by the loss of a commercial market for seal products. It has also assessed the possibilities of alternative employment or other compensation for lack of employment in sealing, and the consequences of various forms of compensation for the cultural and economic life of the communities.



Stretching sealskins (Northwest Territories)

neces-
rect economi the indu
but a flects on international statu sulting

Future prospects for any sealing industry would depend on the possibility and acceptability of developing other markets, both in Canada and

elsewhere, for seal products, Including not only skins, but also meat and oil. The Commission has examined these possibilities.

Biological Issues

[n view of the importance attached to the question of humaneness or cruelty in the killing of seals, the Royal Commission has examined the methods used in the various hunts and sought expert advice on the level of suffering involved in each of these methods. It has also looked at proposals for alternative methods of killing which might be more acceptable. To provide standards of comparison, it has reviewed information on the level of humaneness in two other circumstances in which great numbers of large mammals arc killed, slaughterhouses and big game hunting.

To determine whether any of the Canadian seal populations have been seriously reduced, and particularly whether survival of any species has been endangered by hunting, the Commission bas reviewed and sought expert opinion on the available information on tbe sizes and compositions of the seal populations, and how they have changed in recent years as a result either of hunting or of other causes.

Other human activities could have adverse effects on seal populations. These include the passage of large ice-breakers through the arctic ice and pollution by toxic chemicals. Seals can also become entangled in active or abandoned fishing gear. The Royal Commission has reviewed what is known of these effects.

Three aspects of the interactions of seals with commercial fisheries have been examined. Using the available information on the sizes of the seal populations, the Royal Commission has assessed, as far as possible, the quantities of commercially important fish and other marine animals consumed by seals, and the effect that this consumption is likely to have on the amount and value of the catch of commercial fisheries.

Another complaint raised by fishery interests concerns the transmission of nematode parasites (codworm/sealworm) by seals. The Royal Commission has studied tho incidence of parasites, the costs of removing them from fish flesh, and the reduction in value caused to the product. It has also, to the extent possible, examined the relation between seal numbers and parasite frequency, and the degree to which the parasite-related costs could be reduced by reducing seal stocks.

Hooded seal and blueback PUP

The Commission has also assessed the available information on the direct losses which seals cause fishermen by robbing their catches and damaging their gear.

Management Issues

Management issues arise at several levels. The current controversy emphasizes the need for the identification crnd adoption of principles and objectives for the management of seal populations which are widely acceptable to the Canadian people and 10 the broader international community. If these goals arc to be achieved, there is need both for a higher level of public knowledge about seals and seal hunting, and for the establishment of machinery to work out these objectives through wide and reasonably public consultation. The Royal Commission has considered ways in which these processes of public education and consultation could be more effectively advanced.

Once suitable objectives have been identified, their achievement for any particular seal population will require both adequate knowledge of the biological factors involved and efficient administrative mechanisms. Basic to the biological problems are the general principles relating the size and

structure of animal populations to numbers removed by exploitation or predation. These principles apply directly when seals are taken, either by commercial or subsistence harvesting, or by culling with the aim of reducing adverse effects on the fishing industry. Essentially the same principles also apply when seals are preying on commercial fish stocks. In addition to knowledge of these basic principles, management requires knowledge of the population parameters of the particular seal and fish stocks where the problems arise. The Royal Commission has reviewed much of the available information on these biological problems and drawn such conclusions as it could on their implications for management. The Commission has, however, found great deficiencies in the present level of knowledge and has identified requirements for further research to provide a more effective basis for future management.

The Royal Commission has also commented on a number of possible administrative arrangements and practices which might be considered with a view to improving the efficiency of management of seal stocks.

Chapter 4

Summary of Findings

The Canadian commercial seal hunt, which involved the use of large ships and the clubbing of seal pups on the ice, has been a focal point of international attention for more than 20 years. Because of massive negative publicity, the prices of sealskins and other seal products fell dramatically. The international markets for all Canadian sealskins, largely located in Western Europe, virtually disintegrated over a one-year period in 1982-1983. In 1983 the European Community (EC) issued a Directive banning the importation of products made from harp and hooded seal pups. Markets have not recovered.

These changes have had a dramatic impact on the way of life of many Canadian Inuit, as well as substantial effects on the incomes and ways of life of many Canadians living in small communities on the more northerly parts of the Atlantic coast. The drop in prices of seal pelts has resulted in large reductions in the number of seals killed in all types of hunting, and has altered the nature of many of the questions that the Royal Commission has had to address. In this chapter, the Royal Commission summarizes its findings according to four main categories: ethical issues; biological issues; management issues; and economic, social and cultural issues. The chapter concludes with a commentary *on* the possible future of Canadian sealing communities.

Ethical Issues

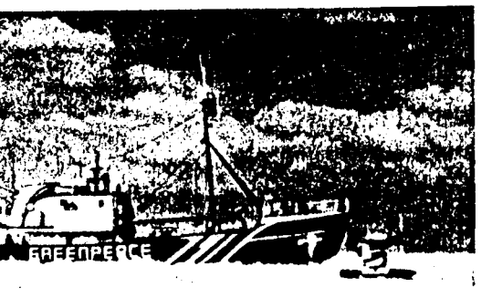
There is no agreement on whether it ia ethical or moral to kill seals. The choice is a matter of personal conviction. There in, however, substantial weight of opinion that if the killing of any wild animal is to be accepted as ethical, it should satisfy the following conditions:

- The existence of the species should not be threatened.
- No unnecessary pain or cruelty should be inflicted.
- The killing should serve an important use.
- The killing should involve a minimum of waste.

sion recommends that any killing of wild animals should
nese conditions.

hown later, most present-day Canadian sealing satisfies
. Sealing operations pose no significant risks to any
le cruelty or unnecessary suffering inflicted in most seal-
ne people have attacked the triviality of the ultimate uses
:., in fashion furs), but the critical issue is the importance
rated to those hunting seals. This income is of consider-
sealers living in conditions of limited economic opportuni-
g operations there is little or no waste of any usable seal

opinion polls and other information showed that the
s well informed about seals and sealing. Many present
g give as their reason for opposition one or another of the
bove. Their opposition might be reduced or eliminated if
ore aware of the degree to which these conditions are
-day sealing. The government should assist in providing
to the public, especially through the media. It should also
rmed about public opinion concerning seals.



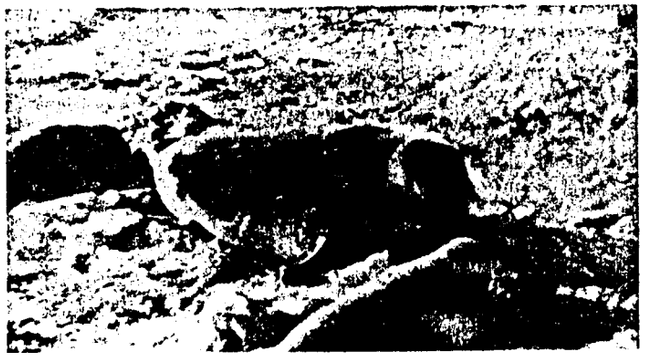
n the Gulf

If the four points listed above are indeed satisfied, the ethical case against sealing as it was carried out in most recent years comes down to the argument that any killing of an animal is wrong. Some people clearly hold this view, but opinion polls show that they constitute a small minority in Canada, as well as in other countries in which polls have been conducted. Other killing of animals, such as the slaughter of domestic animals for food or the hunting of wild animals for sport, is widely accepted, although the ethical arguments against them seem, on logical grounds, to be as strong as the ethical arguments against sealing.

The killing of seals should not, therefore, be prohibited as a matter of principle. Nevertheless, opinion polls, letter-writing campaigns and other measures of public feeling show that there is considerable opposition to the clubbing of seal pups. While this opposition may be largely an emotional response to the attractive picture of a white, dark-eyed "baby seal", or to the brutal image of one being clubbed and skinned on the ice, it is a very strong response, and it is unrealistic to consider any resumption of the whitecoat harvest. Whatever the facts about conservation or cruelty, a renewal of large-scale commercial hunting of seal pups would make sealing once again a matter of divisive public controversy. Consequently, the killing of the pups of harp seals (whitecoats) and hooded seals (bluebacks) for commercial purposes should not be permitted.

Biological Issues

These issues are concerned with the conservation of the stocks, the possible cruelty of the killing methods, and the interactions of seals with fisheries. Following the collapse of the market for sealskins, Canadian harvests, with the possible exception of some small local groups of ringed seals, are much less than the sustainable yields. The populations of most species of seals are therefore increasing. In fact, it is likely that the abundance of harp seals has been increasing ever since the application of effective quota regulations in the 1970s. In some cases the rate of increase is fairly rapid – grey seals on Sable Island are increasing by some 13% per year. These increases will probably intensify the seriousness of the impact of seals on fisheries, as is discussed below. Even if markets recovered and harvests of older harp and hooded seals increased, there should be no conservation problem caused by harvesting, provided that the system of monitoring the stocks and imposing catch limits and other controls is as effective as was that for harp seals during the last decade.



Adult harp seal and whitecoats

Northern fur seals of the Pribilof Islands of the north Pacific are not hunted in Canada, although some visit Canadian waters during their migrations. Their numbers are declining, possibly because of entanglement with pieces of old fishing nets and other waste material, Canada should continue to collaborate with the other countries concerned to tackle this problem. With this exception, human activities that indirectly affect seals, such as the depletion of fish stocks and pollution, currently pose no significant threat to seal stocks. However, if year-round large-vessel shipping traffic developa among the arctic islands as a result of mineral or oil development, it could pose threats to seals, especially because of the break-up of the patches of ice on which ringed seals have their breeding dens.

Any killing of large numbers of animals, whether the clubbing or ahooting of seals, the shooting of wild animals far food or sport, or the slaughter of domestic animals for food, will involve some pain and suffering. Sealing is no exception. There are two types of sealing where suffering is considerable: netting, and deliberate wounding of seals in open water to facilitate their retrieval. These types of sealing should be phased aut as coon as possible. Other types of sealing, when properly conducted, involve little or no cruelty. Young harp seals, for example, suffer no stress ae the sealer appreaches; proper clubbing produces unconsciousness or death virtually instantaneously; and in most cases - indeed, in all cases for older pupsafter weaning - there is little evidence of stress being caused to the mother or to other seals in the vicinity.

In the past, some sealing was conducted in ways that did Involve some cruelty and suffering. Since the 1960s, however, stricter regulations on sealing methods have been introduced, particular attention has been paid to the whitecoat hunt, where the regulations, for the most part, have been vigorously enforced. The cruelty involved in present-day sealing is probably less than that inflicted in hunting deer or other wild animals, or in many forms of rearing and slaughtering domestic animals. This sets the killing of seals in the context of killing other animals, but it does not justify any cruelty *in* the killing of seals. There should be no relaxation of the efforts to maintain and improve the standards of humaneness in all aspects of the various seal hunts.

Many questions remain concerning the interactions of seals with fisheries. The impacts of seals on fisheries are very real, but they are also very difficult to express in reliable, quantitative terms. Fewest doubts concern the losses caused fry removal of fish from, and damage to, fishing gear, which are usually clearly visible. Losses from these sources are estimated to run to a few million dollars annually. Losses resulting from competition between seals and fishermen for commercial species of fish, and from the spread of parasites, are almost certainly much higher. Estimates of these losses are given in the Royal Commission's Report, but should be treated with caution. 'f'hey have been produced to illustrate the likely extent of the problem, and the logical and arithmetical steps that need to be taken to produce quantitative estimates. Even the lower bounds of the ranges of losses, which are believed to be conservative, are substantial when compared with the total value of the fishing industry. These problems are most acute in the Atlantic region, but there are also problems in the Pacific.

While changes in seal numbers are unlikely to be reflected in exactly proportional changes in the losses caused to fisheries, these losses will increase as populationa of seals, especially grey and harp seals, continue to increase. Even if there is no direct human intervention, these increases will not continue forever, but the levels at which different seal populations will stabilize are not known, and they are probably well above present levels. Many uncertainties surround the estimates of the current impacts of different species of seals on fisheries, and how these impacts would change as the numbers of seals change. Regardless of the policy adopted towards possible central of seal populations, further biological research an seals and an their interactions with fisheries is greatly needed.

Management Issues

The changing attitudes of Canadians towards seals and sealing, and the growing number of people who believe that seals should be considered as more than just another potentially harvestable resource, require modifications in the methods of formulating and implementing Canadian sealing policy. The Royal Commission is therefore recommending that the Department of Fisheriee and Oceans should be assisted by a broadly representative advisory group charged with drawing up the basic Canadian policy on seals. This policy should include scientifically based, long-term management plans for seal species, and it should trike into account the interests of those provinces and communities that are particularly dependent on sealing, as well as the views of major conservation and animal-welfare groups, and the probable impact of scale on commercial fisheries. In the Arctic, formulation of policy on sealing should be a co-ordinated process between the aboriginal peoples, and the Governments of Canada and the Northwest Territories. These governments should encourage and formalize self-regulation of harvesting by the aboriginal peoples.

The management issues which were in the forefront before 1983- conservation of the stocks, and elimination of unnecessary cruelty - are now much less urgent. They were, in any case, largely resolved by the applications of various regulations (closed seasons, quotas, restrictions on killing methods) in the late 1960s and the 1970s, and the great reduction of catches, following the collapse of the market for sealskins, has eased any remaining problems.

At present, the crucial management question arises from the relation between seals and fisheries, including damage done to fishing gear, the transmission of parasites, and competition between seals and fishermen for fish. At issue is tho question of whether or not to cull the increasing populations of grey seals and harp seals in the Atlantic and harbour seals in the Pacific. (The question of a possible harp seal cull assumes that, as seems likely, there will be no large-scale commercial harp seal hunt in the immediate future.) Though the total loss caused by seals to Canadian fisheries is not accurately known, it is almost certainly appreciable and is likely to increase. The method of reducing these impacts that shows the most promise of being effective is the control of total seal numbers by some form of cull, although in some cases, such as harbour seals in the Pacific, the killing of individual seals at places where fisheries are especially vulnerable may be effective.

Grey seals

The choice of whether or not to cull should take into account the estimated scale of cull required to have any substantive impact, and the costs of such a cull. It should also take account of the uncertainties that surround such estimates, the degree to which these uncertainties could be reduced by further research, and the likely public reaction to a cull.

For harp seals the balance between these factors is such that no government-operated cull would rejustified at present, In particular, the extent of the impacts on fisheries is known much less accurately than it is for grey seals. Further research should enable more precise estimates to be available in a few years' time, when the matter should be carefully re-examined.

For grey seals, which have the greatest pcr capitaimpact on fisheries, the arguments are more evenly balanced. The long-term benefits to fisheries from all causes, for each grey seal killed, would greatly exceed the costs of carrying out a cull. It is not clear, however, whether a large annual cull of several thousand grey seals, which would be required to stabilize the population, would be generally acceptable to the Canadian public. The public reaction to a cull may become clearer, and the choice of whether or not to cull may become simpler after this Report has been published.

Economic, Social and Cultural Issues

The direct economic benefits from commercial sealing are extremely small compared with the Canadian gross national product (GNP) or even

with the total output of the Atlantic provinces. Because there are practically no alternative employment opportunities in or near sealing communities during the sealing season, the benefits to sealers of the seal hunt are more significant than might be concluded from a narrow assessment of the direct costs of the hunt and the incomes earned from sealing.

Fishing, an occupation of which sealing is often a major component, is the main economic activity in many of the outports of Newfoundland and Labrador, and in many of the small settlements along the lower north shore of the Gulf of St. Lawrence and in the Magdalen Islands. Government-financed community services are the other major contribution. In some of the northern parts of Newfoundland, income from sealing can, in good years, amount to 20%–30% of the total earnings from all types of fishing.

Even this percentage tends to under-represent the importance of sealing to these Atlantic communities. In addition to providing cash income, sealing also provides high-quality food, and plays an important role in the social and cultural life of the communities. Furthermore, sealing occurs in the late winter and spring, when there is very little else to do. The income from sealing provides, in addition to day-to-day expenses, the money for preparing the boats and gear for summer fishing. The success of all types of fishing and sealing is highly variable from year to year, and a variety of activities is thus needed to provide security in years when one or another activity fails. The loss of income from sealing weakens the whole annual cycle of activities and thus threatens the survival of some of these communities. Alternatives to sealing have been considered by the Royal Commission, but the prospects are not good. Few show much economic promise, and none provides seasonal employment in late winter and early spring, which is necessary to fill the gap in the seasonal cycle that is left by the absence of sealing.

The main income from sealing has come from the sale of skins. Much of the meat on the seals caught is eaten by the sealers and their families or sold locally; the flippers of young seals are considered a delicacy in Newfoundland. A small proportion is canned and sold elsewhere in Canada. The oil from the blubber is also sold.

The market for sealskins has collapsed, and sealskins are virtually unsaleable in the former main market, Western Europe. In the mind of many sealers, the loss of this market is clearly linked with the Directive issued by the EC in October 1983 and renewed in 1985. The Directive called on members of the EC to prohibit the import of skins and products made from harp and hooded seal pups (whitecoats and bluebacks). The products from

Atlantic whitecoat hunt

older seals were not included in the EC ban, and for Inuit products this non-inclusion was explicitly stated. The collapse in the markets for all types of sealskins was more the result of changing demand than of any legal barriers. However, the drop in demand was largely the result of a strong, well-publicized campaign against sealing. The European discussions, especially the debates in the European Parliament at Strasbourg, provided useful occasions for this campaign to focus public awareness on seals and sealing. The large anti-sealing majorities in the European Parliament and the later formal Directives were probably influential in strengthening public opinion against buying any type of seal product.

Sealing was, and remains, even more important fOr the people of the North. No crops will grow in the North, and inhabitants must rely on harvesting wildlife. The mix of seals, fish, caribou and birds in their diet varies from area to area. In no area can the hunters depend on a single species; instead they must change with the seasons. There are many areas where for months seals, principally ringed seals, are virtually the only food resource, or where, toking the year as a whole, seals supply the most important single source of food. Even when they are able to earn standard wagea, Inuit cannot afford to eat as nutritious or as healthy a diet based on relatively expensive foods imported from the south, as that obtained from hunting.

Over the years the pattern of hunting has changed from traveling with dogs to greater use of snowmobiles, and from harpooning the seals to shooting. This change has probably decreased the amount of suffering because more seals are killed outright, but it may have increased the proportion of seals that are killed but not recovered. The use of snowmobiles has made it possible for Inuit to live in centralized townsites and continue to go hunting, but it has also increased their need for cash to pay for fuel and spare parts. In addition to providing food and clothes for people (and, where they are still used, food for dogs), sealskins have been sold, and the cash has been used to buy hunting equipment. The collapse of sealskin markets has reduced the cash income of Inuit hunters by as much as two-thirds, resulting in decreased hunting which has led to poor nutrition.

The Future of Commercial Sealing

Since 1982, the context of the sealing controversy has changed dramatically. The seal hunt as it is commonly understood - the large-scale killing of whitecoat harp seal pups on the ice - has ended. At the same time the market for all other seal products has collapsed.

The effect on other sealing has been largely inadvertent; it was not the objective of most of those whn have worked for the end of the whitecoat hunt. Public opposition to the killing of older seals is much less widespread than is that to the killing of seal pups, and there is considerable public support for Inuit hunting.

The collapse of the markets for seal products in 1982-1983 has been very serious for many communities in the Arctic and in Atlantic Canada. The Royal Commission has therefore examined possible actions that might be taken to relieve the economic and social distress in these communities. The outlook for markets for seal products is not good. There is no immediate prospect for a revival of the market in Western Europe, and the markets in other areas outaide Canada have always been, and are likely to remain, very limited. There is also a very large existing inventory of sealskins and a continuing supply of some tens of thousands of skins from Norway and Greenland. The prospects for marketing Canadian skins outside Canada are therefore extremely poor. On the other hand, there is an existing market in Canada for some 20,000 sealskins and for the meat from some 40,000 seals. The Canadian market could probably be increased, provided that prices do not escalate.

Because many of those protesting against the commercial seal hunt are sympathetic to the Inuit, and because the products from, Inuit hunting were specifically y not included in the EC Directive, the possibilities for revival of an export trade in Inuit products are much better than those for the" products from commercial sealing. These possibilities will be increased if the products from Inuit sealing can be clearly identified with a distinctive trademark.

Apart from the skins of wildlife, and some carving and other artwork, the Arctic produces little other than minerals and oil. Extraction of minerals or oil could threaten the fragile arctic ecosystem, and both activities offer limited long-term employment to local people, If the human population is not to depend largely on government handouts, the best possible use must be made of wildlife, as a source of food and cash. This is not likely to happen unless the Inuit can receivo a reasonable cash return from those skins not needed for their own subsistence. This implies some restoration of the market for sealskins to about the pre- 1983 level. To accomplish this, encouragement needs to be given to the development of co-operative enterprises in Inuit communities, for improving the processino and marketing of clothing and other seal products. Efforts to restore the markets for Inuit products would be helped by a more direct dialogue and exchange,

Inuit skinning bearded seal

of information between representatives of Inuit peoples and the more responsible conservation and animal-welfare groups.

It is also possible that the current legal barriers, under the United States Marine *Mammal* Protection *Act of* 1972, 10 the importation of Inuit seal products into the United States might be removed by seeking an exemption for Inuit products. There may be legal grounds for such an exemption under the 1794 Treaty of Amity, Commerce and Navigation.

Even with good marketing it will be some time before conditions relating to Inuit sealskin products are restored to the level of those occurring before tho market collapse. In the intervening period considerable economic and social distress is likely to continue in many communities. The Royal Commission is therefore proposing that there should be a fund of $4 million annually for at least five yeare, to support Inuit ongaged in subsistence hunting, and to provide them with a cash income approximately equivalent to that accruing before the market collapse.

The situation *on* the Atlantic coast is quite different. There could be a future for some types of seal hunting but not far others. The whitecoat hunt aroused widespread opposition and should not be allowed in the future. There appears to be less opposition to the killing of older seals and some sympathy for the people in the small isolated communities in northern Newfoundland and elsewhere.

The possibility of alternative activities, including increased fishing and the development of aquiculture, should not be ruled out, but the only identified activity that seeme capable of partially filling the early spring gap in tho cycle of seasonal activity, and thue reducing the economic problems of the most seriously affected communities, is a modest sealing industry based on taking older seals. The prospects for this development differ for the three major groups of sealers.

The end of whitecoat hunting means the end of large-vessel sealing. Only in breeding areas do the large concentrations of seals occur that can eupport this kind of large-scale sealing, and hunting on these patches only for adults would not be economically viable, even if it made biological sense.

Longliners take older seals and do not ordinarily harvest whitecoats. The fish catches of these vessels provide the principal economic support of communities in northern Newfoundland and the Magdalen Islands, and participation in the seal hunt has been necessary for the financial viability of longlining enterprises. If markets for products from older seals could be improved, the economic problems faced by those communities would be marginally lightened.

Lendsmen include a number of people, especially in the small outports, for whom catching older seals is an important part in the seasonal cycle of activity, ae well as people who only go sealing very occasionally, and for whom sealing is not economically important. Past catches by landsmen in northern Newfoundland and especially at the Magdalens hove included significant quantities of whitecoats. The permanent loss of the whitecoat harvest would involve considerable economic loss for these people.

In the years immediately preceding the EC ban, landsmen and longliners used to take some 40,000–76,000 older scale annually. The recent Canadian market has been perhaps half or less of this number, but it might be possible over time to develop tho domestic market to the 10VCl at which it might be capable of absorbing these quantities. This development would, however, be subject to three conditions:

- Primary processing facilities for this quantity of skins would need to be available,
- Effective market development work would need to be implemented.

- Prices and costs would need to be favourable.

As in the Arctic, it is not expected that restoration of modest seal product markets would resolve most of the economic and social problems. The Royal Commission is therefore proposing direct financial support. This should take two forms. A training and development fund of the order of $50 million should be made available to sealing communities to help them in general economic development. It is possible that a proportion of the fund might be used to support industry feasibility studies regarding the processing and marketing of the products from older seals. Another fund, of about the same value, should be used to compensate sealers for lost income and other losses associated directly and exclusively with the disappearance of the markets for seal products. This compensation should be given in the form of a single grant payment to individuals judged to have been aggrieved.

Chapter 5

Conclusions and Recommendations

However, in order to provide an overview, in which all recommendations can be read quickly and related to the principal conclusions on which they are based, this summary chapter has been compiled.

The conclusions and recommendations are organized under the following general headings:

- Should Harvesting Be
- Killing Methods,
- Marketing and the European Ban,
- Aboriginal Sealing Communities,
- Atlantic Sealing Communities,
- Impacts on Fisheries and Control,
- Environmental Protection,
- Public
- Canadian Management,
- International Management.

In the few cases where a conclusion under one heading leads to a recommendation that appears under a different heading, this is noted. At the end of the chapter, an index is provided that lists the relevant recommendations for each chapter.

Should Harvesting Be Continued?

(See Chapters 8,9,11,12,21,22, 30.)

Conclusions

- The question of whether it is ethically right or wrong to kill animals generally, or seals specifically, is a matter of personal conviction. The policies adopted by Canada on such matters need to take into account the opinions of the public. (Recommendations 37, 38.)

- Public opinion on the killing of animals ranges between the extreme views that any utilization of animals is permissible and that all uee by man is *wrong.* The great majority of those polled in Canada and a number of other countries hold intermediate viewa, and accept tho killing of animals, provided that harvesting does not threaten the species, the killing is acceptably humane, and it is carried out for important social and economic benefits without appreciable waste. (Recommendation 36.)

- Recent harvesting of seals in Canada has generally met the criteria specified in the above conclusion. Although the final use of some seal pelts in fashion markets is viewed by some people as a trivial use of seals, the income generated from seal hunting and the primary processing of the products has been very important to many of those involved.

- There ie considerable sympathy with the traditional hunting of seals for food and clothing, by both aboriginal and non-aboriginal peoples, and somewhat iess for hunting seals to provide cash to support other subsistence activities.

- There is very strong public opposition to the clubbing of harp seal pups (whitecoats) and hooded seal pupa (bluebacks). This hunt is widely viewed an abhorrent both in Canada and abroad. The resulting public protest cannot be effectively countered by any technical arguments about the facts of the issue.

- Non-commercial hunting of seal Pups is usually on a very small scale and would be very difficult to halt altogether.

- **Ringed and bearded seals:**
  Ringed seals are widespread in the Arctic and probably number over a million in Canadian waters. The population as a whole is probably stable, but it is possible that local stocks in areas that were heavily hunted may be depressed, Management measures are necessary to assure the continued stability of ringed seal stocks In some of the areas where they are on important resource for humans. (Recommendations 13, 40.)

  Bearded seals are much less numerous than ringed seals and correspondingly fewer are killed, but local overexploitation is also possible.

- **Since the application of quotas to harvests of harp and hooded seals, Canadian management of seals satisfies the criteria laid down in the World Conservation Strategy of maintaining essential ecological processes und ensuring sustainable utilization.**

- **For all species of seals in Canadian waters there are some uncertainties in the estimates of numbers and population trends. Regular monitoring is necessary to provide reliable information on the current status. This information is needed troth for the management of those stocks, which are still exploited, and for development of policy in respect of those stocks which are seen to be, actually or potentially, a threat to commercial fisheries.**

Recommendations

1. The killing of **seals** should be permitted only when subject to appropriate controls on the numbers killed, the methods of killing, and the **purposes** for which they are killed.

2. **The commercial hunting of the** pups of harp **seals (whitecoats)** and hooded seals **(bluebacks)** is widely unacceptable to the public and should not be permitted.

3. Non-commercial hunting of **pups** of harp seals **(whitecoats)** and hooded **seals (bluebacks),** to the extent that it **occurs** at **all,** should be carefully regulated and strictly limited.

4. **The Canadian** government **should regularly** monitor the stacks **of seals.**

6. In view of the suffering involved, the government should take action with a view to phasing out, as rapidly as possible, the netting of scale in those communities which now rely largely on this method to take harp seals both for subsistence and to provide a substantial part of their income. Netting of seals in other areas should be prohibited immediately.

7. Discussion should be held with sealing communities with the aim of making clear that the practice of deliberately wounding seals to facilitate retrieval is not condoned, and of finding waye of reducing it as far as possible.

8. Discussions should be held with sealing communities with a view to ensuring the use of rifle ammunition that produces a high proportion of instantaneous kills under the conditions normally encountered in hunting each species of seaL

9. No new methods of killing seals for purposes of either harvesting or population control should be used in Canada unless they are clearly demonstrated to be acceptably humane.

Marketing and the European Ban

(see Chapters 10, 13, 16, 18.)

Conclusions

- **In 1963, the Council of the European Communities issued a Directive banning the import of raw, tanned or dressed skins of** pups of harp seals **(whitecoats)** and **hooded** seals **(bluebacks)**. A **second Directive in 1985 extended** this bsn to **1** October **1989.**

- **The Directives reflected public concern over the killing of baby seals rather then the scientific evidence regarding the survival of the seal stocks and the humaneness of the** method **of killing. The discussions In the European Parliament, Commission and Council leading up to the Directives provided occasions for well-orchestrated anti-sealing campaigns by protest groups. Most markets for seal products had already collapsed prior to the issuance of the European Council's initial Directive.**

- There is widespread interest in articles made by aboriginal peoples following their traditional handicrafts. It would assist the Inuit in finding markets both in Canada and abroad if a distinctive trademark were developed to identify their products, Such a trademark could be applied to all handicraft products, not only those derived from seals, This might be more effective if product marketing and development were done in co-operation with the Inuit in other countries (e. g., Greenland).

- Canadian government support of Inuit efforts to market their surplus products in Europe and elsewhere is desirable,

Recommendations

10. The Canadian government should assist in the development of potential markets within Canada for products from seals other than whitecoats and bluebacks.

11. The Canadian government, recognizing that the European Council's Directives were explicitly not aimed at Inuit seal products, should assist Inuit organizations in exploring opportunities for marketing their products in the European Community and elsewhere and should encourage co-operation among the Inuit of Canada and Greenland, and between Inuit and European authorities.

12. The Canadian government should encourage tha development of community and co-operative enterprises In Inuit communities for processing and marketing clothing and other products. It should also encourage establishment of a recognizable trademark to identify products directly derived from traditional~Inuit~activities - and. promote its widest possible public recognition in Canada and elsewhere. Care should be taken, however, not to encourage any commercial hunt that would endanger the traditional hunting for au hsistence needs.

Aboriginal Scaling Communities

(See Chapter 13.)

Conclusions

- Seals are a vital resource for the Inuit for economic, social and cultural reasons. Scaling is the most economical means of maintaining adequate nutritional levels in most northern communities. Increased use of imported finds will result in substantially poorer health and extra costs which the Inuit can ill afford.

- Centralization of Inuit communities in recent decades has resulted in many Inuit living considerable distances frum their hunting areas Motor transport, especially snowmobiles, increased in response to this development.

- Northern communities have suffered considerably from the loss of commercial sealskin markets. The virtual disappearance of the commercial market currently threatens the subsistence hunt since the cash income gained from the sole of seal products could be used for the purchase of the equipment necessary to enable the Inuit to carry on traditional hunting. For some communities the total cash income has fallen to a small proportion of the pre-1982 level. The sale of seal products remains the most feasible and environmentally appropriate means of meeting the cash requirements of motorized hunting.

- Northern communities also suffer from high transportation costs, from gasoline prices which are much higher than those in other parts of Canada, and from high prices for lubricants, spare parts and ammunition. One factor in the high prices of all goods, including store food, in the North maybe the lack of competition in the retail market in many communities.

- Activities such as fur harvesting, tourism and commercial fishing appear to have limited potential in the Arctic unrt would probably provide additional income for only a fcw Inuit. Arctic mineral and oil/gas exploration and exploitation might reduce the availability of marine mammals without leading to the development of a more prosperous northern economy in the long term. (Recommendations 29, 30.)

- In the absence of a sealskin market to provide them with cash, Canadian Inuit would need up to *$4* million annually for at least several years to maintain subsistence hunting at the same level as before the European Council's Directive. Local hunters and trappers associations have the capability to manage such funding effectively.

- In its 1794 Treaty of Amity, Commerce and Navigation with the United Kingdom, the United States promised la allow aboriginal peoples free passage and trade across the Canadian border. The United States Marine *Mammal Protection Act of 1972* nonetheless restricts tha impartation of aboriginal Canadian products derived from marine mammals, while protecting the right of U.S. Inuit and Indiana to produce and sell crafts of this kind.

- Present federal sealing regulations require that Labrador Inuit follow regulations that are intended primarily for the Atlantic harp and hooded seal hunt, and this is causing them unnecessary hardship. Aboriginal subsistence hunters in British Columbia, Quebec and other parts of the Atlantic provinces may encounter similar difficulties as a result of federal regulations that are designad for tha management of commercial hunting.

Recommendation

13. The Canadian government should encourage and formalize self-regulation of **Inuit** marine mammal harvesting. Arrange. **menta** should also be made for the necessary research to provide **Inuit** with appropriate scientific advice **as** a basis for self.regulation.

14. The Canadian government shouid provide temporary relief to Inuithunters through negotiated arrangementa wlthrepresentative Inuit organizations, **such** as **local** hunters and trappers associations, to ensure that wildlife harvesting can continue. Such relief should consist of annual **payments** of up to $4 **million for at least five** years, **after** which the need for financial support **should** be reviewed.

15. The Canadian government should initiate discussions with the United States authorities. with the **aim** of **expanding** the **trading** exemptions contained **in** the United **States** *Marine Mammal Protection Act of 1972* **to include all** aboriginal peoples of North

America without discrimination. Inuit representatives should be consulted throughout these discussions.

16. Federal regulations should be modified to allow residents of the Labrador coast north of Fish Cove Point to hunt seals in the same manner as aboriginal peoples of the Canadian Arctic. The Canadian government also should ensure, in consultation with representative local aboriginal organizations, that its regulations do not Interfere with subsistence hunting of seals by aboriginal communities in British Columbia, Quebec, and other parts of the Atlantic provinces.

Atlantic Sealing Communities

(See Chapters 14,15, 16,17, 18.)

Conclusions

- In 1962, a typical year prior to the collapse of the market, the gross value of commercial sealing in the Atlantic region waa about $7 million. The net economic benefits, after subtracting the costs involved, were some $2.5 million. These benefits are extremely small in relation to those from many large industries in the Atlantic region, although it may be noted that, when government subsidies are deducted from even quita large projects, the net economic benefits can be very small *or* even negative.

- Sealing makes a very important contribution to the economies of parts of coastal Labrador, northern Newfoundland, the Magdalen Islands and the Quebec north shore of tha Gulf of St. Lawrence. Its importance cannot be narrowly meaauredoniy in dollars; there are also major social, cultural and nutritional benefits, and it provides • critical infusion into the economies of many *poor* communities.

- Except for the very limited meat on whitecoats, the seals killed have been fully utilized. Tha skins and some meat have been sold to processing plants, but most of the meat haa been consumed locally.

- There are no full-time sealers in Atlantic Canada. Sealing, like the various forms of fishing in the communities concerned, tits into a sea-

sonal cycle of activities. it is particularly important because it comes at a time when there are few other income-earning activities available in the areas and when cash is needed to prepare boats and gear for the fishing season. Where, as was the case in several locations, the economic viability of communities was already marginal, the lose of a key seasonal activity is extremely serious.

- In many coastal communities a substantial proportion of the population has been seriously affected by the collapse of the market for sealskins, including those people who have traditionally earned income from the hunt, those who had access to the meat and those who earned income from the primary proceeding of the pelts.

- A deep sense of frustration has been felt by many of the people affected by the demise of seal markets. They have seen an important base to their livelihood lost due to the campaign which hae been waged against sealing. They feel aggrieved economically, socially and culturally. There is a need for financial compensation for these losses.

- The alternative employment opportunities in most of these coastal communities do not appear very promising although a number of ideas have been generated by background studies for the Royal Commission. It is concluded that support should not be confined to compensation, but should also include a serious effort to help develop new employment opportunities. In many cases, some training elements are likely to be necessary, as well as modest public works, small industry support and market development studies.

- Some form of sealing activity appears more promising than meet other identified options, in large part because of the seasonal timing and the relationship with the fisheries.

- The hunts by landsmen and longliners in the years before 1982 produced around 40,000-75,000 older seals annually. Provided costs are kept within hounds, the markets within Canada could possibly, with a little development, absorb this volume of skins and meat. This would, however, only be practicable if there were adequate facilities for primary processing of seal pelts in Atlantic Canada. (Recommendation 10.)

- If a cull of harpseals is undertaken, the employment of ex-sealers could help relieve come of the economic distress in the most seriously affected communities. (Recommendation 26.)

Recommendations

17. The federal government should assist the victims of the very unusual circumstances that have led to the demise of commercial sealing. Within the constraints noted elsewhere in this Report regarding seal hunting, the Canadian government should support private initiatives aimed at reviving an induetry based on eider seals.

18. There is a need for support for training and development as well as compensation.

    (a) A new fund of the order of $50 million should be made available by the federal government to sealing communities for development and retraining within tbe framework of Economic and Regional Development Agreements (cRDA). Sealing communities themselves should be given a clear role in the detailed shaping and monitoring of the fund. The most appropriate federal sponsoring department would appear to be the Department of Regional Industrial Expansion. A proportion of this fund could well be used to support the processing end marketing of products from older seals.

    (b) A new fund of the order of $50 million should be established to compensate sealers for lost income and other losses associated directly and exclusively with tbe demise of markets for seal products. The fund, under the sponsorship of the Department of Fisheries and Oceans, should probably be administered by two committees, one for Newfoundland and Nova Scotia, and the other for Quebec. Beneficiaries should be individual sealers, sealing operators who retied on sealing to finance their vessels, individual workers in seal processing plants, and the owners of processing plants.

Impacts on Fisheries and Population Control

(See Chapters 24,25,26,29, *30.*)

Conclusions

- Seals cause financial losses to the fishing industry through competition for fish, damage to gear and catches, and contamination of fish with nematode parasites.

  (a) The quantity of commercial fish consumed by seals is certainly large. The value of the resulting loss of catch can only be estimated very approximate y, but on the Atlantic coast it is probably significant in comparison with the value of the present catch. On the Pacific coast the value of the lost catch is probably very small compared to that of the present catch.

  (b) Seals damage gear and remove fish from nets. The total annual losses from these impacts may be at least $2 million on the Atlantic coast. No estimate is available for the Pacific coast, except for a loss of $700,000 for salmon gill-netters.

  (c) Nematode parasites (codworm / sealworm) have been increasing in commercial fieh on the Atlantic coast in recent years. Present losses due to the costs of removing worms and the reduced prices paid for infected fish are probably at least $30 million annually. Losses on tha Pacific coast appear to be much smaller.

- The species of seals differ considerably in their impacts and in how these impacts might change in the future.

  (a) Ringed, bearded and northern fur seals probably have, at most, very small impacts.

  (b) Hooded seals may cause same losses due to competition for fish, but it is possible that their main feeding grounds are too deep and too far north for hooded seals to constitute a serious threat to Canadian fishermen.

  (c) Harp seals seem to have, at present, an impact only through competition for commercial fish; this impact could be significant.

In the absence of a hunt the harp seal stock will increase. The effects due to competition and perhaps also damage to gear or transmission of parasites may possibly increase to the level at which they have serious impacts on the fishery.

(d) Grey seals, which are increasing rapidly, are the major source of infection with parasites, and also probably contribute significantly to the losses due to competition for fish, and to gear damage. These impacts are estimated to be between $60 million and $115 million annually. Though far from precise, these estimates are known with greater precision than is the case for harp seals.

(e) Harbour seals on the Atlantic coast cause losses that are very small compared with those due to grey seals; in addition, the population is expanding only slowly, if at all. On the Pacific coast harbour seals are increasing quite rapidly, and appear to cause significant losses of herring and salmen. On both coasts damage seems to be localized near seal colonies and areas of fish concentration.

(f) Sea lions may have a small impact through competition for fish and damage to gear, although same of these losses may be highly visible.

- These losses could be reduced, or at least prevented from increasing, by reducing or stabilizing seal populations. Based on present information, the only effective method of controll ing the numbers of seals is through a cull, though other methods cannot be completely ruled out. For same seals tha financial savings from such actions could be several times greater than the costs involved. If the seal stacks are increasing, as is the case for harp and grey seals, there would be disadvantages in postponing a cull if control measures are desirable. The longer a cull is postponed, the greater the impacts on fishermen and the larger the numbers that would ultimately have to be killed. (Recommendation 38.)

- In some circumstance the extent of the impact can be reduced without effecting the seal populations. The damage to fixed gears or aquiculture establishments may be reduced if effective methods of scaring seals away from these operationa can be developed. It may also be possible to develop cheaper technique for detecting and removing parasites from fieh fillets.

- There are considerable uncertainties about the magnitudes of many of these impacts, especially in relation to the effects of competition. There are also very large uncertainties concerning the extent of the changes in the impacts, especially the Impact of parasites, that would result from changes in the numbers of seals. These changes are unlikely to be exactly proportional, (Recommendation 42.)

- In view of the many uncertainties about the costs and benefits of population control, any such operations would need to be regarded as experimental and be supported by an expansion of relevant research programs.

- Operations by government-employed hunters are generally superior to a bounty scheme on the basis of their effectiveness in meeting the objectives of the cull, their better collection of data on the kills, their lower cost, and the greater humaneness of controlled operations.

- Where seals cause serious local losses which cannot be prevented in other ways, consideration may be given to allowing fishermen to kill 'nuisance" seals under strict controls.

- Public attitudes towards killing seals, and regarding the relative values of seals and commercial fisheries, are factors to be considered before any decisions on culling are made.

- The chosen balance between the interests of fishermen and the views of those opposed to any killing of seals needs to be expressed in explicit guidelines for each seal population, determining whether they should be allowed to increase, be reduced or be stabilized.

- For only four species - harp, grey and harbour seals and Staller eea lions - do current total impacts, or marginal impacts per seal, appear sufficiently large to make it necessary to consider measures of population control.

- For harp seals the present marginal impact oar seal may be suite small, and might possibly be less than the cost of a government-operated cull, Large numbers would need to be killed for effective control, and there are many uncertainties that might be significantly reduced in a few years if there is an effective research program. A government-operated cull does not appear justified at the present time.

- The net economic benefits of a cull of harp seals would be greatest if it were carried out hy existing sealers under a program of price supports for sealskins. In addition, such an operation would help to relieve some of the economic and social problems being felt in the traditional sealing areas. A large-scale cull of this kind would, however, almost certainly involve very considerable public protest, (Recommendations 37, 38.)

- For grey seals the economic benefits of a cull to the fishery would, even on conservative estimates, be several times the likely cost of a cull. Culls of grey seals were carried out in the years up to 1983 without significant public protest. About 7,ooo grey seals would need to be killed annually in order to maintain the population at its present abundance. This is more than were killed in the pre-1984 culls. Culls of this magnitude would almost certainly require operations on Sable Island, and these might generate increased public protest.

- For harbour seals the total impact is relatively small, and the most serious effects concern limited areas. The problems might be resolved by allowing fishermen to kill "nuisance" seals under strict controls, or by localized government culls.

- For Steller sea lions the damage from attacks on fishing operations tends to be relatively conspicuous; however, the greatest impact on the fishery is probably due to competition for salmon. Losses due to all causes seem to be small compared to those on the Atlantic coast. The population ie probably no greater than it wae in 1913, and is not increasing, There seems to be no technical justification for instituting a cull at this time, although it will be necessary to keep a watch on population trends.

Recommendations

19. The Department of Fisheries and Oceans should, with appropriate advice (see Recommendation 37), establish explicit guidelines for determining which seal population should, in principle, be allowed to increase, or be reduced or stabilized. No population control activities should be undertaken unless clearly favoured by the balance of social and economic benefits, and then only under a carefully monitored long-term program of evaluating their efficacy.

20. Any population control operations should be done under government supervision.

21. Fishermen operating fixed gears, including aquiculture establishments, may be given licences to kill "nuisance" seals in the vicinity of their gears under strict controls, with provision fora recompense for return of biological material of value to research programs.

22. Any population control programs should be:

(a) designed to provide detailed data on such matters as the number, age, sex, location and parasite load of the animals killed; and

(b) associated with continuing monitoring of the population concerned to determine any changes in the numbers, structure and principal biological parameters of the population, as well as the efficacy of tbe population control measures.

22. The Canadian government should promote further studies aimed to establish more precisely the impact of seals on fisheries through competition, damage to gear, and transmission of parasites. Particular attention should be given to tbe relationship between changes in seal numbers and changes in impact, especially in relation to parasites. Research programs should also be undertaken to determine the effects of any control operations, both on the seal populations and on their impacts.

24. Studies should be made of possible methods of controlling the abundance of seals, other than by culling. Studies should also be made of possible methods of reducing impacts other than by a general reduction in seal numbers. These might include seal-scaring devices and Improved techniques for detecting and removing parasites.

26. There should not be a cull of harp seals *in* 1987, but the impact of harp seals on fisheries will increase, and the possibility of a cull in later years must be seriously considered.

26. If a cull of harp seals is found to be biologically and economically desirable and publicly acceptable, consideration should

be given to the use, in the implementation of the cull, of ● x-sealers from the communities most severely affected by the collapse of the seal markets.

27. The Royal Commission believes that biological and economic considerations indicate that substantial advantages would be gained by a cull of grey seals. Nevertheless, before deciding whether to implement such a cull, the Canadian government should take account of public opinion and should make use of the advisory processes discussed in Recommendations 19 and 37 for this purpose. Because grey seals are increasing rapidly, a decision needs to be made as soon as practicable.

Env ronmental Protec ion

(See Chapters 13,22, 23.)

Conclusions

- Reduction in numbers of many species of fish by commercial fisheries wiii have come effects on seal populations. Because of the wide variety in the diet of most seal species these effects are believed to be generally small and are not necessarily adverse. in any case they ● re very difficult to determine.

- Some seals are killed by becoming entangled in active fishing gear, either accidentally or when trying to take fish from the gear. The limited evidence suggests that the numbers dying in this way are small compared either to come past commercial kills (harp seals) or the natural rates of increase of acme populations (harp seals and grey seals).

- Lost or discarded fishing neta and other plastic debris cause the deaths of many seals. It is likely that they are the principal cause of the decline in the northern fur seal population since the 1960s. There is need for active steps to try to alleviate this problem.

- There is no evidence of any adverae effects of chemical or radioactive pollution on seals in Canadian waters. DDT, PCBs and related organo-

chlorine compounds have caused harmful effects elsewhere, including the United States Pacific coast, and there are some indication of harmful effects on belugas in the lower St. Lawrence River. There are also, however, some indications that the quantities of DDT in the sea are diminishing.

- The principal danger to seals in the event of a major oil spill would be to northern fur seals as a result of loss of thermal insulation due to oiling of the pelage. All other Canadian seals, which depend mainly on their blubber for insulation, are less vulnerable in this respect. However, ringed seals could be vulnerable if oil accumulates at their breathing holes.

- Serious adverse effects on seals, particularly ringed seals, in the Arctic could result from arctic development activities such as surface mining for minerals, petroleum exploration and exploitation and, particularly, large-scale sea transport through the ice in association with these activities.

Recommendations

28. The Canadian government should work both domestically and internationally to reduce the amount of netting and other plastic material being discarded at sea. It should also support studies aimed at developing modifications to fishing gear which will reduce the hazard to seals and other marine tife caused by the lost nets.

29. The Canadian government should not permit development in any part of the Arctic without a thorough investigation and disclosure of the potential environmental impacts on seals and sealing communities, and the consent of any aboriginal community whose legal rights are affected.

30. In addition, any significant increase of ice-breaker traffic in the Arctic may affect the numbers and distribution of ringed seals as well as the mobility of hunters, and therefore should be conditional on (a) consultations with communities that use the sea Ice to ascertain the extent to which their activities may be affected, (b) routing designed to mitigate effects on seals and hunters, and (c) compensation to hunters for any unavoidable effects.

Public Information

(See Chapters 9, 11,30.)

Conclusions

- The public attitude to seals and sealing has sometimes been based on incomplete and inaccurate information, including matters such as the trends in population numbers and the importance of sealing to local communities.

- Organizations opposed to commercial sealing were more effective than sealers or the Canadian authorities in presenting their viewe to the public at large and to the European authorities. Reasons for this included the nature of the issue, the lack of public awareness of the biological, social or economic backgrounds, and the isolation and lack of resources of the sealing communities.

- The public obtains nearly all its information from the media, rather than directly from protest groups or tbe government, but expects the government to be the primary source of this information.

- The government needs to be informed about public knowledge of, and attitudes toward, seals and sealing in order to frame national policies that are responsive to those attitudes. Regular monitoring of public knowledge and opinion would also be valuable for checking the effectiveness of programs to keep the public fully informed about seals. (Recommendation 38.)

- Government restrictions on observation of the commercial seal hunt became an important source of conflict.

Recommendations

31. The Canadian government should ensure that the public is much more fully and regularly informed about the reasons for, and background to, its policies regarding seals.

32. The Canadian *government* should facilitate greater balance in the public presentation of the views both of the sealing communities and of other interested groups.

33. The Canadian government should make the most effective use possible of the media in disseminating information about sealing.

34. The Canadian government should undertake regular studies to examine public knowledge and views regarding seals, botb to assist it in taking account of these views In formulating Canadian seal management policies, and to enable It to ensure that its activities aimed at keeping the public fully informed ● bout the issues underlying these policies are being effective.

35. Observers should be permitted to view any operations in which seals are killed, subject to such legal constraints as are necessary to protect personal rights and property.

Canadian Management

(See Chapters 8,9,11,12,13,17,27,29, 30.)

Conclusions

- Although there waa overexploitation of the harp seal population up to the 1960s, recent Canadian management of seal stocks has been generally successful.

  (a) Harp seals have very probably been increasing in recent years and it is likely that hooded seals have also been increasing, quotas set since 1972 have *been* in accordance with the balance of scientific advice.

  (b) Humane hunting techniques have been brought into effect.

  (c) With a few well-publicized exceptions, regulations have been enforced effectively.

- The most widely accepted objectives for managing wildlife are those set out in the World Conservation Strategy. They are:

  (a) to maintain essential ecological processes and life-support systems on which human survival and development depend;

(b) to preserve genetic diversity; and

(c) to ensure the sustainable utilization of species and ecosystems.

- The views of Canadians towards seals and sealing vary, Inadequate recognition by the government in its policy making of the width of this range *of views* about seals and sealing, has probably added to the bitterness of the harp seal controversy,

- Management of seals and sealing throughout Canadais presently entrusted to the Department of Fisheries and Oceans (DFO). DFO has the necessary technical competence in data collection, research into all aspects of marine ecosystems, and enforcement, However, many of those who view seals as other than an exploitable resource feel that their concerns are not adequately reflected in policy making. This concern would be reduced if DFO had a visible mechanism for taking into account all relevant interests when setting basic policy.

- In the Arctic, research into, and policy for, seals and sealing need to be closely integrated with similar activities in respect of palor bears and arctic foxes which are the major predators on ringed seals. Management of, and research into, polar bears and arctic foxes are presently the responsibility of the Government of the Northwest Territories, with the exception that the Department of the Environment shares responsibility for research into polar beam.

- The Constitution Act, 2982, sec. 35, and federal commitments limit the Government of Canada's authority to regulate aboriginal wildlife harvesting except in accordance with a claims settlement or some other form of aboriginal consent. (Recommendation 13.)

- Aboriginal groups in the Arctic are in the procees of finalizing agreement with the federal and territorial governments under which they are assuming a certain degree of management responsibility and control. (Recommendation 13.)

- Considerable uncertainties surround many aspects of seals and sealing, including the population dynamics of the stocks of seals. Particularly important uncertainties relate to the interaction between seals and fisheries through competition for fish and transmission of parasites. Intensified research is needed to reduce these uncertainties, whether or not commercial seal hunting is continued. (Recommendation 23,)

- The non-consumptive use of scale such as the viewing of seal herds can generate income in some areae in the Gulf. With appropriate controls it can be carried out without harmful impacts on zeal stocks, their environment or any sealing that might continue.

Recommendations

36. The minimal explicit objectives of Canadian wildlife resource conservation strategy ● bould be as ● tatad in the World Conservation Strategy:

    (a) to maintain essential ecological processes nnd life.support systems on which human survival and development depend;

    (b) to preserve genetic diversity; and

    (c) to ensure the sustainable utilization of species and ecosystems.

    Two further objectives should be to ensure that:

    (d) wild animals are harvested with a minimum of suffering; and

    (a) harvesting activities serve important human needs ● nd involve minimum waste.

37. The Department of Fisheries and Oceans, with the ● asletence of a *representative* ad visory group, should explicitly establish for each seal stock both priorities for management ared use that reflect social, economic and other values, and management plans baaed on these priorities.

38. Management plans should be baaed on information on seal numbers, on seal impacts on fisheries, and on public attitudes toward the killing of seals. They should include proposals for target levels of population in the medium term, ● nd for the number of seals, if ● ny, that may be killed in population control program% subsistence hunting and commercial sealing.

The non-consumptive uae of seals, such● e the viewing of *seal* herds, should be encouraged subject to appropriate regulatory measures to protect the animals and their habitat.

40. Federal responsibility for seals in tire Arctic ● hould be closely co-ordinated with responsibility for the rest of the arctic eco. system. Policy formulation should be ● co-ordin ated process Involving aboriginal peoples, the Government of Canada and the Government of the Northwest Territories.

41. The Canadian government should consider transferring responsibility for seals on tbe Atlantic ● nd Pacific coasts to a sec. tion of the Department of Fisheries ● nd Oceans separate from those directly concerned with fisheries. The responsibilities of this section should include the protection of seals, management of any utilization and the interactions with fisheries.

42. Seal management policies should be supported by an active, well co-ordinated research program addressed to 'all the relevant issues. The financial and staff resources given to this program should be substantially greater than those given to seal research in recent years.

International Management

(See Chapters 10,22,28, 30.)

Conclusions

- Some species of seals inhabiting Canadian waters also move into waters under the jurisdiction of other countries and, to a lesser extent, into international waters. In addition, many seal products enter international trade, and seals and sealing in Canada arouse a great deal of interest outside the country. Canada therefore needs to collaborate with other countries on seal matters, and to take account of views outside Canada in setting policies on seals. In particular, collaboration with Greenland, and with the European Community in relation to the Directives, is desirable.

- Canada belongs to one International organization and is a party to one convention involved in the conservation and management of seals.