FINAL ENVIRONMENTAL IMPACT STATEMENT

ON THE

INTERIM CONVENTION ON CONSERVATION OF NORTH PACIFIC FUR SEALS

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UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE

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Responsible agencies:

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Abstract

The Interim Convention on Conservation of North Pacific Fur Seals will expire in October 1980. The Department of State, in consultation with the Department of Commerce, has drafted a Protocol, subject to the advice and consent of the Senate, extending the Interim Convention for four additional years. Two major alternatives to this action have been examined: termination of the Convention and a renegotiation. Following public review and comment, and hearings on the draft environmental impact statement, we have determined that extension of the Convention provides the best available protection to the northern fur seal throughout its range. The consequences of the chosen alternative, and additional options available, are detailed in this document and form the basis of our recommendation to extend this treaty.

SUMMARY

I. Purpose of and Need for Action

The Interim Convention on Conservation of North Pacific Fur Seals is due to expire in October 1980. A decision must be made before this date on extension, renegotiation or termination of this treaty.

Agreements leading to the present Interim Convention have been in force since 1912. There is widespread agreement that these treaties have been very successful in establishing an international conservation regime to protect the fur seal from over exploitation. Starting from a low of approximately 300,000 animals in 1912, when the original treaty came into force, the northern fur seal population has increased to at least 1.7 million today.

The major reason for this population increase was the agreement among the present nations of Canada, Japan, the U.S.S.R., and the United States to stop harvesting the seals at sea, and to limit land harvest to levels consistent with wildlife management principles. We estimate that the unexploited population, before 1787, numbered over 2.5 million.

Pelagic sealing was a wasteful practice in that it had a high struck and lost ratio. Many more seals were lost from the population than were actually retrieved in the harvest at sea. Pelagic sealing also took an inordinately high percentage of female seals, thus further reducing the breeding potential of this population.

The Interim Convention provides for land harvests on the breeding islands of the northern fur seal by the United States and the U.S.S.R. Canada and Japan each receive 15 percent of the sealskins taken in both harvests. The United States and the U.S.S.R. each retain 70 percent of their respective harvest.

II. Alternatives Including Proposed Action

A. Extension (Proposed Action)/Proposed Record of Decision

We recommend that the Interim Convention be extended for a period of four years, with minor modification in the enforcement provisions to reflect extended fisheries jurisdictions. We believe that this action is environmentally preferable to termination of the treaty, or renegotiation at this time. Our recommendation is based on two primary considerations: the need to protect the northern fur seal throughout its range and our responsibilities to the people who live on the Pribilof Islands.

Since the northern fur seal spends a considerable portion of its life history in international waters and areas under the jurisdiction of Canada, Japan, and the Soviet Union, it is vulnerable, in waters outside of our jurisdiction, to directed pelagic harvests, and taking incidental to commercial fishing. During recent consultations, both Canadian and Japanese representatives indicated that their governments are under pressure from fishing interests to resume pelagic sealing because of perceived competition between fishermen and the seals for fish. We believe such harvests are likely should the Convention be terminated. Without existing international restraints, we anticipate that a greater number of seals may be killed than the number currently harvested on land.

While we recognize that many oppose the harvest on moral and ethical grounds, we believe that the Pribilof Island segment of the population is near the maximum number that can be maintained under present environmental conditions, and can support the current harvest without adverse environmental consequences. Harvesting methods, which are under continual evaluation, represent a rapid, efficient and humane way to harvest fur seals, comparable to the best practices used in the slaughter of domestic livestock and fowl.

Beyond our responsibility for the management of the Pribilof Island herd and the worldwide conservation of the northern fur seal, we have a special responsibility to the people who live on the Pribilof Islands. Under the Fur Seal Act of 1966, the Department of Commerce is charged with administration of the Island communities including provision of employment in the seal harvest. Much progress in self-determination has been made on the Islands since passage of this legislation. No longer are the native Aleut residents solely dependent on the Federal Government for food, transportation, housing and utilities. We are still, however, the major employers on the Islands and a cessation of harvesting would undoubtedly result in the loss of approximately 80 jobs on both Islands. Island residents and Aleut representatives have asked that we extend the Convention and continue the harvest on which much of their employment depends.

Renegotiation, in our view, offers no advantages to an extention of the treaty. We believe we may be able to institute reductions in harvest levels, should this be necessary, under terms of the present treaty. Extension of the Interim Convention would not, therefore, foreclose the possibility of a phaseout of the harvest, favored by some public reviewers. Renegotiation to introduce optimum sustainable population (OSP), the management concept of the Marine Mammal Protection Act (MMPA) of 1972, would have little or no chance of success at this time, due to the demonstrated opposition of Canada and Japan. The population of the northern fur seal is however, presently at a level consistent with OSP management, according to our most recent estimates.

B. Termination

We could allow the treaty to terminate in October 1980 and protect the northern fur seal under the MMPA of 1972. The commercial harvest would probably cease and a subsistence harvest for food and the making of native handicrafts, under the native exemption to the MMPA moratorium, might involve more than 5000 animals per year. We would have no control over or direct influence on the possible taking of these seals beyond 200 miles off the United States coast or on the Soviet controlled islands. In our discussions with Party Governments both Canadian and Japanese representatives indicated that their governments are under increasing pressure from fishing interests to resume pelagic sealing, and so reduce a population that fishermen perceive as direct competition for fish. We believe pelagic harvests, either as a directed commercial enterprise or as an opportunistic adjunct to fishing operations, would resume if the treaty were terminated.

A new multilateral agreement, or a series of bilaterals, providing for no harvest of this population, would have an uncertain prospect of acceptance by the governments of Canada, U.S.S.R., and Japan. All countries have, however, indicated their willingness to extend the present treaty an additional four years.

The size of the total population may well be decreased under this alternative due to pelagic harvest outside our jurisdiction, as well as land harvest on the Soviet controlled rookeries. While we know that a high proportion of seals taken pelagically would be females, we are not able to estimate the numbers that would be taken under these conditions. At risk, however, during some or all of their life cycle, is as much as 85 percent of the total population of this species.

The effect of this alternative on other international conservation arrangements is also uncertain. Possibly our unilateral withdrawal from a marine mammal conservation agreement would have adverse effects on our ability to negotiate new conservation treaties, or improve existing international arrangements. Certainly the parties to this agreement wish the United States to continue as a member of the North Pacific Fur Seal Commission, and show great pride in the conservation achievements of the current treaty.

An end to the commercial harvest would result in the loss of at least 80 jobs on the Pribilof Islands. Lost income could be partially replaced by welfare payments, but no additional jobs are available at this time. Island representatives hope that a new fishing industry can provide additional employment opportunities in the future.

C. Renegotiation

We considered calling for a renegotiation of the Convention, prior to the termination of the present treaty, in order to incorporate the management concept of optimum sustainable population (OSP). We also considered the amendment of existing provisions to provide for gradual reduction of the harvest levels, should this action be deemed necessary in the future.

Both issues were raised during informal consultations with Party Governments held in Washington, D.C., October 1979. The Soviet Union reserved comment until the next meeting of the North Pacific Fur Seal Commission (NPFSC) the following April. Both Canada and Japan, however, indicated opposition to a renegotiation and specifically opposed introduction of OSP into the present agreement at this time. They indicated that the application of this concept to the northern fur seal population needs further explanation, that the present management regime using maximum sustainable productivity (MSP) was working well for this population, and that they would need to know more precisely what effect OSP management would have on the status quo, before considering such a change.

Canadian, Japanese and U.S.S.R. representatives were questioned as to their views on a possible reduction of the United States share of the harvest. No objections were raised to our preliminary view that such action may be taken under terms of the present Convention; renegotitation may not be necessary to obtain this objective.

At the 23rd annual meeting of the NPFSC, April 14-18, 1980, in Moscow, the U.S.S.R. indicated willingness to consider a discussion of OSP and its application to the treaty, at the next annual meeting of the Commission in Toyko, April 1981, provided a report on this topic is prepared by the United States and circulated to Party Governments prior to this meeting. Canada seconded this view and Japanese representatives indicated that they will reserve judgement on this proposed agenda item until after a review of the United States report.

While thoroughly exploring the feasibility of this alternative, we have concluded that a renegotiation of the treaty would present no advantages over extension of the present agreement. On the contrary, renegotiation might result in the introduction of management practices, such as a pup harvest on Soviet islands, long opposed by the United States. A phaseout of the harvest might be initiated without a renegotiation and the introduction of OSP into the treaty is not, in our view, possible at this time.

III. AFFECTED ENVIRONMENT

A. The Northern Fur Seal

1. Range

The northern fur seal, the most truely oceanic of the North Pacific seals, rarely comes ashore except during the breeding season. During most of the year fur seals range across the subarctic waters of the North Pacific Ocean. In the east, they are found south to about the latitude of the California-Mexico border, and in the west to the latitude of Tokyo, Japan. They tend to concentrate along the continental shelf and slope where nutrient-rich waters support a variety of prey species. During journeys to and from the breeding islands they are regularly found outside the 200-mile fishery jurisdiction of the United States.

2. Breeding Islands

During the summer months, the northern fur seal congregates on the following breeding islands: Robben I. in the Okhotsk Sea, the Kuril Islands in the western North Pacific, the Commander and Pribilof Islands in the Bering Sea, and San Miguel I. in the eastern North Pacific. The Pribilof Islands are home to the largest number of fur seals; more than one million animals breed here.

Most mature seals are on or near their breeeding islands from June to November. Immature seals may or may not return to their islands of birth each year. Adult males begin arriving late May and early June and establish territories. The older pregnant female seals arrive next, about mid-June, followed by younger pregnant and nonpregnant females. Most pups are born in early July, and by August nursing females are leaving on feeding forays to about 100 miles from land and in some cases as far as 260 miles, returning at regular intervals to nurse their pups. The female seal mates soon after giving birth, usually with the bull in whose territory she gave birth.

As with females, the males arrive in descending order of birth, the older animals first. Most territorial breeding males abandon their territories for other parts of the islands or the sea by mid-August. Younger males, mostly from three to five years of age, begin to haul out on areas adjacent to the rookeries in late June and continue to arrive through July and into September. In October, seals of all ages and both sexes begin to leave the islands, with the peak of departure for most seals occurring early November.

3. The Harvest

The United States Government harvests approximately 26,000 animals per year on St. Paul Island, Alaska and shares 30 percent of the harvest with Canada and Japan. Except for some females taken accidentally or for research, only males between the ages of two and six years are taken. Ninety percent or more of these animals are three and four years of age. Through 1972 seals were harvested each year on both major islands of the Pribilof group; however, since 1973 no seals have been taken commercially on St. George Island. Set aside as a research study area in 1973, St. George I. is being used to compare the growth and behavior of an unharvested population with that of the harvested St. Paul population.

There is a limited harvest season of five weeks ending on or about July 31. Each bachelor hauling ground is harvested once each week, or five times during the season. Since at any one time many of these seals are feeding at sea and other have not yet arrived on the Island, we have found that this method allows a sufficient number of young seals to escape the harvest and return to breed in later years. Because the fur seal is polygynous, many more females are needed for reproduction than males. Regulation of the take ensures that only those seals not needed as replacements for the breeding stock are taken and that the harvest is carried out in the most humane way possible. Independent studies conducted by a number of prominent veterinarians have concluded that our harvest is efficient and humane.

4. Population Abundance

The current estimate of the North Pacific fur seal population is 1.7 million. Of this number, approximately 1.25 million will return each year to the Pribilof Islands. The remainder breed on U.S.S.R. owned islands in the Bering Sea and eastern North Pacific, and a small population breeds on San Miguel I. off California.

5. Productivity and Optimum levels

The Interim Convention requires parties to work toward achieving the "maximum sustainable productivity" of the northern fur seal, "with due regard to their relation to the productivity of other living marine resources of the area." Maximum net productivity (MNP) has been defined as the natural increase in population abundance at that level of population which will result in the greatest annual increase after losses due to natural mortality, i.e. births minus deaths. According to our estimates of MNP on St. Paul Island, where population statistics are most precise, MNP would occur between a population of 940,000 and 1,080,000 seals. The current population is approximately one million.

Optimum sustainable population, or OSP, is the management concept embodied in the Marine Mammal Protection Act of 1972. It is defined as: "the number of animals which will result in the maximum productivity of the population of the species, keeping in mind the optimum carrying capacity of the habitat and the health of the ecosystem of which they form a constituent element." Carrying capacity is usually considered the number of animals which can be supported by the environment of a given area. We have defined OSP as a range between the population size which provides maximum net productivity and the population at the carrying capacity of the ecosystem.

Our current estimate of the carrying capacity for the St. Paul Island herd is about 1,570,000. This assumes that carrying capacity of the Bering Sea area has been reduced since the 1700s, when there were approximately 1.6-2.0 million animals on St. Paul, and since the 1950s, when the carrying capacity may have been as high as 1.8 million. Commercial fishing, pollution and perhaps other factors may well have reduced the carrying capacity of this area for fur seals and the area may no longer be able to support populations which existed in earlier times. Thus we may assume that this population exists at levels within the range of OSP as defined by the MMPA and implementing regulations.

B. Bering Sea Fisheries

1. Groundfish Fishery

Beginning in the 1950s Japan and the U.S.S.R. began an intensive groundfish fishery in the E. Bering Sea and Aleutian area. Peak harvests were taken in the 1960s and early 1970s. Following passage of the Fishery Conservation and Management Act (FCMA) of 1976, quotas have been placed on these fish species and catches have declined. These catch restrictions stemmed from evidence of declining abundance of the fish resources. Groundfish catches are now restricted to about 1.5 million metric tons (mt) per year; two-thirds of this is pollock, an important food source for northern fur seals.

2. Salmon Gillnet Fishery

Japan operates a salmon gillnet fishery in the Bering Sea and Northwestern Pacific from mid-May to the end of July. This fishery is regulated by the International North Pacific Fisheries Commission (INPFC) under a treaty signed by Japan, Canada, and the United States. In 1978, this treaty was revised to conform with the FCMA. The Japanese salmon fishery now operates further to the west and a research program has begun to reduce or eliminate the incidental take of marine mammals in these gillnet operations.

3. Incidental Take

We estimate that between 546 and 1,105 fur seals were taken in 1978 incidental to Japanese gillnet fisheries. This estimate is down from

1975 estimates of approximately 8,000, due we believe to a decrease in fishing effort and the shift in 1978 in the INPFC statistical area to the west. The groundfish fishery may acccount for an incidental take of approximately 500 animals per year.

C. Fur Seal - Fishery Interactions

The relationship between fur seals and commercial fisheries remains uncertain. Studies are underway to define parameters and develop mathmatical models of the Bering Sea which might allow us to predict effects of change of one population on others species in this ecosystem. We do know that fur seals consume commercially important fish. They are opportunistic feeders, taking squid and a variety of fish including herring, anchovy, salmon, capelin, saury, walleye pollock and mackerel. As much as 80 percent of the diet is fish; during some months in the Bering Sea approximately half of this is pollock. One estimate is that marine mammals, including whales, and birds take an amount of pollock from the E. Bering Sea equal to the total commercial catch; approximately 20 percent of this amount may be due to northern fur seal predation.

D. Social and Economic Environment

1. Employment and Income of the Native Pribilof Island Population

Aleut people, native to the Aleutian Island area for over 9000 years, were brought to the Pribilof Islands in the late 1700s by Russian sealers to work in the harvest. The Pribilofs are now home to the largest Aleut community in the world. Since the United States acquired these Islands with the purchase of Alaska, Federal agencies have been responsible for the welfare of Island residents. The National Marine Fisheries Service (NMFS), under terms of the Fur Seal Act of 1966, is now responsible for administration of these Islands and employment of Island residents. A socio-economic survey of the Pribilof Islands in 1979 found that of the 678 native Aleut residents, 235 are employed in full or part-time/seasonal jobs. Eighty of these jobs involve harvesting and processing sealskins; eighty more involve construction, maintenance and other non-harvest functions funded by the NMFS.

Earned income in 1979 totaled about $3 million; $2 million came from NMFS salaries, and of this amount approximately $250,000 was directly related to harvesting and processing sealskins. Approximately 34 percent of the jobs and 8 percent of the wages on the Pribilof Islands are dependent on the annual fur seal harvest.

2. NMFS Pribilof Island Program Budget

In 1979 our expenditures for the Pribilof Islands were $4.2 million; of this amount, approximately $444,000 was the direct cost of the harvest.

3. Sale of the Sealskins

The United States Government contracts for the processing of the sealskins into finished furs. The finished skins are then sold at public auction. Proceeds returned to the Federal Treasury in FY79 from sale of fur seal skins totaled $842,811.16.

IV. Environmental Consequences

We have attempted to evaluate the alternatives of extension, termination and renegotiation of the treaty in terms of the following environmental considerations: 1) size of the fur seal population, 2) stability and productivity of the Bering Sea ecosystem, 3) well-being of Island residents, and 4) United States efforts to protect marine mammals and other species in the Bering Sea and elsewhere.

A. Extension

1. Extension of the Interim Convention would continue the present management regime for the northern fur seal population for four additional years. Since the population has remained relatively constant in abundance since 1973, we could anticipate little change in population statistics under this alternative.

2. We could also anticipate no change in the stability and productivity of the entire Bering Sea ecosystem as a result of four more years of a fur seal harvest of about 26,000 annually from a total Pribilof population of 1.25 million with pup production at around 326,000 per year.

3. No change in the social and economic status of the Aleut residents of the Pribilof Islands would result from extension of the treaty.

4. Extension of the treaty may have a positive impact on our efforts to protect other species by indicating to other countries our willingness to continue a successful wildlife management agreement. Alternatively, some have argued that our involvement in a commercial marine mammal harvest undermines efforts to negotiate a commercial whaling moratorium. It is certain that under this alternative we could protect the seal population from a return to commercial pelagic sealing for four more years.

B. Termination

1. An end to the commercial harvest would result in an increase in primarily three and four-year-old male seals on St. Paul Island, at least in the short-term. Judging from our experience on St. George I., where the harvest ended in 1973, an increasing male population of this polygynous species would give rise to a decrease in females and newborn pups, and an increase in pup mortality on land. We don't fully understand this phenomenon, but it may be due to a form of competition between young males and females for food, and interaction between the pups and older males on the breeding islands. The age structure of the population on St. Paul may change, but we do not expect a significant long-term change in numbers of fur seals resulting from an end of the harvest.

A resumption of pelagic sealing, which we consider likely should the treaty be terminated, could affect total size of the fur seal population. By taking primarily female seals, pelagic harvests could have adverse impacts on the breeding potential of this species for years to come. While we cannot estimate the number of seals which may be taken in a pelagic harvest, we can estimate the number which may be at risk under this alternative. Approximately 450,000 seals breed on the Asiatic side of the North Pacific; assuming at least 80 percent of the Pribilofs herd migrates outside United States jurisdiction, at least 1,450,000 seals, or about 85 percent of the total population, are outside our jurisdiction during all or part of their life cycle.

2. If termination of the treaty results in resumption of pelagic sealing we can anticipate a decrease in the northern fur seal population. How this might affect the productivity and stability of the Bering Sea ecosystem we can not answer at this time. Presumably other marine mammal species would fill the niche left by the declining fur seal population.

3. Termination of the treaty and an end to the harvest would adversely impact the level of employment on St. George and St. Paul Islands. Approximately 80 jobs and $250,000 in earned income would be loss to the 678 native Aleut residents of the Islands.

4. Termination of this treaty would have no certain effects on United States efforts to protect other wildlife species in the Bering Sea and elsewhere, but would definitely reduce our ability to protect the northern fur seal throughout its range. Presumably our unilateral withdrawal from this agreement would signal to other nations our unwillingness to participate in wildlife management agreements, involving any harvests of marine mammals, regardless of the status of the populations involved. This would conflict with our position on commercial whaling, for example. Our position at the International Whaling Commission, and at other forums, is predicated on opposition to

harvests of species where the population data are not sufficient to make wise decisions, or where further takes present a clear threat to the health and productivity of the species.

C. Renegotiation

1. The environmental consequences of a renegotiation would depend upon the management program adopted in conformance with the new convention. Introduction of OSP into the Convention, even if this were possible this year, would have no impact on numbers of seals harvested. Our preliminary estimate remains that the current level of population is consistent with one at OSP, as defined in the MMPA. We are, however, refining our estimates and plan to have a more precise definition of current OSP status, and possible implications for international management, ready for discussion with the North Pacific Fur Seal Commission in April 1981.

A phaseout of the United States share of the commercial harvest would have impacts on the size of the population similar to those of termination, as detailed above. Again, we do not expect a significant long-term change in numbers of fur seals resulting from an end to the commercial harvest.

2. A phaseout of the Pribilof Island harvest, assuming a continuance of international prohibition of pelagic sealing, would probably not change the number of fur seals in the North Pacific, and therefore the level of northern fur seal predation on commercial fish stocks. This alternative is unlikely to alter in any significant way the present level of stability or productivity of the Bering Sea ecosystem.

3. The impacts of a phaseout of the commercial harvest on the economy of St. Paul Island will be the same as indicated under the termination option; however, the effect on the local economy will be less abrupt and presumably allow more time to develop alternative means of employment.

4. Our efforts to protect marine mammals and other wildlife species in the Bering Sea and elsewhere, would probably not be significantly impacted by an attempt to renegotiate this treaty. If we should fail in our efforts to negotiate new terms and then terminate the existing agreement, impacts would be as those indicated above for termination.

V. PUBLIC REVIEW AND COMMENT

A. Letters received

Twenty-four written comments were received on the draft environmental impact statement (EIS) during the 45 day review period.

B. Hearing testimony

Public hearings were held on the draft EIS on August 27, 1979, in Anchorage, Alaska; on August 29, 1979, in St. Paul, Pribilof Islands, Alaska; and on September 6, 1979, in Washington, D.C. Over 50 people testified at these proceedings resulting in almost 400 pages of transcript. Information obtained from the hearings, as well as questions raised here and in written comments, have been incorporated into the text of the final EIS.

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I. PURPOSE OF AND NEED FOR ACTION

The Interim Convention on Conservation of North Pacific Fur Seals will expire in October 1980. A decision needs to be made on extension, renegotiation or termination of this treaty. In order to place this decision in context with relevant historical and legal actions, we have prepared the following summaries of the history of the Convention and domestic laws which affect its implementation.

A. History of the Convention

The United States responsibility for fur seals began in 1867 when Alaska, including the Pribilof Islands, was purchased from Russia. The estimated existing Pribilof seal population was between 2 and 2.5 million. Estimates of harvest size in 1868 and 1869, vary from 226,000 to 329,000. In 1869 a 20 year lease of sealing rights on the Pribilofs was granted to the Alaska Commercial Company for 1870 through 1889. During the lease the annual harvest was not to exceed 100,000 males of 1 year of age or older. During this first lease period, pelagic sealing (harvest from vessels at sea) for fur seals by nationals from several nations increased from 5,000 to 30,000 per year.

In 1890, the sealing rights to the Pribilof Islands were again leased for 20 years, but the contracted annual quota was reduced and ranged from 7,500 to 60,000. The average annual land harvest during this period averaged 17,000; the average estimated annual pelagic take was 42,000 animals. In 1910, the leasing of land harvest rights was abolished, the Pribilof Islands were made a special reservation by Congress, and the Secretary of Commerce and Labor was given direct responsibility for the islands and the fur seal industry. On the Commander and Robben Islands, the average annual total harvest from 1871 to 1895 was 36,645, but was quickly reduced to insignificant levels thereafter due to combined overharvesting on land and at sea.

An international agreement to protect the fur seals from pelagic sealing was first signed in 1891; however, the first effective regulations by the United States came with the fur seal treaty of 1911. With the signing of this treaty, the fur seal population was protected from pelagic sealing by the nationals of Great Britain, Japan, Russia and the United States. Commercial sealing on the Pribilofs was halted in 1912 by an Act of Congress until August 21, 1917. Since 1917, the harvest has been controlled first by a quota, and now by a government supervised harvest which takes only non-breeding males.

From 1925 to 1935, the world population of northern fur seals increased rapidly. Twice during the period, in 1926 and again in 1936, the Japanese Government tried to renegotiate the fur seal treaty of 1911

because of alleged damage caused to its fisheries by the increasing fur seal population. Finally, in 1941, Japan notified the other members that it was abrogating the treaty because of this damage.

From 1941 until the present Convention became effective in 1957, the Pribilof Island herd was protected by a provisional agreement between the United States and Canada. Pelagic sealing occurred only in the western North Pacific Ocean and was estimated to be no more than 6,000 animals annually.

The Interim Convention on Conservation of North Pacific Fur Seals ("Convention") was signed in Washington, D.C. on February 9, 1957, by the Governments of Canada, Japan, the Union of Soviet Socialist Republics, and the United States of America. The Convention came into force in October, 1957. It was amended by a Protocol on October 8, 1963, which in turn entered into force on April 10, 1964. The Protocol extended the terms of the Convention for an additional six years and effected several changes with respect to the scientific research programs to be carried out by the Party Governments. The Convention, as amended, was continued in force for an additional six years by an exchange of notes among the Party Governments which became effective on September 3, 1969. In 1975, at a series of meetings of the Party Governments, the conference representatives, although unable to agree on U.S. proposals for a new management regime based upon an "optimum sustainable population" concept, agreed on a Protocol to extend the Convention for an additional four years. This Protocol was signed on May 7, 1976 and entered into force on October 12, 1976.

Unlike other international forums (notably the International Whaling Commission), the North Pacific Fur Seal Commission does not set annual harvest quotas for either the United States or the Soviet Union, but seeks through the general provisions of the Convention, to maintain a high population level of northern fur seals.

Article V, paragraph 2(d), of the Convention states:

> ["The North Pacific Fur Seal Commission] shall recommend appropriate measures to the Parties on the basis of the findings obtained from the implementation of such coordinated research programs, including measures regarding the size and the sex and age composition of the seasonal commercial kill from a herd and regarding a reduction or suspension of the harvest of seals on any island or group of islands in case the total number of seals on that island or group of islands falls below the level of maximum sustainable productivity."

Thus the Convention text provides safeguards, through the operation of the Standing Scientific Committee, to prevent the stocks of northern fur seals from diminishing to a level which could endanger their existence.

The Convention mandates extensive research responsibilities by the Party Governments to study fur seal habitat, migration, feeding habits, reproduction and other vital statistics. A harvest is allowed only after such a recommendation by the Standing Scientific Committee is accepted by Parties to the Convention. The Convention further allows the United States and the Soviet Union to alter or cease a harvest if those governments determine such action necessary to the well-being of the fur seals under their jurisdiction.

The present Convention is recognized by world wildlife management authorities as a hallmark international conservation program for a migratory species. It has resulted in the recovery of the fur seal from a low of about 300,000 animals in the early 1900s to about 1.7 million today. There is, however, opposition to the treaty because of the commercial harvest it allows. A conviction exists among many citizens that killing fur seals is unethical and immoral. There is therefore, opposition to any action which would continue the United States harvest of northern fur seals on the Pribilof Islands.

B. Domestic Legislation

1. The Fur Seal Act of 1966

The Fur Seal Act of 1966 (16 USC 1151-1187) implemented the Convention in the United States. This Act provides for the conservation and protection of North Pacific fur seals, the protection of sea otters on the high seas; and the administration of the Pribilof Islands. The Act allows Indians, Aleuts and Eskimos who dwell on the coast of the North Pacific Ocean to take fur seals in traditional ways using canoes and spears. The Act also directs the Secretary to take and use fur sealskins on the Pribilofs, to carry out other duties in connection with the harvest, and to provide certain services to the Aleut residents. One of the major purposes of the Act (often referred to as the Bartlett Act) was to require the United States Government to pay fair wages, provide adequate housing, provide retirement benefits, and generally provide for the wellbeing of the Aleut residents.

2. Alaska Native Claims Settlement Act

The Alaska Native Claims Settlement Act (43 USC 1601) in 1972, extinguished native claims to land in Alaska, authorized selection of certain lands and mineral rights, and established payments to native corporations. Under the terms of the Act approximately 94 percent of the land area on St. Paul and 97 percent of the land area on St. George has been conveyed to the ownership of the Aleut residents. Ownership of the fur seal rookeries and a buffer zone around the rookeries were retained along with some buildings and small areas by the Federal Government.

3. The Marine Mammal Protection Act of 1972 (16 USC 1351-1407) ("MMPA")

It is the policy of the MMPA as expressed in section 2 that "species and population stocks of marine mammals should not be permitted to diminish below their optimum sustainable population (OSP)" and "that the primary objective of their management should be to maintain the health and stability of the marine ecosystem. Whenever consistent with this primary objective, it should be the goal to obtain an optimum sustainable population keeping in mind the optimum carrying capacity of the habitat."

Section 108(a)(4) of the MMPA, required the Secretary to "initiate the amendment of any existing international treaty for the protection and conservation of any species of marine mammal to which the United States is a party in order to make such treaty consistent with the purposes and policies of the Act..."

Section 108(b) required the Secretary to undertake two studies, one relating to population trends and optimum sustainable population, the other relating to consistency of the Convention with the Act. The studies were required by October 21, 1973, and, if certain findings resulted from the studies, the Secretary was required to initiate negotiations to modify the Convention. If negotiations were unsuccessful, Congress mandated that the then-existing termination date of October 14, 1976, should be extended. However, in the event of unsuccessful negotiations followed by a successful extension, section 108(b) gave no specific guidance as to subsequent studies, findings, renegotiations, or extensions.

On November 15, 1973, the Secretary transmitted the required studies to Congress and they were published in the Federal Register on April 2, 1974 (39 FR 12051-12054). Although finding "no basic incompatibility" between the Convention and the Act, the Secretary recommended negotiations under section 108(b)(2)(B)(ii) to reconcile the differences of emphasis between the Convention and the Act.

In 1975, the United States actively sought to renegotiate the Convention and called for a revised Convention which would allow the Parties to take into account a variety of factors, in addition to biological, in fur seal conservation and management. During the renegotiations, the U.S. delegation submitted a working paper on the OSP concept which noted its concern for a management program based on a single stock management.

The United States was unable to achieve agreement of the Parties on the inclusion of the OSP concept in a new Convention. The delegation of Canada expressed the view that the concept was not a viable management tool for fur seals. The delegation of Japan expressed the view that the

OSP concept required further refinement before a full discussion on its use could take place. The Parties did, however, agree to a number of changes to the Convention which take into account the health of the ecosystem and humane harvest provisions.

The United States position on extension, renegotiation, or termination of the Convention is guided by section 108(a)(4), because the Convention clearly qualifies as an international treaty for the protection and conservation of a species of marine mammal to which the United States is a party. Section 108(a)(4) directs the Secretary to initiate the amendment of the Convention, if necessary, to make it consistent with the purposes and policies of the Act. Thus, we must continue to evaluate whether, and to what extent, the Convention has advanced the North Pacific fur seal toward population levels consistent with the purposes and policies of the Act, and, whether other arrangements consistent with the Act are required.

In the absence of a convention, management of the North Pacific fur seal would be subject to the MMPA. The central feature of the MMPA is a moratorium of indefinite duration, with certain limited exceptions, during which no marine mammal, including parts or products thereof, can be imported into the United States or taken by any person subject to the jurisdiction of the United States.

The MMPA exempts any Indian, Aleut, or Eskimo who dwells on the coast of the North Pacific or Arctic Oceans from the moratorium; and any taking by such person is exempt so long as the taking is for subsistence or handicraft purposes, and not accomplished in a wasteful manner.

On December 21, 1976 (41 FR 55536), the National Marine Fisheries Service published a definition of OSP:

> "a population size which falls within a range from the population level of a given species or stock which is the largest supportable within the ecosystem to the population level that results in maximum net productivity (MNP). Maximum net productivity is the greatest net annual increment in population numbers or biomass resulting from additions to the population due to reproduction and growth less losses due to natural mortality."

This definition was subsequently approved by Judge Charles Richey of the United States District Court for the District of Columbia in Committee for Humane Legislation vs. Kreps, (D.D.C. Civ. Action No. 77-0564 Order of the Court dated June 30, 1977).

A panel of specialists in population dynamics (NMFS 1976) noted that, "The limiting points of the range of OSP are not fixed. Natural environmental changes, and changes imposed on other elements of the ecosystem, e.g. harvesting of fish . . . can change both the carrying capacity and the population size giving maximum net productivity."

4. The Fishery Conservation and Management Act (FCMA)

On April 13, 1976, the President signed into law the Fishery Conservation and Management Act of 1976 (16 USC 1801-1881). This Act provided for a U.S. fishery conservation zone (FCZ), the inner boundary of which is a line conterminous with the seaward boundary of each of the coastal States, and the outer boundary of such zone is a line drawn in such a manner that each point on it is 200 nautical miles from the baseline from which the territorial sea is measured. Section 404 of the FCMA extended the jurisdiction of the Marine Mammal Protection Act out to the same boundaries as defined above.

II. ALTERNATIVES INCLUDING PROPOSED ACTION

A. Extension (Proposed Action)

We recommend that the Interim Convention be extended for a period of four years, with minor modification in the enforcement provisions to reflect extended fishery jurisdictions. We believe that this action is environmentally preferable to termination of the treaty, or renegotiation at this time. Our recommendation is based on two primary considerations: the need to protect the northern fur seal throughout its range and our responsibilities to the people who live on the Pribilof Islands.

Since the northern fur seal spends a considerable portion of its life history in international waters and areas under the jurisdiction of Canada, Japan, and the Soviet Union, it is vulnerable, in waters outside of our jurisdiction, to directed pelagic harvests, and taking incidental to commercial fishing. During recent consultations, both Canadian and Japanese representatives indicated that their governments are under pressure from fishing interests to resume pelagic sealing because of perceived competition between fishermen and the seals for fish. We believe such harvests are likely should the Convention be terminated. Without existing international restraints, we anticipate that a greater number of seals may be killed than the number currently harvested on land.

While we recognize that many oppose the harvest on moral and ethical grounds, we believe that the Pribilof Island segment of the population is near the maximum number that can be maintained under present environmental conditions, and can support the current harvest without adverse environmental consequences.

Harvesting methods, which are under continual evaluation, represent a rapid, efficient and humane way to harvest fur seals, comparable to the best practices used in the slaughter of domestic livestock and fowl.

Beyond our responsibility for the management of the Pribilof Island herd and the worldwide conservation of the northern fur seal, we have a special responsibility to the people who live on the Pribilof Islands. Under the Fur Seal Act of 1966 the Department of Commerce is charged with administration of the Island communities, including provision of employment in the seal harvest. Much progress in self-determination has been made on the Islands since passage of this legislation. No longer are the native Aleut residents solely dependent on the Federal Government for food, transportation, housing and utilities. We are still, however, the major employers on the Islands and a cessation of harvesting would undoubtedly result in the loss of at least 80 jobs on both Islands. Island residents and Aleut respresentatives have asked that we extend the Convention and continue the harvest on which much of their employment depends.

Renegotiation, in our view, offers no advantages to an extension of the treaty. We believe we may be able to institute reductions in harvest levels, should this be necessary, under terms of the present treaty. Extension of the Interim Convention would not, therefore, foreclose the possibility of a phaseout of the harvest on ethical grounds, favored by some public reviewers. Renegotiation to introduce optimum sustainable population (OSP), the management concept of the Marine Mammal Protection Act (MMPA) of 1972, would have little or no chance of success at this time, due to the demonstrated opposition of Canada and Japan. The population of the northern fur seal is however, presently at a level consistent with OSP management, according to our most recent estimates.

B. Termination

We could allow the treaty to terminate in October 1980 and protect the northern fur seal under the MMPA. The commercial harvest would probably cease and subsistence harvest for food and the making of native handicrafts, under the native exemption to the MMPA moratorium, might involve more than 5,000 animals per year. We would have no control over or direct influence on the possible taking of these seals beyond 200 miles off the United States coast or on the Soviet controlled islands. In our discussions with Party Governments both Canadian and Japanese representatives indicated that their governments are under increasing pressure from fishing interests to resume pelagic sealing, and so reduce a population that fishermen perceive as direct competition for fish. We believe pelagic harvests, either as a directed commercial enterprise or as an opportunistic adjunct to fishing operations, would resume if the treaty were terminated.

A new multilateral agreement, or a series of bilaterals, providing for no harvest of this population, would have an uncertain prospect of acceptance by the governments of Canada, U.S.S.R., and Japan. All countries have, however, indicated their willingness to extend the present treaty an additional four years.

The size of the total population may well be decreased under this alternative due to pelagic harvest outside our jurisdiction, as well as land harvest on the Soviet controlled rookeries. While we know that a high proportion of seals taken pelagically would be females, we are not able to estimate the numbers that would be taken under these conditions. At risk, however, during part or all of their life cycle, is as much as 85 percent of the population.

The effect of this alternative on other international conservation arrangements is also uncertain. Possibly our unilateral withdrawal from a marine mammal conservation agreement would have adverse effects on our ability to negotiate new conservation treaties, or improve existing international arrangements. Certainly the parties to this agreement wish us to continue as a member of the North Pacific Fur Seal Commission, and show great pride in the conservation achievements of the current treaty.

An end to the commercial harvest would result in the loss of at least 80 jobs on the Pribilof Islands. Lost income could be partially replaced by welfare payments, but no additional jobs are available at this time. Island representatives hope that a new fishing industry can provide additional employment opportunities in the future.

C. Renegotiation

We considered calling for a renegotiation of the Convention, prior to the termination of the present treaty, in order to incorporate the management concept of optimum sustainable population (OSP). We also considered the amendment of existing provisions to provide for gradual reduction of the harvest levels, should this action be deemed necessary in the future.

Both issues were raised during informal consultations with Party Governments held in Washington, D.C., October 1979. The Soviet Union reserved comment until the next meeting of the North Pacific Fur Seal Commission, April 1980. Both Canada and Japan, however, indicated opposition to a renegotiation and specifically opposed introduction of OSP into the present agreement at this time. They indicated that the application of this concept to the northern fur seal population needs further explanation, that the present management regime using maximum sustainable productivity (MSP) was working well for this population, and that they would need to know more precisely what effect OSP management would have on the status quo, before considering such a change.

Canadian, Japanese, and U.S.S.R. representatives were questioned as to their views on a possible reduction of the United States share of the harvest. No objections were raised to our preliminary view that such action may be taken under terms of the present Convention; renegotiation may not be necessary to obtain this objective.

At the 23nd annual meeting of the NPFSC, April 14-18, 1980, in Moscow, the U.S.S.R. indicated willingness to consider a discussion of OSP and its application to the treaty, at the next annual meeting of the Commission in Toyko, April 1981, provided a report on this topic is prepared by the United States and circulated to Party Governments prior to the next meeting. Canada seconded this view and Japanese representatives indicated that they will reserve judgement on this proposed agenda item until after a review of the United States report.

While thoroughly exploring the feasibility of this alternative, we have concluded that a renegotiation of the treaty would present no advantages over extension of the present agreement. On the contrary, renegotiation might result in the introduction of management practices, such as a pup harvest on Soviet islands, long opposed by the United States. A phaseout of the harvest might be initiated without a renegotiation and the introduction of OSP into the treaty is not, in our view, possible at this time.

III. AFFECTED ENVIRONMENT

A. Oceanography of the North Pacific

A review of oceanographic conditions in the subarctic North Pacific may be found in Dodimead et al., 1963. A brief summary of bathymetry, current systems and weather conditions affecting living resources of this area (from Kajimura 1980) follows:

1. Bathymetry

Figure 1 details general bathymetry of the North Pacific Ocean. The Pribilof Islands are situated in the eastern Bering Sea within a shallow plateau of about 55 to 73 meters, part of the vast continental shelf which extends over 750 kilometers offshore. By contrast the Commander Islands are surrounded by very deep water. The shelf along the eastern Aleutian Islands, Gulf of Alaska and the west coast of Canada and the United States is fairly narrow. The shelf is widest off Kodiak Island where Portlock and Albatross Bank are major feeding grounds of fur seals in the Gulf of Alaska.

2. Ocean currents

The role of ocean currents and other oceanographic factors in the life history of fur seals in the North Pacific is still generally unknown. Some factors which probably influence fur seals and other living resources in this area include variations in temperature, salinity, oxygen and water movements. These factors can influence the distribution and abundance of plants and animals at sea. Sudden changes in water temperature, for example, have led to mass mortalities of fish. McLain and Favorite (1976) have shown that a cooling trend evident in the eastern Bering Sea since 1968 has reduced some plant and animals populations.

The surface layer of coastal water may be transported offshore by winds blowing parallel to the coast. This water is then replaced by nutrient-rich water from below, a process known as upwelling. The western coast of North America is among the world's major upwelling regions. Upwelled water increases the productivity and abundance of plants in this region, and therefore influences numbers and distribution of animals, including fish and marine mammals.

3. Weather

Harsh winter storms in the North Pacific are the major cause of mortality among fur seals during their first year at sea. Scheffer (1950) found that January and February storms of that year were the principal cause of death for young seals, many of which washed ashore on the beaches of British Columbia, Washington, and Oregon. During its first winter the fur seal pup will lose nearly one-half of its body weight due to storms and other adverse oceanographic conditions, as well as its inability to catch fish as efficiently as older and more experienced seals. Strandings of older seals are less common and their deaths are most likely due to disease, rather than the direct effects of weather.

B. The Northern Fur Seal (Callorhinus ursinus)

1. Range and Breeding Islands

The life history and migratory patterns of northern fur seals are discussed in Taylor (1955), North Pacific Fur Seal Commission (1962, 1969, 1971, 1975, 1980), Fiscus (1978, 1980) and Kajimura (1980).

The northern fur seal is a monotypic genus and species that ranges the subarctic waters of the North Pacific Ocean and portions of the Sea of Japan, and the Okhotsk and Bering Seas. Its breeding islands are: Robben I. in the Okhotsk Sea, Kamennye Lovushki Rocks and Srednev Rocks of the Kuril Islands in the western North Pacific, the Commander and Pribilof Islands in the Bering Sea and San Miguel I. in the eastern North Pacific.

Most mature fur seals are on or near their breeding islands from June to November, and spend the remaining months at sea. Immature seals may or may not return to their islands of birth each year. Fur seals range across the North Pacific north of the subaractic boundary, and are rarely found in water with a surface temperature greater than 15^{o}C. They tend to concentrate along the continental shelf and slope where nutrient-rich waters support a variety of prey species. Some migrate south in the eastern North Pacific to about lat. 32^{o}N (California-Mexican boundary) and in the western North Pacific to about lat. 36^{o}N off Honshu I. Japan. In the Sea of Japan they range south to about lat.

37°N on the Korean coast. There have been a few sightings of fur seals south of these latitudes and some may stay north of the normal range in summer. Fur seals are occasionally sighted north of Bering Strait in the Chukchi Sea and eastward in the Beaufort Sea as far as the Canadian Northwest Territories. Some seals remain in the northern portions of their range; however, much of the Okhotsk Sea, about three fourths of the Bering Sea and about half of the Sea of Japan are ice-covered in winter and on occasion the ice persists in the vicinity of the breeding islands into June (Robben I. and rarely St. Paul I.).

Based on tag recoveries, fur seals wintering in the Sea of Japan are considered to be principally of Robben Island origin. Seals wintering in the western North Pacific are primarily from the Commander and Kuril Island populations, although some Robben Island and Pribilof Islands seals are present. Seals wintering in the eastern North Pacific are primarily from the Pribilof Islands, although seals from Robben Island and Commander Island populations are present.

Based on tag recoveries and sightings, seals from the Pribilof and Commander Islands intermix on their respective home islands more frequently than with seals from other breeding islands. Robben Island seals occur more frequently on the Commander Islands than on the Pribilof Islands. On Robben Island, seals from the Commander Islands are the most numerous visitors although a few seals from the Pribilof Islands have been recorded. On the Kuril Island rookeries, seals from the Commander Islands are the most numerous visitors followed by those from Robben Island and the Pribilof Islands. On San Miguel Island off California, seals from the Pribilof Islands are most numerous followed by Commander Islands and Robben Island seals. A relatively small number of seals have been tagged at San Miguel Island and to date none have been reported north of California waters.

A large proportion of the tagged seals recovered on islands other than their home island are immature males; however, immature and mature females have also been sighted. On San Miguel Island, for example, at least 32 tagged females from other islands (23 Pribilof Is., 6 Commander Is., 3 Robben Is.) have been sighted, whose ages at first sighting ranged from 4 to 20 years of age, most from 6 to 8 years of age.

Older males (10-15 years old) winter farther north in the North Pacific than the younger males and females. In the eastern Pacific females and young males appear during southbound migration along the continental shelf from about lat. 57° to lat. 46°N in late November and off central California from lat. 40° to lat. 38°N in late December; and during January-April major concentrations occur from about lat. 49° to lat. 34°N. Yearlings (pups born the preceding July) appear along the coast from about lat. 57°to lat. 46° in January and off California lat. 42° to 38° in late February or early March.

Spring (northbound) migration in the southern portion of the winter range may begin as early as March. In northbound migration, many seals follow the continental shelf northward, then westward through the Gulf of Alaska and into the Bering Sea through the eastern Aleutian Island passes. Some apparently move in a relatively straight line to their breeding islands, in effect, retracing their southbound paths as described below. The older (socially mature) males are usually the first to arrive on the home islands, in May, and are followed by the older females in late June. Younger males and females continue to arrive usually in descending order of age. Many of the yearlings and 2-year-olds of both sexes do not return, and remain scattered across the subarctic waters of the north Pacific for their first year or two of life.

In southbound migration, seals bound for the eastern North Pacific migrate through the eastern Aleutian Island passes and fan out across the eastern North Pacific to arrive along the eastern continental shelf at about the same time from about Sitka, Alaska (lat. 57°N) to the Columbia River (lat. 46°N) and a few weeks later off the Farallon Islands (lat. 38°N).

The range and breeding islands of the northern fur seal are shown in figure 2. As mentioned previously some animals may wander north and south of the range as depicted here but their numbers are insignificant. In the extreme southeastern portion of the range this species may intermix with the Guadalupe fur seal (Arctocephalus townsendi) which numbers about 1,000 animals, and presently breeds only at Guadalupe Island, Mexico. A few Guadalupe fur seals range north to San Miguel I. California where several are seen each year and the untrained observer may confuse the two species at sea where their ranges overlap.

We estimate that at least 80 percent of the Pribilof Island fur seals pass through waters outside U.S. jurisdiction during their migrations. A chart of fur seal sightings is presented as figure 3.

2. Maximum Population and Population Trends - Pribilof Islands

The two islands subject to United States jurisdiction where harvesting of fur seals has taken place are St. Paul and St. George, the major islands of the Pribilofs. There are very limited data from which to estimate the size of the Pribilof fur seal herd at the time that it was discovered in 1786. A best estimate would be that the unexploited Pribilof fur seal population was at the carrying capacity of the ecosystem as it existed at that time, and numbered between 2 and 2.5 million animals, of which 1.6 to 2.0 animals were on St. Paul Island. Following exploitation, the herd reached its lowest levels in 1912, when 82,000 pups were counted on the St. Paul and St. George rookeries, representing a total population of about 300,000 animals. An average of

80 percent of the Pribilof Island fur seal population has been found on St. Paul Island, so there would have been about 240,000 fur seals on St. Paul Island in 1912.

From 1912 to 1924 the annual rate of increase of pups was about 8 percent (Table 1). As long as the population was relatively small, the number of pups born could be determined by actual total or partial counts. After 1924 total pup counts became impractical because of the population increase, but a substitute counting method was not developed until 1947 when pups were tagged as a means of estimating their numbers. This method consisted of tagging a sample of pups with a permanent metal tag and estimating the total pup population from the ratio of tagged to untagged animals in the harvest of 3 and 4 year old animals. The population estimates made by this method were later shown to be inflated, primarily because some young animals died as a result of the tagging. In the early 1960s a shearing type mark was developed, followed by random sampling the same season to obtain marked to unmarked ratios. This method provides the most reliable estimate of pup numbers, and is the method used now. Total populations are calculated from the number of pups born using the best estimates of mortality rates. Total counts are now made only of harem and idle bulls on the rookeries.

Evidence from the counts of adult males and the harvest of immature males (no females were harvested commercially until 1956 except for a few taken accidentally) indicates that the Pribilof Islands fur seal population reached a maximum size by the early 1950s. For the period 1950 through 1956, Chapman (1973) estimated that the average number of pups born on St. Paul Island was 449,000. This number of pups indicates that the total St. Paul Island herd consisted of about 1,800,000 animals. This herd size was probably very close to the carrying capacity of the ecosystem at the time because the management practices in effect from 1912 to 1956 should not have limited the growth of the population. For example, females were not harvested commercially; and therefore the number of pups and the size of the population could increase to the carrying capacity of the ecosystem provided there were sufficient adult males to fertilize the females. The fur seal population on St. Paul in the early 1950s, about 1,800,000, was probably not significantly different from the estimated pre-exploitation carrying capacity levels.

In the late 1950s it was believed that, theoretically, the population was too large to produce a maximum yield, and therefore a program to reduce the number of fur seals was carried out. The reduction was achieved primarily by harvesting females from 1956 through 1962. From 1963 through 1968 an effort was made to stabilize the population by harvesting only females believed to be in excess of the number needed to maintain a stable population. As a result of the harvest of females and also possibly due to environmental changes associated with the development of commercial groundfish fisheries, the St. Paul Island fur seal population decreased from its peak in the early

1950s of about 1,800,000 to about 930,000 in 1970. No intentional commercial harvest of females has taken place since 1968, and based on a pup count of 278,000 animals in 1975, the population was estimated at 1,110,000 in 1975. The 1979 pup count was about 246,000, equating to a population of about 990,000 (all figures for St. Paul Island).

Estimates of pups born from 1912 through 1979 are given in Table 1. Annual pup production is now about the same as when the herd reduction program of 1956-63 ended, although a low point evidently occurred about 1969-70 (e.g. Lander and Kajimura 1976) and a decline on St. George Island may be in progress (National Marine Mammal Laboratory 1979). Reliable estimates of pup births throughout the 1970s are available from data collected on all the rookeries of each island (Lander 1980):

Year	St. Paul Island	St. George Island
1970	230,000	51,700
1973	-	60,400
1975	278,000	-
1978	-	47,200
1979	246,000	-

St. George Island was exempted from commercial harvesting starting in 1973, and continuing indefinitely, in order to provide a comparision between exploited (St. Paul Island) and unexploited populations of northern fur seals. It is anticipated that the results of this study will provide marine mammal scientists information on the natural factors which limit the abundance of fur seals. The apparent decline in pup production here is an unexpected result.

3. Population-Commander and Robben Islands (U.S.S.R.)

Both the Commander and Robben Islands fur seal populations were near depletion by 1911 when the fur seal treaty came into force. It is estimated that the Commander Islands population was between 1.0 and 1.7 million animals when first discovered in 1741. According to Dorofeev (1961), the total number of fur seals on the Commander Islands in 1911 did not exceed 9,000 animals while the Robben Island population was only 7,000. The population growth was noticeably slow between 1911 and 1957; however, the population has tripled since that time (Nikulin, 1971). From 1968 through 1972, the total number of adult males on the Commander Islands showed a precipitous decline and by 1972, it was about one-third (1,721) of the 1967 population (5,642) (NPFSC, 1975). Since 1972, the adult male population has quadrupled (1,711-7,343 in 1978). The cause of the sudden decline was an excess harvest of large males and the increase resulted from a decreased harvest of males.

Data on pup production on Robben and Commander Islands have been available only since the middle 1950's when the stocks were estimated to be well below the level of maximum sustainable yield (MSY). The numbers of pups born annually on Robben and Commander Islands is shown in Table 2. For the Commander Islands, Lander and Kajimura (1976) estimate that MSY is achieved at a pup production level of 50,000-55,000 young per year. As shown in Table 2, pup production has exceeded this level since the early 1960's.

On Robben Island, the number of adult males exhibited a noticeable decline in 1971-1973 (Table 3). Within two years, the total number of adult males had decreased nearly two-thirds and continued to decline until 1974 but increased substantially by 1978 as a result of harvest restrictions by the U.S.S.R.

Ichihara (1972) estimated MSY for the Robben Island fur seal population at 50,000 pups per year. Currently, pup production is below this level.

The number of pups born on Robben Island decreased by 19.1 percent, while the number of adult males increased by 24.8 percent between 1978 and 1979. This result is similar to findings on St. George Island in the Pribilofs, where the cessation of harvest in 1973 caused an increase in the numbers of adult males. A 22 percent decrease in pup production on St. George was noted in 1978. No cause and effect relationship has yet been identified to explain a coincident increase in male counts and decrease in pup counts, as reported by the Scientific Committee of the North Pacific Fur Seal Commission in 1980, but studies of this phenomenon are continuing. Possible explanations include competition between young males and breeding females for food and interactions between males and pups on the breeding islands.

4. Current Estimate of Population Abundance

The current estimate of the North Pacific fur seal population is 1.7 million. The population on each island group is as follows:

Island Group	Area	Number of Seals
Pribilof Islands	E. Bering Sea	1,250,000
Commander Islands	W. Bering Sea	265,000
Robben Island	Okhotsk Sea	165,000
Middle Kuril Islands	W. North Pacific	55,000
San Miguel Island	E. North Pacific	2,000
		1,737,000

The population estimate for the Pribilof Island segment of the population published in the draft EIS (1.39 million) has been revised in light of work prepared for the 23rd annual meeting of the NPFSC and based on data analyses from research done at sea by the United States and Canada. The current estimate of 1.25 million is based on average pup production (1973-79) and an new life table, giving revised estimates of survival for each age group. Tables 4, 5 and 6 give the background for this analysis; additional details are available in Lander 1980.

5. Productivity and Optimum Levels of Population

The Marine Mammal Protection Act of 1972 (MMPA) introduced three new terms in establishing goals and objectives for the management of marine mammals: optimum sustainable population, optimum carrying capacity, and the health and stability of the ecosystem.

Section 2(6) of the MMPA states that the primary objective of marine mammal management should be the maintenance of the health and stability of the marine ecosystem. "...whenever consistent with this primary objective, it should be the goal to obtain an optimum sustainable population keeping in mind the optimum carrying capacity of the environment. A similar statement is found in Section 2(2): "...consistent with the major objective that stocks should not be permitted to diminish beyond the point at which they cease to be a significant functioning element in the ecosystem of which they are a part, they should not be permitted to diminish below their optimum sustainable population."

OSP is defined in Section 3(9) in terms of the health of the ecosystem, the optimum carrying capacity, and maximum productivity:

> "The term "optimum sustainable population" means, with respect to any population stocks, the number of animals which will result in the maximum productivity of the population of the species, keeping in mind the optimum carrying capacity of the habitat and the health of the ecosystem of which they form a constituent element."

It is clear that the MMPA intends an ecosystem approach to marine mammal management. It has been very difficult, however, to reduce expressions such as "the health and stability of the ecosystem" to a set of objective rules which allow for practical implementation of this statute. Two characteristics we have used to describe the dynamics of marine mammal populations are carrying capacity and maximum net productivity.

a. Carrying Capacity

Carrying capacity is the number of animals that can be supported by a given environment. Various empirical indicators have been proposed to identify whether a population is at or near, or is below its carrying capacity (Marine Mammal Commission, 1976). Pregnancy rates, age at first reproduction, growth rates and survival rates especially of the young, have been examined for the Pribilof fur seal herd.

Factors suggesting that the population is below the carrying capacity of the current state of the ecosystem include average growth rates and pup survival rates which are characteristic of past rates associated with an intermediate population rather than with either a population at its carrying capacity, or a very depleted population. Figure 4 compares average lengths of pregnant females for grouped years. The latest group (1969-74) shows the greatest lengths. Figure 5 shows survival of pups to harvest. The scatter of points for pup survival in the 1950s is characteristic of a population at carrying capacity. Most current values continue in the generally linear pattern characteristic of a population below carrying capacity.

The primary indicator suggesting that the population is at or near its carrying capacity for the current state of the ecosystem is the relatively constant pup production on St. Paul Island over the past 10 to 15 years since the cessation of a female harvest of fur seals on St. Paul. However, the lack of increase in pup production can be explained in part by the continuing effect of the earlier female harvest which was strongly weighted to younger animals.

York (1979) has examined the cumulative effect of the female harvest upon the total breeding population of females. Although the female harvest ceased in 1968, the female population actually continued to decline because of low recruitment to the breeding population as a result of the earlier harvest coupled with the natural mortality of the more numerous, older animals. The minimum female breeding population was reached in 1971-73, three to five years after the end of the female harvest, and is only now reaching the approximate level of 1968, the year the female harvest ended. Using a computer model, York has estimated what pup production would have been for the years 1956-79 had no female harvest occurred.

Approximately 225,000 female pups were born per year during the period 1950-1956 on St. Paul Island (Chapman, 1973) when the herd was probably close to its carrying capacity. The average number actually born in 1975-79 averaged about 137,000 female pups per year. If there had been no female harvest, the anticipated number of female pups born per year would have been 196,000 per year. Thus, approximately two-thirds of the reduction in pups presently born as compared to the 1950-56 base level may be accounted for by the effects of the female reduction program.

The remaining one third difference (225,000 vs. 196,000) equivalent to 13 percent of the total herd may represent a continuing discrepancy between pup estimates based on metal tags (1950-56) and estimates based on shearing (1975-79); or the observed decline may represent a reduced carrying capacity of the ecosystem as a result of expanding Bering Sea groundfish fisheries during the 1960s. Using trends in pup production it appears that the carrying capacity for St. Paul Island is about 1,570,000, a reduction of about 13 percent from earlier figures (1950-56).

b. Population Size at Maximum Net Productivity

The MMPA refers to "maximum productivity" in the Act's definition of OSP. "Maximum productivity" is not otherwise defined in the Act. The National Marine Fisheries Service (NMFS) regulations implementing OSP defined maximum "net" productivity:

> "Maximum net productivity is the greatest net annual increment in population number or biomass resulting from additions to the population due to reproduction and growth less losses due to natural mortality." 41 FR 55536 (Dec. 21 1976).

The principal objective of the Convention is to achieve "maximum sustainable productivity." Although one expression may be more commonly used in a given circumstance, these three terms are often used interchangeably in the scientific literature. In the NMFS definition, productivity is defined in terms of biomass or number of animals. Productivity may also refer to a rate of change. Other terms often used interchangeably with productivity to refer to the number or biomass of animals added to or lost from a population are "production" and "yield."

Some writers (Chapman, 1978) have distinguished production or productivity from yield by using production or productivity to describe an undisturbed and unharvested population, while restricting yield to refer to the harvest under a particular management scheme. Where management and harvest are based upon the dynamics of the total natural population, maximum sustainable yield (MSY) and maximum net productivity (MNP) will continue to be nearly equal. However, where a harvest is based on a selective factor, such as surplus males, MSY and MNP may not be the same. For stocks such as fur seals, managed for decades under a selective harvest, there are few data to describe a "natural" population and distinguish MSY from MNP.

Early models by Chapman (1961) and Nagasaki (1961) were designed to provide estimates of MSY, and were based on the relation between the observed kill or the estimated number of pups born and population size. These models, although constructed independently, were in agreement that about 384,000 pups must be born annually on St. Paul Island to achieve MSY. Because the estimates of pups born based on early tagging methods proved to be too high, Chapman (1973) constructed a new model based on the present estimates of pup counts. Chapman's 1973 model estimating MSY is the most recent one published. This model predicts 283,000 pups (142,000 females) born on St. Paul Island to achieve MSY. In this model MSY occurs at 63 percent of carrying capacity, assumed to be 1,800,000. If the present carrying capacity of the ecosystem is 1,570,000, Chapman's estimate should be reduced to the vicinity of 250,000.

The logistic model is a simplified production model which has been widely used to describe the dynamics of a population. In this model, maximum production occurs at a population at 50 percent of carrying capacity. As shown by Fowler (1978), there is a general tendency in large mammals for density dependent effects to occur at population levels quite close to the carrying capacity. This results in production curves which peak at levels close to the carrying capacity. As illustrated by survival of pups, this tendency is exhibited by fur seals as well. As a result, it is to be expected that maximum production of both sexes would occur at population levels above 50 percent of the carrying capacity. Based on work by Chapman we have selected 60 percent. It must be stressed that population levels at both MSY and MNP are subject to revision on the basis of subsequent research. The MSY for a male harvest will occur at population levels greater than that at which maximum natural productivity occurs (Fowler et al. 1978).

c. Optimum Sustainable Population

Optimum sustainable population (OSP) is defined as a range between the population size which provides maximum net productivity and the population at the carrying capacity of the ecosystem (See Sec. I.B.3.). In the early 1950s the fur seal population of St. Paul Island was at a carrying capacity of approximately 1,800,000. There is now some evidence that the carrying capacity of the ecosystem today is less than 1,800,000, and may have been reduced by 13 percent to a present carrying capacity of 1,570,000.

Based on Chapman (1973) the number of newborn pups needed for MSY on St. Paul Island is about 283,000 (carrying capacity of 1,800,000) or 250,000 (carrying capacity of 1,570,000). Pup births averaged about 450,000, but with high variability, during the 1950 period when the population was at or near carrying capacity. The most recent (1975, 1979) estimates of pups born on St. Paul Island are 275,000 and 246,000, equating to estimated populations of 1,100,000 and 990,000.

If OSP is determined on the basis of the ecosystem prior to exploitation and MNP rather than MSY is taken as the lower limit, the carrying capacity for St. Paul would be 1,800,000, the population level at MNP would be 1,080,000 (60 percent of carrying capacity), and the present population, 990,000, would be slightly below OSP.

If OSP is determined on the basis of present estimates of the carrying capacity and MNP rather than MSY is taken as the lower limit, the carrying capacity would be 1,570,000, MNP would occur at 940,000 and MSY at 990,000. The present population at 990,000 would be above the lower limit of OSP.

If the carrying capacity of the ecosystem has been severely reduced as a result of environmental changes including, but not limited to increased fishing, but masked by the effects of the female harvest, the present population could be at or near the present carrying capacity of the ecosystem. Assuming that present carrying capacity is the appropriate basis for OSP, the present population is above the lower limit of OSP.

As our understanding of the effect of density dependent factors upon fur seal populations improves, MSY, if defined in terms of harvested males, may be found to occur at a level close to or equal to the carrying capacity. If MSY rather than MNP is selected as the appropriate lower limit for OSP for a species managed on a male-only harvest basis, the range of OSP would be very narrow, and population would normally fall either above or below OSP. For a population below OSP, the most rapid recovery of the population to levels at or above OSP will occur with a harvest of surplus males.

6. The Harvest

Historical levels of take on both the United States and U.S.S.R. owned islands are given in Tables 7 and 8. Reports on the methods used to harvest fur seals on the Pribilof Islands may be found in Simpson (1967), Virginia Mason Research Foundation (1971), Veterinary Panel (1971), Battelle, Columbus Laboratories (1973) and Keyes (1980).

The United States Government harvests approximately 26,000 animals per year on St. Paul Island, Alaska and shares 30 percent of the proceeds with Canada and Japan. Except for those females taken accidentally or for research, only males between the ages of two and six years are taken. Ninety percent or more of these animals are three and four years of age. Through 1972 seals were harvested each year on both major islands of the Pribilof group, however, since 1973 no seals have been taken commercially on St. George Island. In that year a moratorium on sealing was agreed to by Party Governments and St. George was set aside as a research study area.

There is a limited harvest season of five weeks ending on or about July 31st. Each bachelor hauling ground (Figure 6) is harvested once each week, or five times during the season. Since at any one time, many of these seals are feeding at sea, we have found that this method allows a sufficient number of young seals to escape the harvest and return to breed in later years. Because the fur seal is polygynous, many more females are needed for reproduction than males. Regulation of the take ensures that only those seals not needed as replacements for the breeding stock are taken and that the harvest is carried out in the most humane way possible without undue stress to the animals.

C. Bering Sea Fisheries

1. Groundfish Fishery

Japan, the U.S.S.R. and the Republic of Korea (ROK) are the principal nations harvesting fish in the Bering Sea and Aleutian Island region. In the Bering Sea Japan initiated its efforts in 1954, the U.S.S.R. in 1958, and ROK in 1968. Harvests, primarily of yellowfin sole (Limanda aspera) by Japan and the U.S.S.R., increased to over 500,000 metric tons (mt) in 1961 and then declined to about 85,000 mt in 1963. Peak harvests, of primarily pacific ocean perch (Sebastes alutus), occurred in 1965 in the Aleutian areas (Figures 7 and 8). In the mid 1960s the Japanese began an intensive pollock (Theragra chalcograma) fishery, and by 1972 total catches of groundfish exceeded 2.3 million mt of which pollock accounted for 80 percent. Catches have declined since 1972 as catch restrictions were placed on pollock and other groundfish through bilateral agreements between the United States and Japan and the U.S.S.R. These catch restrictions stemmed from evidence of declining abundance of the resources. By 1976, catches were limited to about 1.5 million mt.

With passage of the Fishery Conservation and Management Act of 1976, the fishery resources of the eastern Bering Sea and Aleutian Islands came under the jurisdiction of the United States. Beginning in 1977, the United States annually established total allowable levels of foreign fishing based on the optimum yield of each fishery resource. Optimum yield is based on maximum sustainable yield modified by relevant economic, social and ecological factors. Optimum yields established for 1979 for major fishery species are as follows:

Species	MSY (mt)	1979 Optimum Yield (mt)
Pollock	(BS) 1,100 - 1,600	950,000
Cod	58,700	58,000
Yellowfin sole	169,000 - 260,000	106,000
Other flounders	144,000 - 176,000	139,000
Pacific Ocean perch	(BS) 32,000	6,500
	(AL) 75,000	15,000
Sablefish	(BS) 11,350	5,000
	(AL) 1,850	1,500
Atka mackerel	33,000	24,800
Herring	-	18,700
Squid	10,000	10,000
Others	67,000	93,600
Total	1,702,200 - 2,325,700	1,428,100

(BS = Bering Sea) (AL = Aleutian Area)

Of the approximately 1.3 million mt of fin fish removed from this area in 1976, 941,665 mt, or about 75 percent, was pollock (NMFS 1980).

2. Salmon Gillnet Fishery

Japan operates a salmon gillnet fishery in the Bering Sea and northwestern Pacific from mid-May to the end of July. This fishery is regulated by the International North Pacific Fisheries Commission (INPFC) established in 1952, by a convention including Japan, Canada, and the United States. In 1978, this treaty was renegotiated to conform with the 200-mile fishery jurisdiction of the United States established by the FCMA. The renegotiated convention limited the high seas salmon fishery in the northwestern Pacific to the area between 170° and 175°E, north of 46°N. In the Bering Sea, the fishery now operates predominately between 56° and 60°N and between 170°E and 175°W.

A Japanese landbased salmon fishery operates predominately between 42° and 46°N, from 145°E to 180°. In each of these types of gillnet operation, sea birds and marine mammals are taken incidental to fishing operations.

3. Incidental Take

The incidental take of northern fur seals in the North Pacific by the Japanese salmon fishery was estimated by Fukahara (1974) to be between 3,150 and 3,750 animals per year. Nishiwaki (personnal communication to Lander and Kajimura, 1976) estimated the total incidental take to be 7,000 fur seals per year. Jones (1980) has estimated the incidental take of northern fur seals in Japanese salmon gillnets in the North Pacific 1975-78, based on fur seal catch rates of Japanese salmon research vessels (from Sano, 1978) and on the amount of gear (in tans) used by the commercial salmon fisheries (land-based and mothership). In the following table Jones estimated incidental take for all statistical areas for which fur seal catch rates were available. The estimates for both land-based and mothership fisheries ranged from a high of 7,342 in 1975 to a low of 546 in 1978.

Estimated incidental take of northern fur seals by Japanese gillnet fisheries for INPFC statistical areas in which fur seals were taken during 1975-1978.

	1975	1976	1977	1978
Total	7,342	6,070	4,033	546
Mothership	1,780	1,563	958	470
Landbased	5,562	4,507	3,075	76
Number of tans fished	11,623,725	11,756,494	7,702,963	4,997,781

In the following table (from Jones 1980) incidental take is estimated for the entire commercial fishing area, rather than only for those areas in which a fur seal catch rate was available. For areas where the catch rate was unknown, a weighted average rate was calculated for the three year interval. On this basis, the estimated total incidental take ranged from 7,824 in 1975 to 1,105 in 1978.

Estimated incidental take of northern fur seals by Japanese gillnet fisheries for all INPFC statistical areas commercially fished, 1975-1978. Number of tans fished as above.

	1975	1976	1977	1978
Total	7,824	6,590	4,415	1,105
Mothership	2,156	2,018	1,256	725
Land-based	5,668	4,572	3,159	380

Jones indicated that the decreased incidental take in 1978 in the mothership fishery is the result of a decrease in the number of statistical areas fished and in the number of tans fished. There was also a 46 percent decrease in fishing effort in 1977 compared to 1976. The decrease in the land-based fishery incidental take in 1978 was probably related to the decrease in fishing effort. In addition, the fishing area shifted towards the west, to areas with lower fur seal catch rates.

Data on incidental take in the groundfish fishery is much less complete. Jones (1979) has reviewed reports of observers aboard foreign vessels in this fishery and computed minimum fur seal per metric ton catch rates for the years 1973, 1975, and 1978. Recognizing that the data base is small and the variability is quite high, Jones concludes from her analysis that the incidental take of fur seals in the groundfish fishery may approximate 500 animals in years of intensive fishing.

Fiscus (1978) discusses the hazards to fur seals of discarded, lost or abandoned fishing nets and net fragments. The arrival of fur seals on home islands with net fragments around their necks caused enough concern by the late 1960s to merit discussion at meetings of the NPFSC. Fur seals, curious by nature, will investigate flotsam and jetsam at sea. They swim through and rest on floating kelp patches, when discarded fish netting is encountered, they treat it as they would kelp and may become entangled. As a result, some die of starvation, and others return to land where they are sometimes rescued and cut free of the entwining gear. The number of entangled seals observed during the commercial harvest on St. Paul Island (Table 9) is less now than the number observed in 1975, but this problem remains of special concern to Party Governments. The Governments have circulated posters to their fishermen portraying the danger to fur seals of discarding debris at sea.

D. Ecosystem Studies

1. The Food Chain

Figure 9 shows a schematic food chain for the eastern Bering Sea shelf area during the summer, including representative species in various trophic levels and estimated primary production in the Bering Sea (415 mg $C/m^2/day$) and Aleutian area (100 mg $C/m^2/day$).

2. The Diet of Fur Seals

The northern fur seal is an opportunistic feeder, taking squid and a variety of fish including herring, anchovy, salmon, capelin, saury, walleye pollock and mackerel. Species taken by fur seals vary according

to season and the area of their range examined. McAlister and Perez (1977) estimate that as much as 80 percent of the fur seal diet is fish, and in the eastern Bering Sea about half of this is pollock in some months.

Table 10 presents an analysis of fur seal stomachs taken from the eastern Bering Sea (Perez and Bigg 1980). Fishes of the family Gadidae (primarily walleye pollock), family Osmeridae (primarily capelin), and squids of the family Gonatidae are important elements of the fur seal diet here throughout the year.

3. Fish Consumption by Fur Seals

A computer model of the Bering Sea ecosystem, Dynamical Numerical Marine Ecosystem Model, or DYNUMES has been developed by the Northwest and Alaska Fisheries Center of the NMFS. The model incorporates data on population size, distribution, reproduction rates and feeding of fur seals, as well as information on other marine mammals and oceanographic data.

Based on biomass estimates of marine mammals, birds and fish stocks, DYNUMES has been used to estimate fish consumption in the eastern Bering Sea. Table 11 (North Pacific Fishery Management Council 1979) gives the estimate of 388,500 tons of finfish consumed annually by fur seals vs. 2,471,200 consumed by all marine mammals in the area. Considering pollock alone, it is estimated that northern fur seals consume 322,300 vs. 1,122,700 tons consumed by marine mammals in the eastern Bering Sea.

Estimates of food consumption (including fish and squid) by the Pribilof herd, including the entire eastern North Pacific portion of their range (from McAlister and Perez 1977) are given in Table 12. According to these estimates the Pribilof Island herd may consume about 1.5 million metric tons of fish and squid, about 606,000 tons of which is taken in the Bering Sea-Aleutian area.

4. Fur Seal - Fishery Interactions

Based on data from 1970-1977, Table 13 compares the estimated consumption of commercial fish species by fur seals to the estimated biomass and commercial harvests of fish. According to these estimates from McAlister and Perez (1977) fur seals consume about 5 percent of the estimated standing stock of pollock, 8 percent of the amount taken annually by the commercial fisheries, and 12 percent of the allowable catch in 1977.

Based on estimates of consumption of fish in the eastern Bering Sea and Aleutian area (Table 14) fur seals consume about 2 percent of the standing stock of fish, other pinnipeds consume 6 percent and commercial fisheries harvest 5 percent. The estimated total vertebrate predation

by marine mammals, birds and man is about 17 percent. There is no direct equivalence, however, between the commercial fish catch and pinniped consumption of fish, since pinnipeds, including fur seals, eat noncommercial species of fish as well.

While the consumption of fish by fur seals and other marine mammals based on recent estimates presented above, does not appear excessive, the relationship between marine mammals and fisheries remains uncertain. For some fish species, pollock for example, fur seal predation may be significant, however there remain many unknowns in the study of the complex dynamics of fish production. Perhaps seals play an important and positive role in this process that we do not yet understand.

E. The Social and Economic Environment

1. Residents of the Pribilof Islands

The first 137 Aleutian Island natives were brought to the previously uninhabited Pribilof Islands in 1787 by Russian entrepreneurs to harvest the northern fur seal. Descriptions of the discovery, early history and native life on the Islands can be found in Elliott, 1881, 1896, and Martin, 1946.

As late as 1867, Aleut natives were living in semi-subterranean homes built of sod and driftwood and heated by seal oil fires. During the first lease of the Islands, the Alaska Commercial Company constructed some 100 frame houses on the Islands. In addition, churches, a hospital, stores and a schoolhouse were constructed. The population by this time numbered 390. By 1911, the population had decreased to 289; however, a combination of increased birth rate and immigration increased the population beginning in 1912.

From the 1880's through the 1930's natives were paid on a piecemeal basis for harvesting fur seals, usually 40 - 75 cents per skin and on an hourly basis for all other work. Starting in the late 1940's, an effort was begun to place the Aleuts on the same basis as other citizens and Federal employees. Today, they are compensated on a wage-rate basis comparable to that in other Alaskan communities. In addition, they are now charged reasonable rates for utilities, supplies and community services provided by the government. Earlier, as required by then existing legislation, these service had been provided gratis or at nominal cost by the government.

For the past two decades, in an effort to give the Aleuts self-sufficiency, there has been a gradual transfer to the Aleut community of greater responsibility for the administration and management of their villages coupled with increased opportunities for development of new economic activity within the community. However, the approximately 678 Aleuts who reside in the two villages of St. Paul and St. George are still primarily dependent upon the economy generated by federally-

financed activities such as the fur seal harvest, and community support responsibilities mandated by the Fur Seal Act of 1966.

In 1979, under contract to the NMFS, a study was begun on the Pribilofs to determine the best way to supply needed public services to the communities of St. Paul and St. George (Management and Planning Services 1980). While not yet complete, the study has supplied data on the income and employment of Island residents (Tables 15, 16, 17, and 18). The native population on St. Paul in 1979 was 509, with a total earned income of $2,180,566. The NMFS salaries for work in the fur seal harvest and processing totaled $232,950. St. George has a population of 169, with a total earned income of $848,300, of which $22,600 represents the NMFS salaries from sealskin processing work done on St. Paul. Of the 234 full or part-time jobs available to Pribilof residents, 150 are funded by the NMFS and 80 involve fur seal harvesting and processing.

Other economic studies of the Islands include Foote, et al. (1968) and Wolf and Co. (1972). Since the Pribilof Islands have no natural harbors and are located in one of the more productive fishing areas in the Bering Sea, these studies suggest the only viable alternative to the present federally based economy is the development on St. Paul, of a boat harbor and attendant fisheries processing service, and supply facilities. The Army Corps of Engineers is preparing a draft environmental impact statement for a proposed small boat harbor at St. Paul Island (44 FR, Page 31693). Unless a harbor development on St. Paul does take place, the main economic base of the Islands will probably remain tied to the Federal Government. Tourism (approximately 800 tourists a year), contributes very little to the economy of St. Paul and none to St. George. The 1979 study indicates that the NMFS is the major employer on the Islands contributing 87 of the 131 year-round positions available.

2. The NMFS Pribilof Island Program Budget

Table 19 gives a detailed budget summary for the NMFS Pribilof Island Program in FY 79. Our expenditures were $4.2 million; of this amount approximately $444,000 was the direct cost of the harvest.

3. The Sale of the Sealskins

The fur sealskin processing, finishing and garment manufacturing industry is fairly small and localized. Sealskins from the Pribilof Islands have been sold by the U.S. Government for the past fifty years in a finished processed condition. The Fouke Company of Greenville, South Carolina has been the sole U.S. processor for over fifty years

because its patented processing methods produce a high-quality product. Sealskins from the Pribilofs (including the United States, Canadian and Japanese shares), and part of the smaller harvest on the Soviet Islands, account for approximately 70 - 75 percent of the Fouke Company's business. In 1978, the Fouke Company employed about 135 full-time and 40 part-time people and had a payroll of about $1,600,000 annually.

The manufacturing of sealskin coats was traditionally an industry in the New York City area, but due to the economic advantage of European labor this industry all but disappeared in the early 1970's and most fur sealskins are now sold to buyers from Europe. The Fouke Company currently conducts public auctions of the finished skins on behalf of the U.S. Government. Proceeds returned to the Federal Treasury from these sales totaled over $800,000 in 1979.

The Fur Seal Act of 1966 specifies that the State of Alaska will receive 70 percent of the net proceeds from the sale of sealskins after deduction of all program costs. Program costs include administration of the Pribilof Islands, and the services needed by these isolated communities. Before 1970 receipts from the sale of sealskins exceeded total program costs. Since 1970, due to reduced harvests and rising costs from inflation, total expenditures have exceeded sale receipts and there has been no money to share with the State of Alaska. Table 20 gives receipts and expenditures of the Pribilof Island Program from 1960-1979.

IV. ENVIRONMENTAL CONSEQUENCES

A. Extend the Convention

The other Parties to the Convention have indicated to the United States their desire to extend the Convention. The United States can support such an extension if the Convention provides for management principles that advance the northern fur seal toward, or maintain it at a level consistent with OSP. Following our review of the OSP status of the northern fur seal, we believe this condition has been fulfilled.

Extension of the Convention will continue the present programs of international management and research for four additional years. These programs provide for consideration of the species throughout its range and take into acccount the relationship between fur seals and other living marine resources. Pelagic sealing will not be allowed except for research purposes, and the species will be protected from this type of take throughout its migratory range. Since the population has remained relatively constant in abundance since 1973, we could anticipate little change in population statistics under this alternative.

The Pribilof harvest would continue, probably at present levels. Harvesting and preparation of sealskins for shipment would be done by Aleut residents of the Islands and no adverse economic impacts on the residents or the fur seal processor are anticipated.

Extension of the treaty may have a positive impact on our efforts to protect other species by indicating to other countries our willingness to continue a successful wildlife management agreement. Alternatively, some have argued that our involvement in a commercial marine mammal harvest undermines efforts to negotiate a commercial whaling moratorium. It is certain that under this alternative we could protect the seal population from a return of pelagic commercial sealing for four more years.

B. Terminate the Convention

Terminating the Convention would halt the present international management and research programs for northern fur seals. Animals occurring within the United States 200-mile fishery conservation zone would be protected by the United States under provisions of the Marine Mammal Protection Act of 1972. There would be no United States harvest of northern fur seals except for subsistence purposes by the Aleuts and other Alaska natives. There is however, no assurance the Pribilof herd would increase as a result of this action. The studies on St. George, though not yet complete, show no indications the population is increasing despite a moratorium on commercial harvesting.

An end to the commercial harvest would result in an increase in primarily three and four-year-old male seals on St. Paul Island, at least in the short-term. Judging from our experience on St. George I., where the harvest ended in 1973, an increasing male population of this polygynous species would give rise to a decrease in females and newborn pups, and an increase in pup mortality on land. We don't fully understand this phenomenon, but it may be due to a form of competition between young males and females for food, and interaction between the pups and older males on the breeding islands. The age structure of the population on St. Paul may change, but we do not expect a significant long-term change in numbers of fur seals resulting from an end of the harvest.

The Pribilof herd would be protected during part of its migratory cycle; however, the herd migrates through Canadian waters twice annually and some of the herd migrates to the western North Pacific and Bering Sea areas. These periods in which Pribilof seals may be subject to pelagic sealing could impair U.S. efforts to maintain the herd at OSP, if significant levels of exploitation occurred.

A resumption of pelagic sealing, which we consider likely should the treaty be terminated, could affect total size of the fur seal population. By taking primarily female seals, pelagic harvests could have adverse impacts on the breeding potential of this species for years to come. While we cannot estimate the number of seals which may be taken in a pelagic harvest, we can estimate the number which may be at risk under this alternative. Approximately 450,000 seals breed on the Asiatic side of the North Pacific; assuming at least 80 percent of the Pribilof herd migrates outside the United States jurisdiction, at least 1,450,000 seals, or about 85 percent of the total population of fur seals, are outside our jurisdiction during all or part of their life cycle.

If termination of the treaty results in resumption of pelagic sealing we can anticipate a decrease in the northern fur seal population. How this might affect the productivity and stability of the Bering Sea ecosystem can not be predicted at this time. Presumably other marine mammal species would fill the niche left by the declining fur seal population.

International protection would be lost unless other countries established agreements similar in nature to the present Convention. The likelihood of such agreements occurring is uncertain. Japan, Canada, and others may be expected to initiate pelagic sealing. If international agreements are established the probability is great that pelagic sealing would be permitted.

The United States Government role in fur seal harvesting for other than subsistence purposes would be discontinued with the termination of the Convention. However, the Aleuts would suffer socioeconomic impacts without a fur seal harvest.

Termination of the treaty and an end to the harvest would adversely impact the level of employment on St. George and St. Paul Islands. At least 80 jobs and $250,000 in earned income would be lost to the 678 native Aleut residents of the Islands. Fur seals are consumed by the Aleuts and subsistence taking would continue. Portions of about 5,000 seals are consumed annually. Others could be taken for handicrafts. Restrictions on the manner of taking by natives now imposed by the Convention would be eliminated.

Economic losses would be incurred by the fur sealskin industry if the harvest is stopped. Losses to The Fouke Company would affect 135 full-time and 40 part-time jobs and an estimated annual payroll of $1.6 million. In addition, the U.S. Government would lose income from the sale of sealskins, although our obligations to the people of the Pribilof Islands would be undiminished

Termination of this treaty would have no certain effects on United States efforts to protect other wildlife species in the Bering Sea and elsewhere, but would definitely reduce our ability to protect the northern fur seal throughout its range. Presumably our unilateral withdrawal from this agreement would signal to other nations our unwillingness to participate in wildlife management agreements, involving any harvests of marine mammals, regardless of the status of the populations involved. This would conflict with our position on commercial whaling, for example. Our position at the International Whaling Commission, and at other forums, is predicated on opposition to harvests of species where the population data are not sufficient to make wise decisions, or where further takes present a clear threat to the health and productivity of the species.

C. Renegotiate the Convention

The renegotiation of the Convention would provide the United States an opportunity to introduce language consistent with the MMPA which is not presently in the Convention. In particular, the United States could negotiate for inclusion of the concept of OSP. Further, by renegotiating the Convention, the United States could offer to terminate its share of the harvest.

Based on previous experience in negotiating OSP, the United States should not expect success in getting the other Parties to accept that concept. The general feeling among Parties is that the present management principles are more than adequate to maintain the population at healthy levels. Introduction of OSP into the Convention, even if this were possible this year, would have no impact on numbers of seals harvested. Our preliminary estimate remains that the current level of population is consistent with one at OSP, as defined in the MMPA. We are, however, refining our estimates and plan to have a more precise definition of current OSP status, and possible implications for international management, ready for discussion with the North Pacific Fur Seal Commission in April 1981.

A phaseout of the Pribilof Island harvest, assuming a continuance of international prohibition of pelagic sealing, would probably not change the number of fur seals in the North Pacific, and therefore the level of northern fur seal predation on commercial fish stocks. This alternative is unlikely to alter in any significant way the present level of stability or productivity of the Bering Sea ecosystem.

Renegotiation would allow other Parties to introduce new management procedures. The Soviet Union could be expected to suggest the harvesting of pups and the Japanese would solicit provisions allowing some levels of pelagic sealing to alleviate their internal problems with fishermen.

In giving up its share of the harvest, the United States would no longer take fur seals except for scientific research and subsistence harvests. However, the other Parties may not be satisfied with sharing the remaining 30 percent and would be expected to negotiate for a larger share. The United States Government role in harvesting fur seals would be dependent on the renegotiated levels of take but would probably continue. Some take from the Pribilof Island stock for other Parties may be necessary even if the United States discontinued its share of the harvest.

The impacts of a phaseout of the commercial harvest on the economy of St. Paul Island will be the same as indicated under the termination option; however, the effect on the local economy will be less abrupt and presumably allow more time to develop alternative means of employment. The loss of the United States portion of fur sealskins would seriously impact The Fouke Company.

Our efforts to protect marine mammals and other wildlife species in the Bering Sea and elsewhere, would probably not be significantly impacted by an attempt to renegotiate this treaty. If we should fail in our efforts to negotiate new terms and then terminate the existing agreement, impacts would be as those indicated above for termination.

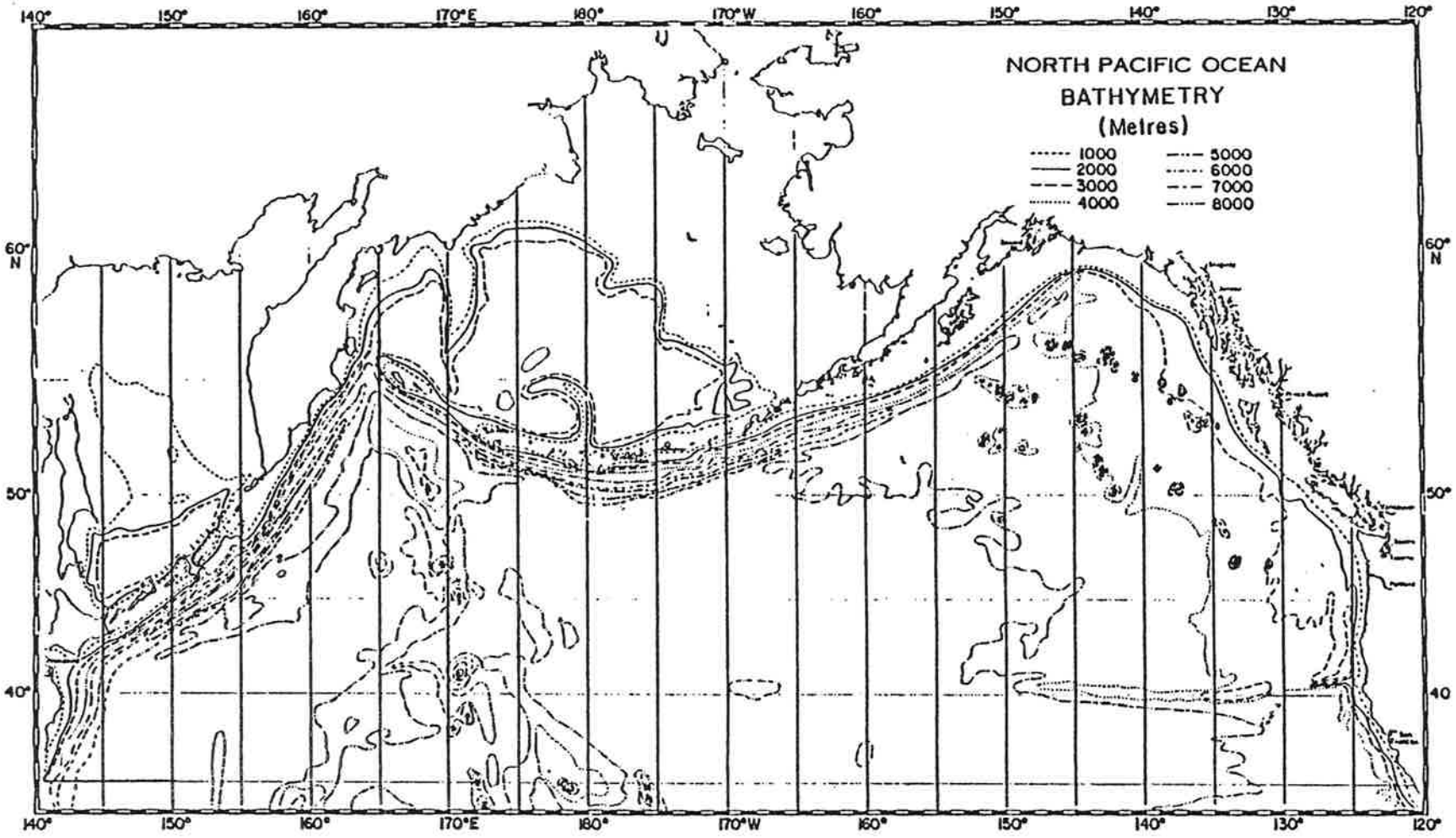
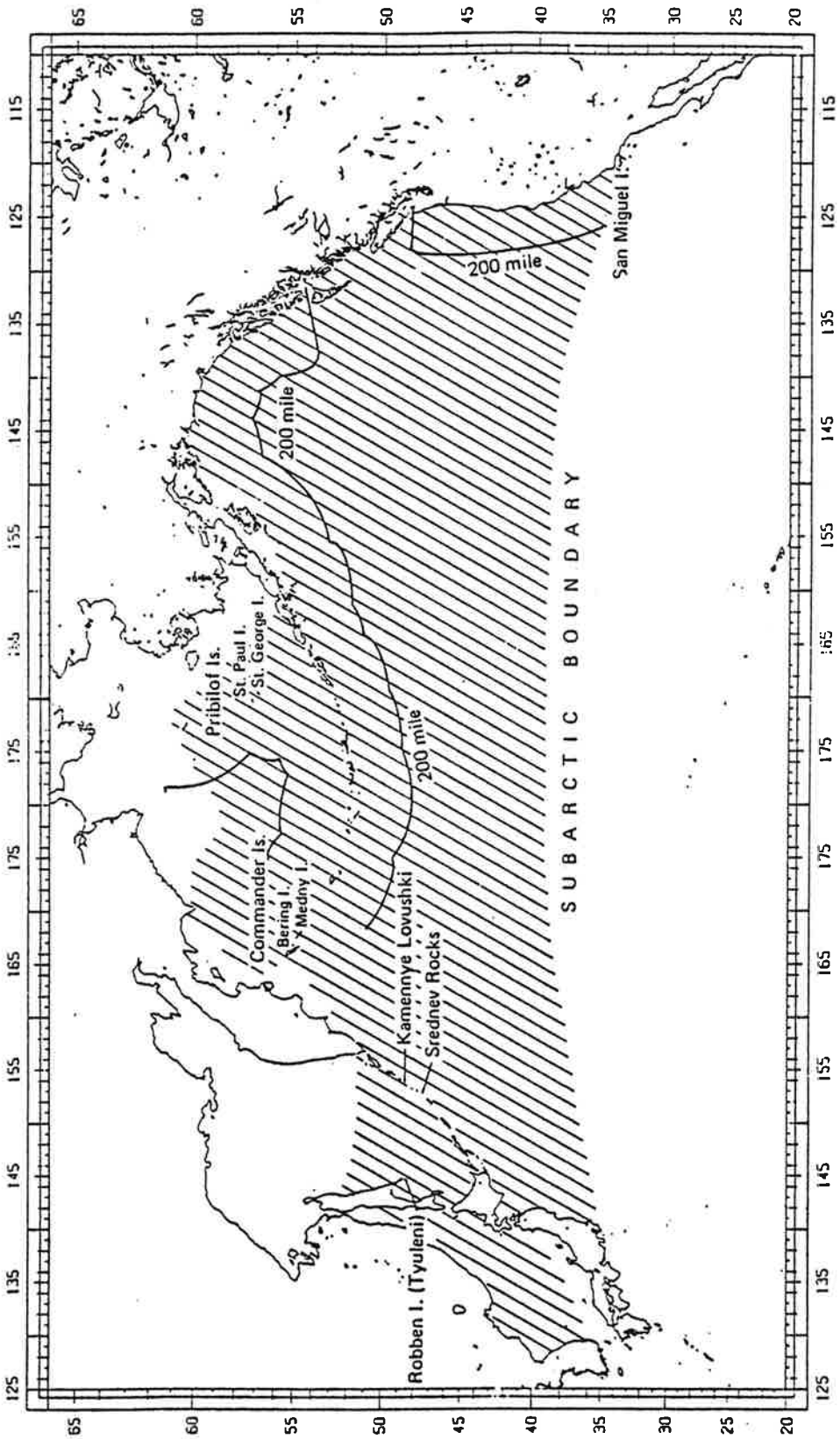


FIGURE 1

Bathymetry of the North Pacific Ocean. From Dodimead et al., (1963).



Range and Breeding Islands of the Northern Fur Seal (Fiscus 1980)

FIGURE 2

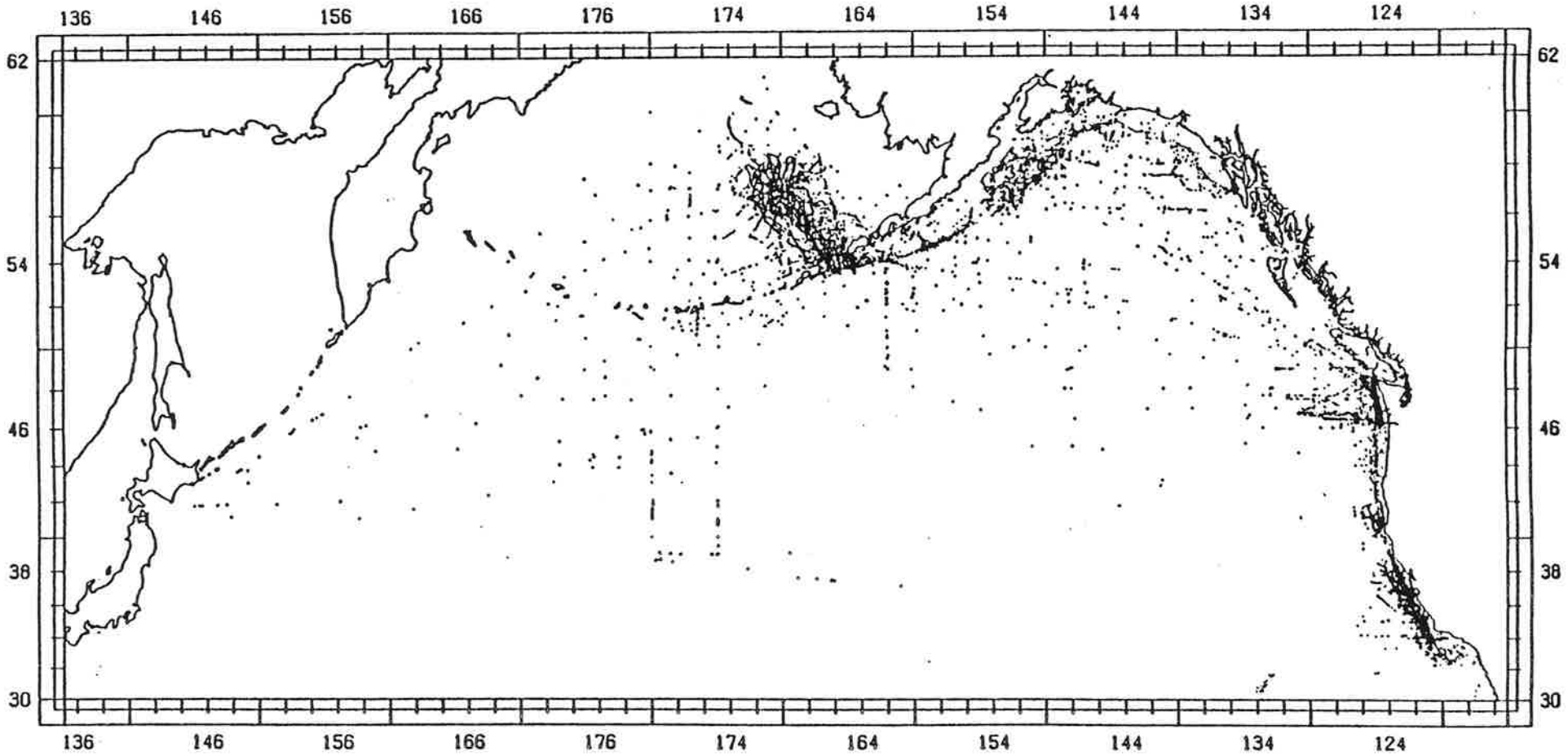


FIGURE 3

Fur seal sightings in the North Pacific Ocean by Canada and the United States, 1958-79. (Kajimura 1980)

COMPARISON OF AVERAGE LENGTHS OF PREGNANT FEMALES AGED 5 TO 16 -26 YEARS FOR COMBINED MONTHS JANUARY TO APRIL.

Combined years 1958–62, 1963–68, and 1969–74. Sample size ≥ 10 seals.

(Lander 1979b)

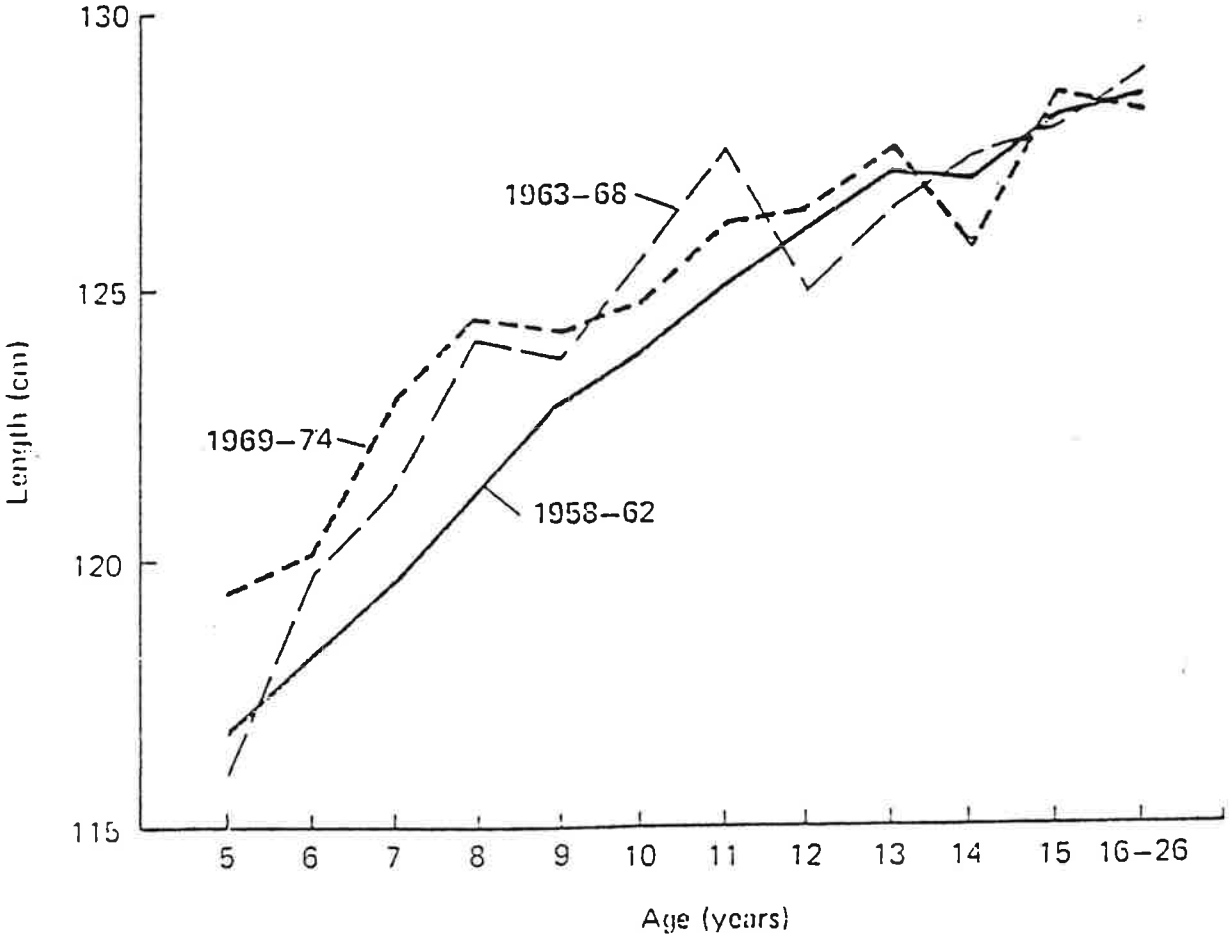
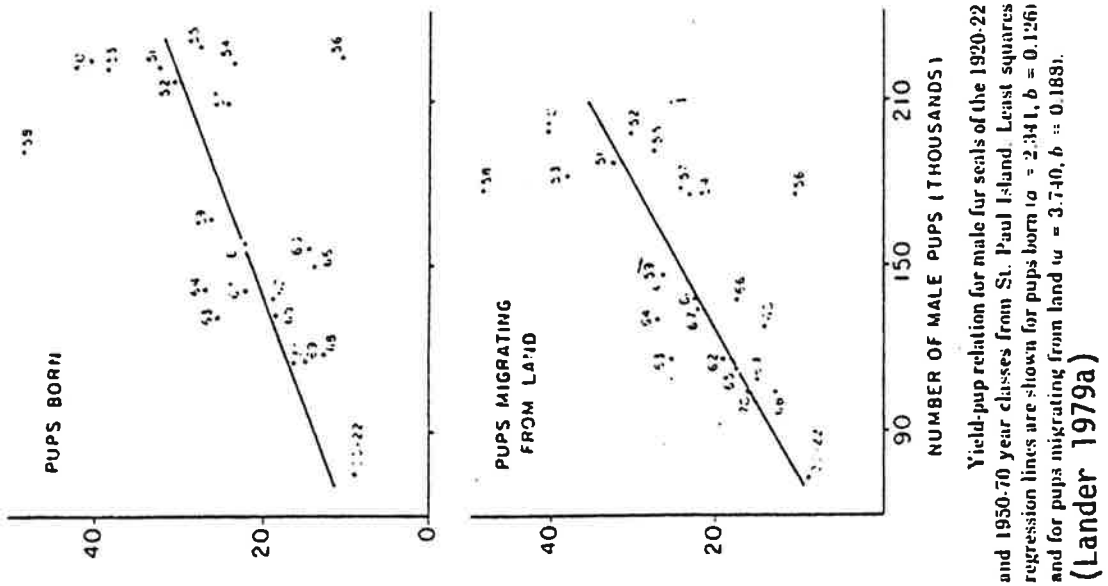


FIGURE 4



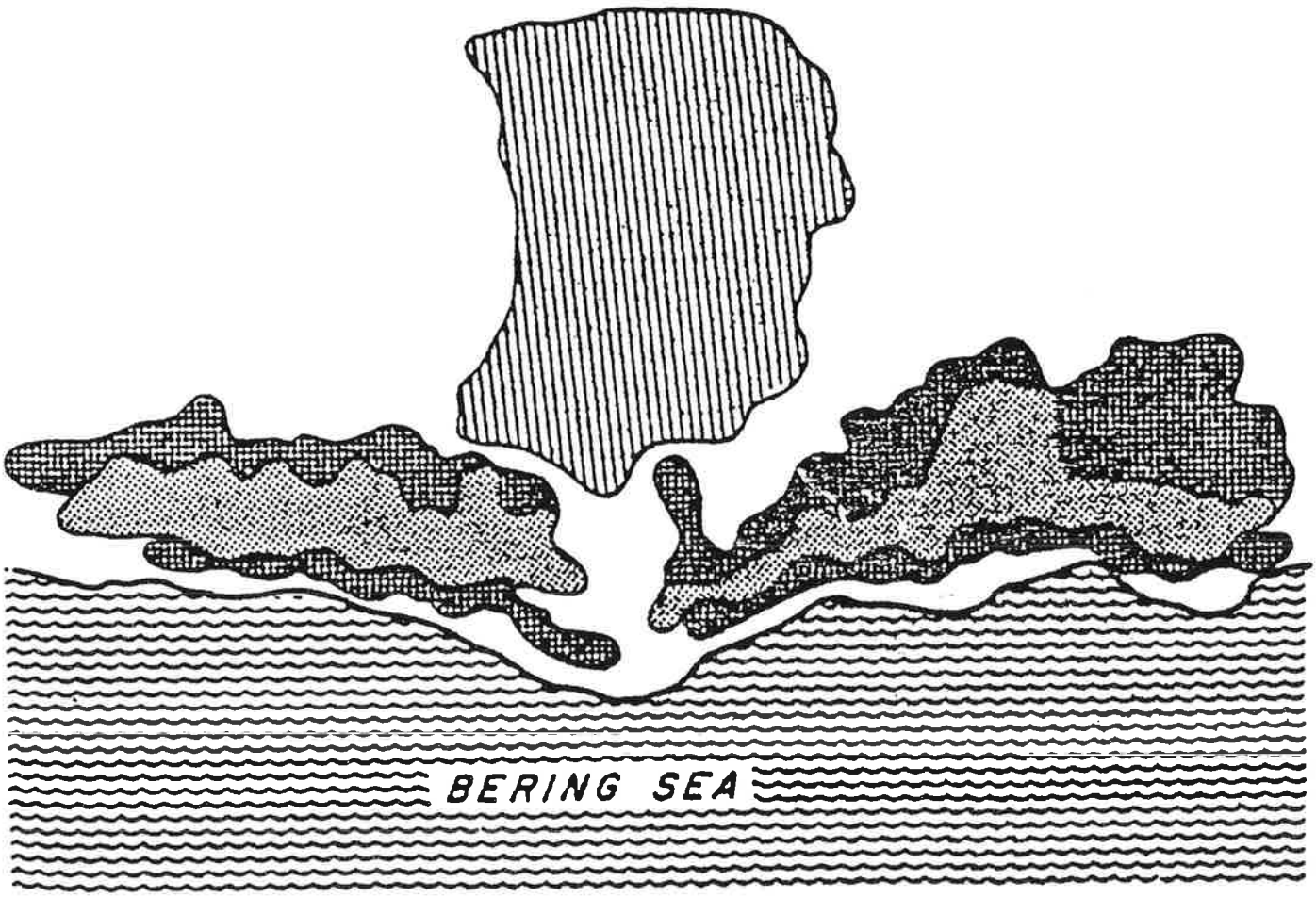
Yield-pup relation for male fur seals of the 1920-22 and 1950-70 year classes from St. Paul Island. Least squares regression lines are shown for pups born (a = 2.341, b = 0.1261) and for pups migrating from land (a = 3.740, b = 0.1881.

(Lander 1979a)

FIGURE 5

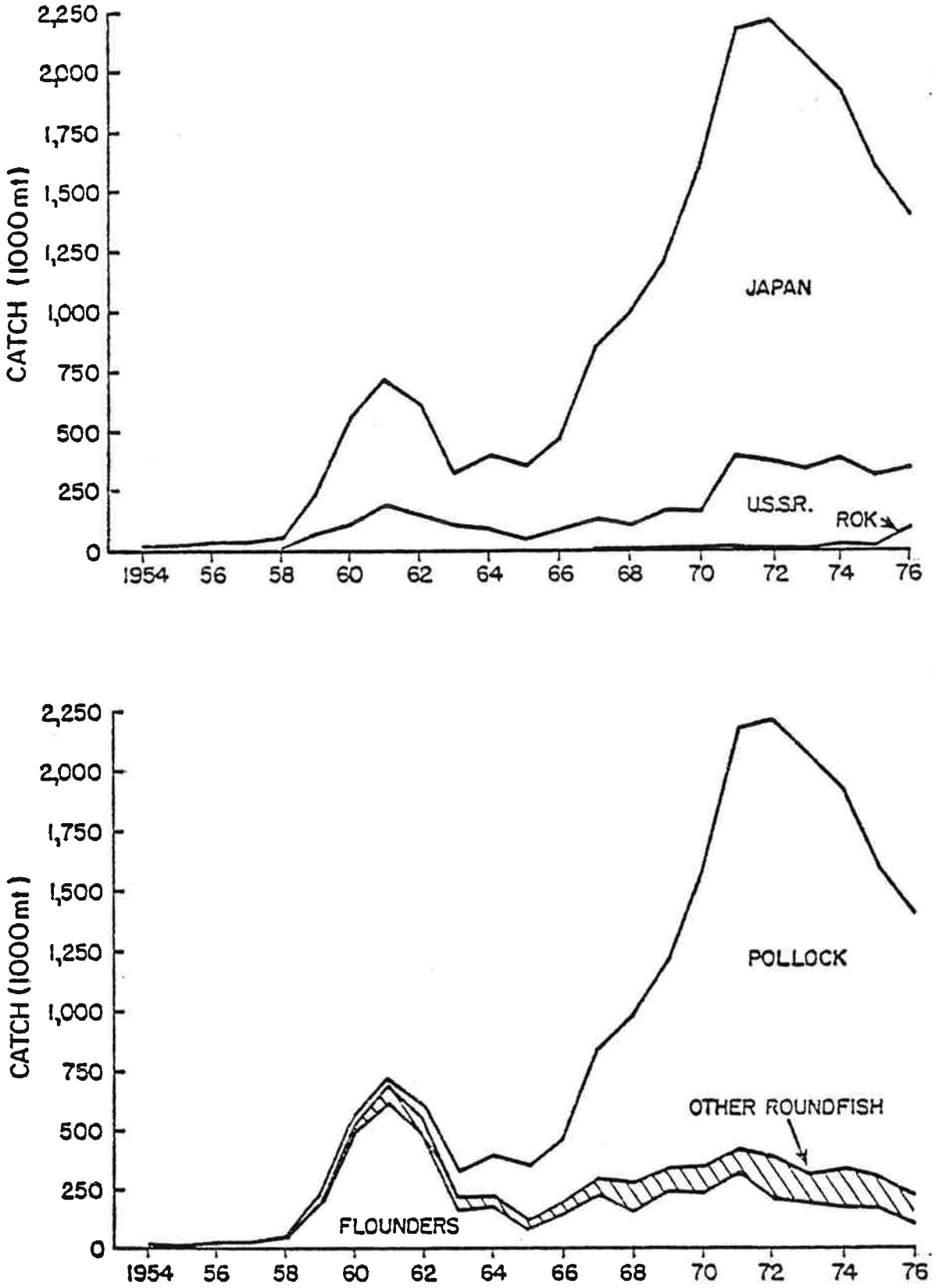
CLASSES OF BULLS

2. TERRITORIAL WITHOUT FEMALES
3. TERRITORIAL WITH FEMALES
5. HAULING GROUND



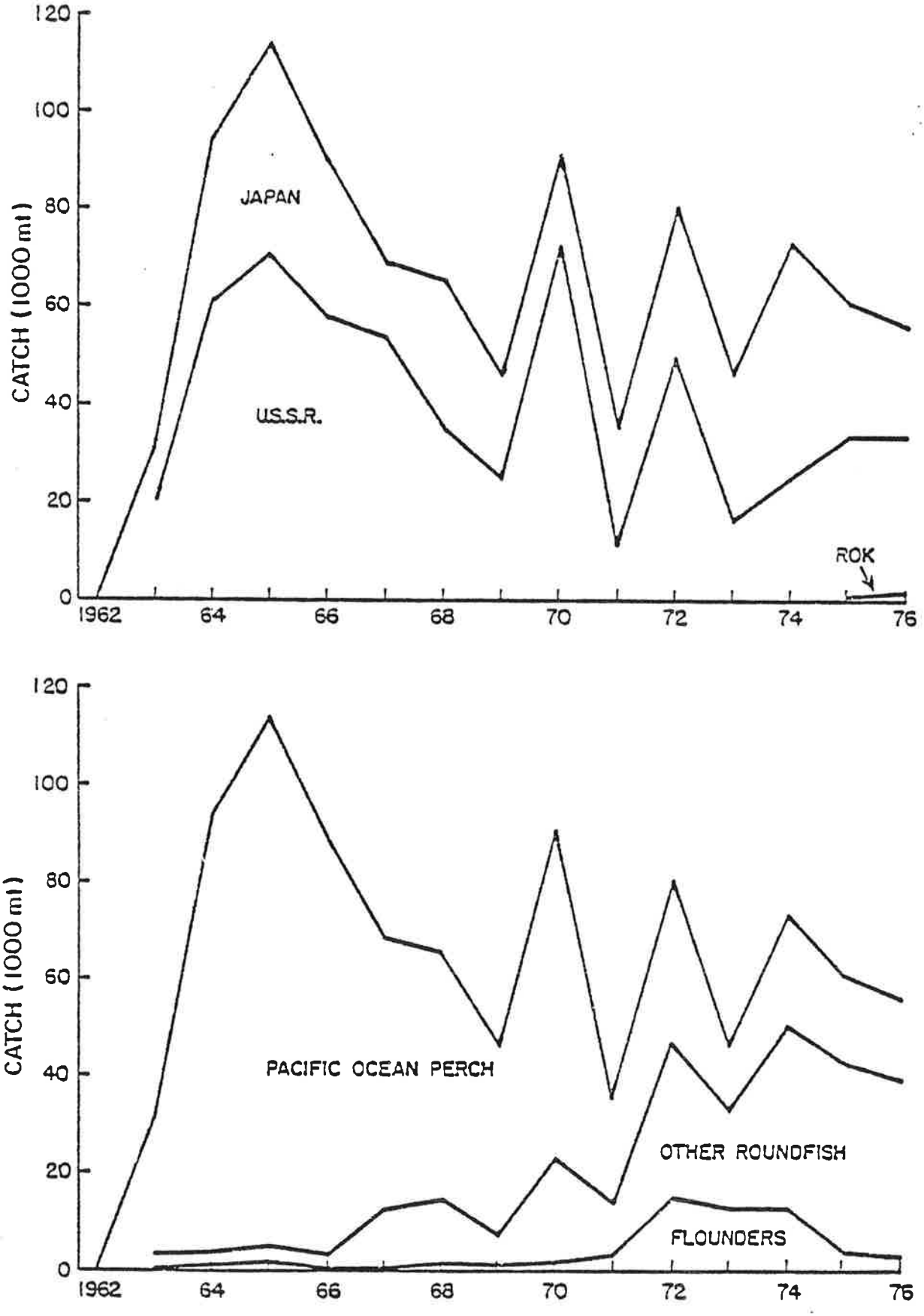
General composition of a typical fur seal rookery. (NMFS 1979)

FIGURE 6



Foreign catches of groundfish in the eastern Bering Sea (east of 180°) by nation (upper panel) and by species or species group (lower panel), 1954-76. (NPFMC 1979)

FIGURE 7

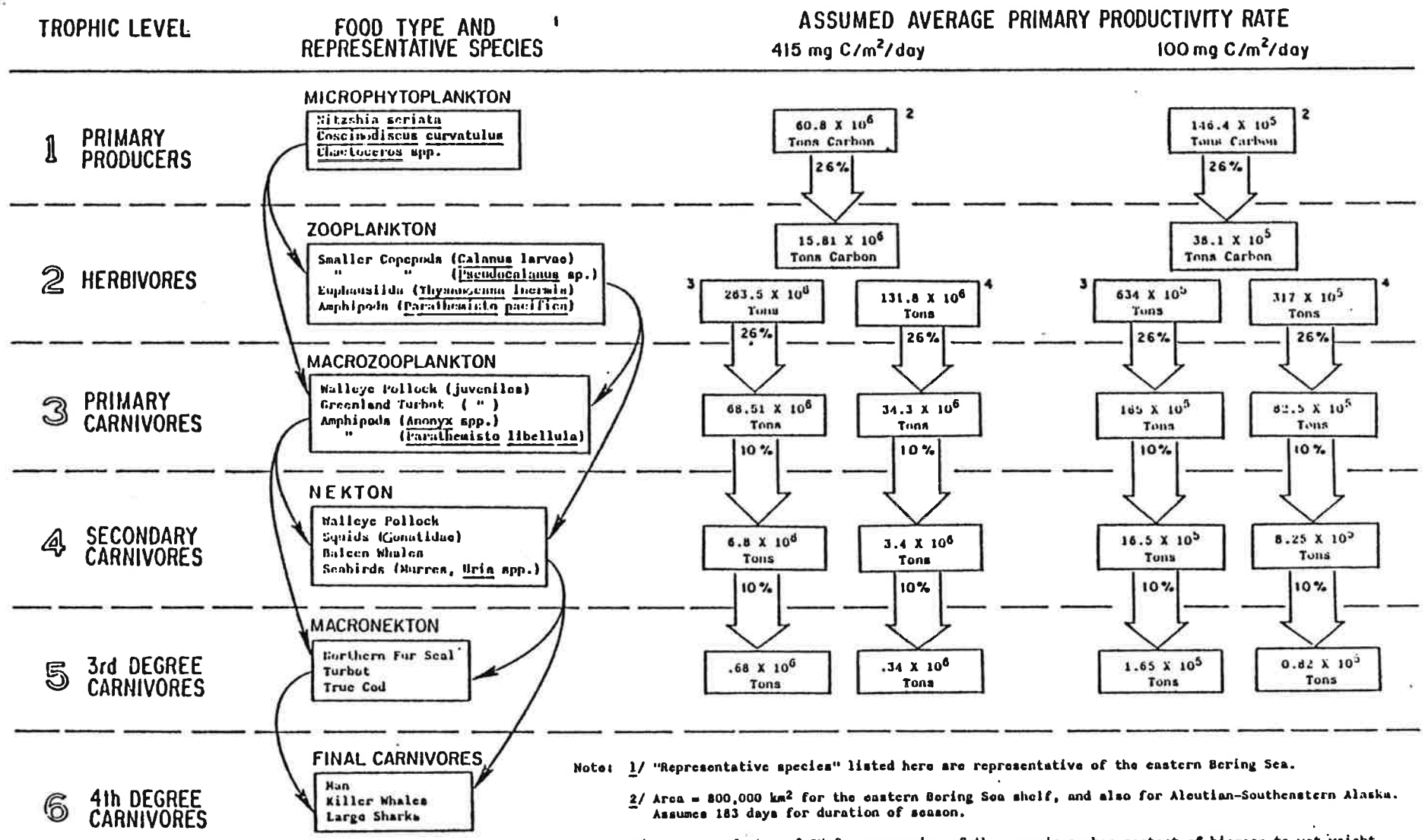


Foreign catches of groundfish in the Aleutian Island area (170°W - 170°E) by nation (upper panel) and by species or species group (lower panel), 1962-76. (NPFMC 1979)

FIGURE 8

Schematic, simplified summer (June-November) food chain, applicable to the eastern Bering Sea.

(McAlister and Perez 1977)



Note: 1/ "Representative species" listed here are representative of the eastern Bering Sea.

2/ Area = 800,000 km² for the eastern Bering Sea shelf, and also for Aleutian-Southeastern Alaska. Assumes 183 days for duration of season.

3/ Assumes a factor of 6% for conversion of the organic carbon content of biomass to wet weight.

4/ Assumes a factor of 12% for conversion of the organic carbon content of biomass to wet weight.

FIGURE 9

The number of northern fur seal pups born (in thousands) on the Pribilof Is.

Year	Based on Counts or Tagging	Based on Random Sampling of Pups
1912	82(c)	
1913	92(c)	
1914	93(c)	
1915	104(c)	
1916	117(c)	
1917	128(e)	
1918	143(e)	
1919	157(e)	
1920	168(e)	
1921	177(e)	
1922	186(c)	
1923	197(e)	
1924	208(e)	
1925-1947	-	
1948	592	
1951	570(560)	
1952	616(560)	
1953	795(560)	
1954	838(560)	
1955	868(560)	
1956	992(560)	
1957	712(560)	
1958	729(510)	
1959	778(475)	
1960	643(420)	
1961	560	438
1962	484	362
1963	446	343
1964	420	370
1965	397	345
1966	-	388
1967	-	(368)
1968	-	(312)
1969	-	304
1970	-	306
1971	-	-
1972	-	359(d)
1973	-	412(d)
1974	-	365(d)
1975	-	361
1979	-	307

Based on complete counts/(c), or rate of increase and partial counts/(e), or sampling selected rookeries/(d). Numbers in parentheses represent best estimates of pup production.

TABLE 1

Number of pups born on Asian Rookeries, 1955-1978

Year	Robben Island (USSR)	Commander Islands (USSR) Bering Island	Medny Island	Total
1955	25,500	-	-	-
1956	27,500	-	-	-
1957	29,700	-	-	-
1958	32,200	15,300	16,400	31,700
1959	35,000	16,700	17,880	34,580
1960	38,000	18,200	19,457	37,657
1961	41,200	19,800	21,200	41,000
1962	44,700	26,000	25,500	51,500
1963	49,000	-	-	-
1964	51,400	29,269	29,223	58,492
1965	48,400	26,840	31,710	58,550
1966	44,900	30,345	30,684	61,029
1967	56,500	31,156	23,374	54,530
1968	45,800	34,319	26,540	60,859
1969	43,500	32,146	26,511	58,657
1970	31,500	33,926	28,275	62,201
1971	41,100	35,784	30,710	66,494
1972	44,050	31,353	29,505	60,858
1973	35,300	28,964	24,924	53,888
1974	33,170	37,085	31,660	68,745
1975	27,000	35,376	38,600	73,976
1976	30,839	38,496	27,990	66,486
1977	28,584	37,570	30,400	67,970
1978	29,900	41,675	33,954	75,629
1979	24,189			

TABLE 2

Adult male population - Robben Island

Year	Number	Year	Number	Year	Number
1962	2630	1968	2252	1974	540
1963	2465	1969	2004	1975	553
1964	2452	1970	1968	1976	738
1965	2213	1971	1864	1977	861
1966	2934	1972	1147	1978	1285
1967	1938	1973	564	1979	1604

TABLE 3

Method of calculating age specific rates of harvesting and of net survival for male seals of St. Paul Island.
(Lander 1980)

Symbol and value	Estimated returns	Estimated rates
N = 126,000 pups born/yr	$R_2 = Ns^* = 47{,}880$	$u_2 = K_2/R_2 = 0.028$
K_i = Average annual kill at age i, 1973-79 (no kill on St. George Island)	$R_3 = R_2\ (1-u_2)s = 37{,}251$	$(1-u_2)s = 0.778$
K_2 = 1,350	$R_4 = R_3\ (1-u_3)s = 17{,}806$	$u_3 = K_3/R_3 = 0.403$
K_3 = 15,006	$R_5 = R_4\ (1-u_4)s = 6{,}090$	$(1-u_3)s = 0.478$
K_4 = 10,206		$u_4 = K_4/R_4 = 0.573$
K_5 = 893		$(1-u_4)s = 0.342$
		$u_5 = K_5/R_5 = 0.147$
		$(1-u_5)s = 0.682$
s^* = Average survival rate, birth to age 2 yr = 38%		
s = Mean natural survival rate/yr at ages 2-5 yr = 80%		
R_i = No. returns or survivors at age i (to be estimated)		
u_i = Age specific harvesting rate at age i (to be estimated)		

TABLE 4

Summary of age specific and cumulative survival rates for Alaskan fur seals.
(Lander 1980)

	Males				Females	
	St. Paul Island		St. George Island and Sea Lion Rock			
Age	By age	From age 0	By age	From age 0	By age	From age 0
0	-	1.000	-	1.000	-	1.000
1	0.500	0.500	0.400	0.400	0.500	0.500
2	0.760	0.380	0.750	0.300	0.800	0.400
3	0.778	0.296	0.800	0.240	0.840	0.336
4	0.478	0.141	0.800	0.192	0.920	0.309
5	0.342	0.048	0.750	0.144	0.940	0.290
6	0.682	0.033	0.700	0.101	0.940	0.273
7	0.800	0.026	0.650	0.066	0.945	0.258
8	0.800	0.021	0.600	0.040	0.950	0.245
9	0.800	0.017	0.550	0.022	0.950	0.233
10	0.760	0.013	0.500	0.011	0.938	0.219
11	0.730	0.009	0.450	0.005	0.924	0.202
12	0.700	0.006	0.400	0.002	0.906	0.183
13	0.650	0.004	0.320	0.001	0.884	0.162
14	0.590	0.002	0.220	<0.001	0.858	0.139
15	0.540	0.001	0.100	-	0.876	0.122
16	0.430	<0.001	0.010	-	0.789	0.096
17	-	-	<0.010	-	0.743	0.071
18	-	-	-	-	0.692	0.044
19	-	-	-	-	0.630	0.031
20	-	-	-	-	0.564	0.017
21	-	-	-	-	0.490	0.008
22	-	-	-	-	0.411	0.003
23	-	-	-	-	0.330	0.001
24+	-	-	-	-	<0.330	<0.001

TABLE 5

Equilibrium survivorship schedule for Alaskan fur seals (in thousands).
(Lander 1980)

	Males			Females			
Age	St. Paul Island	St. George Is. & Sea Lion Rock	Total	Non-pregnant	Pregnant	Total	Both sexes
0	126.00	37.00	163.00	163.00	0	163.00	326.0
1	63.00	14.80	77.80	81.50	0	81.50	159.3
2	47.88	11.10	58.98	65.20	0	65.20	124.2
3	37.30	8.88	46.18	54.77	0	54.77	101.0
4	17.77	7.10	24.87	48.36	2.01	50.37	75.2
5	6.05	5.33	11.38	29.78	17.49	47.27	58.7
6	4.16	3.74	7.90	13.35	31.15	44.50	52.4
7	3.28	2.44	5.72	8.41	33.64	42.05	47.8
8	2.65	1.48	4.13	5.99	33.95	39.94	44.1
9	2.14	0.81	2.95	4.94	33.04	37.98	40.9
10	1.64	0.41	2.05	4.28	31.42	35.70	37.8
11	1.13	0.19	1.32	3.95	28.98	32.93	34.3
12	0.76	0.07	0.83	3.58	26.25	29.83	30.7
13	0.50	0.04	0.54	3.43	22.98	26.41	27.0
14	0.25	0.02	0.27	3.63	19.03	22.66	22.9
15	0.13	0.01	0.14	3.78	16.11	19.89	20.0
16	<0.10	<0.01	<0.11	3.60	12.05	15.65	15.7
17	-	-	-	3.36	8.21	11.57	11.6
18	-	-	-	2.95	5.03	7.98	8.0
19	-	-	-	2.22	2.83	5.05	5.1
20	-	-	-	1.47	1.30	2.77	2.8
21	-	-	-	0.82	0.48	1.30	1.3
22	-	-	-	0.36	0.13	0.49	0.5
23	-	-	-	0.14	0.02	0.16	0.2
24+	-	-	-	<0.16	0	<0.16	0.1
Total	314.6	93.4	408.0	513.0	326.1	839.1	1,247.1

TABLE 6

TABLE 7

Number of male and female seals harvested, 1950-79[1/]

Year	St. Paul Island			St. George Island			
	Males	Females	Total	Males	Female	Total	Grand Total
1950	48,565	245[2/]	48,810	11,360	34	11,394	60,204
1951	50,419	154[2/]	50,573	10,084	32	10,116	60,689
1952	51,401	159[2/]	51,560	12,269	41	12,310	63,870
1953	54,469	817[2/]	55,286	11,355	28	11,383	66,669
1954	49,699	540[2/]	50,239	13,525	118	13,643	63,882
1955	49,977	658[2/]	50,635	14,750	85	14,835	65,470
1956	75,807	20,888	96,695	20,250	6,744	26,994	123,689
1957	35,026	37,558	72,584	11,193	9,868	21,061	93,645
1958	36,171	23,956	60,127	11,695	7,144	18,839	78,966
1959	24,482	24,207	48,689	5,709	3,853	9,562	58,251
1960	29,144	3,294	32,438	7,183	1,018	8,201	40,639
1961	67,621	35,086	102,707	15,177	8,763	23,940	126,647
1962	43,203	35,003	78,206	10,477	8,757	19,234	97,440
1963	31,881	35,093	66,974	10,505	8,859	19,364	86,338
1964	37,789	12,034	49,823	11,191	4,418	15,609	65,432
1965	34,966	7,530	42,496	7,157	2,904	10,061	52,557
1966	42,079	372	42,451	10,393	109	10,502	52,953
1967	42,727	7,502	50,229	12,993	2,594	15,587	65,816
1968	36,349	10,544	46,893	9,276	2,791	12,067	58,960
1969	32,621	196[2/]	32,817	6,057	34[2/]	6,091	38,908
1970	36,197	110[2/]	36,307	5,924	10[2/]	5,934	42,241
1971	27,242	96[2/]	27,338	4,553	7[2/]	4,560	31,898
1972	33,110	63[2/]	33,173	4,204	16[2/]	4,220	37,393
1973	28,457	25[2/]	28,482	-	-	-	28,482
1974	32,976	51[2/]	33,027	-	-	-	33,027
1975	29,093	55[2/]	29,148	-	-	-	29,148
1976	23,081	15[2/]	23,096	200[4/]	-	200	23,296
1977	28,396	48[2/]	28,444	350[4/]	-	350	28,794
1978	24,829	56[2/]	24,885	292[4/]	6[2/]	298	25,183
1979	25,702	60[2/]	25,762	351[4/]		351	26,113

1/ Seals were not harvested on St. George Island from 1973 through 1979 (except for local subsistence) as a result of a moratorium agreed to by Japan, Canada, the USSR and the United States.
2/ Taken accidentally or for research.
3/ Sample counts only completed these years.
4/ Taken for subsistence purposes.

Commercial harvest of male seals on Commander and Robben Islands, 1960-1979.

		Commander Islands		
Year	Robben Island	Bering Island		Medny Island
1960	6,210	-------	4,000	-------
1961	6,947	-------	5,046	-------
1962	7,037	3,655		2,750
1963	7,265	3,805		3,512
1964	8,212	5,061		5,328
1965	8,432	3,648		5,551
1966	9,188	4,506		4,237
1967	8,758	4,779		3,582
1968	5,070	5,625		3,881
1969	6,221	5,896		2,413
1970	7,042	4,841		4,232
1971	7,003	4,807		3,333
1972	5,911	4,262		2,294
1973	4,187	261		2,116
1974	2,482	-		1,713
1975	2,510	-		1,711
1976	2,500	-		2,674
1977	4,000	-		2,692
1978	3,200	1,200		2,988
1979	2,900	------	2,482	-------

TABLE 8

Fur seals entangled in fishing debris and other materials, United States commercial harvest of fur seals, St. Paul Island, Alaska, 1967-79.

Year	Number of seals harvested 1/	Number of entangled seals observed on killing field 1/	Percentage of harvest
1967	50,229	75	0.15
1968	46,893	75	0.16
1969	32,817	67	0.20
1970	36,307	101	0.28
1971	27,338	113	0.41
1972	33,173	139	0.42
1973	28,482	135	0.47
1974	33,027	197	0.60
1975	29,148	211	0.72
1976	23,096	102	0.44
1977	28,444	99	0.35
1978	24,885	114	0.46
1979	25,762	110	0.43

1/ Includes both sexes.

TABLE 9

Analysis of stomach contents of fur seals collected pelagically by Canada and the United States in the eastern North Pacific Ocean and eastern Bering Sea, 1958-74 (all data combined).

(Perez and Bigg 1980)

Food item	Frequency of occurrence		Volume			Individual specimens		Index of relative importance
	Number	Percent	cc.	No. Stomachs Trace volume	Percent	Number	Percent	(IRI)
Fish:								
Entosphenus tridentatus	52	.49	4,164	20	.08	56	.02	.05
Squalus acanthias	1	.01	532	0	.01	6	-	-
Hydrolagus colliei	6	.06	918	1	.02	10	-	-
Unidentified Clupeidae	27	.25	557	17	.01	58	.02	.01
Alosa sapidissima	82	.77	27,664	14	.53	144	.05	.45
Clupea harengus pallasi	1,044	9.76	680,228	54	13.03	9,423	3.15	157.92
Engraulis mordax	1,219	11.39	751,522	64	14.40	43,309	14.48	328.94
Unidentified Salmonidae	157	1.47	51,300	48	.98	292	.10	1.59
Oncorhynchus spp.	303	2.83	125,936	20	2.41	575	.19	7.36
Oncorhynchus gorbuscha	19	.18	9,333	0	.18	42	.01	.03
Oncorhynchus keta	13	.12	13,766	0	.26	19	.01	.03
Oncorhynchus kisutch	27	.25	19,915	0	.38	48	.02	.10
Oncorhynchus nerka	6	.06	3,710	0	.07	9	-	-
Oncorhynchus tshawytscha	12	.11	9,640	0	.18	17	.01	.02
Salmo gairdneri	4	.04	2,428	0	.05	4	-	-
Unidentified Osmeridae	51	.48	4,497	30	.09	279	.09	.09
Hypomesus pretiosus	11	.10	1,681	1	.03	102	.03	.01
Mallotus villosus	1,164	10.88	613,283	103	11.75	73,466	24.57	395.16
Thaleichthys pacificus	130	1.22	26,397	17	.51	3,722	1.24	2.14
Bathylagidae	210	1.96	48,150	39	.94	13,866	4.64	10.94
Tactostoma macropus	1	.01	270	0	.01	16	.01	-
Scopelosaurus sp.	1	.01	438	0	.01	13	-	-
Paralepis atlantica	18	.17	11,143	1	.21	64	.02	.04
Unidentified Myctophidae	66	.62	4,515	28	.09	826	.28	.23
Tarletonbeania crenularis	15	.14	1,629	2	.03	329	.11	.02
Symbolophorus californiensis	1	.01	442	0	.01	31	.01	-
Lampanyctus sp.	1	.01	10	0	-	1	-	-
Anotopterus pharao	1	.01	T	1	-	1	-	-
Cololabis saira	404	3.78	109,316	53	2.09	3,186	1.07	11.94
Unidentified Gadidae	237	2.22	47,582	104	.91	9,542	3.19	9.10
Gadus macrocephalus	22	.21	10,234	5	.20	127	.04	.05
Merluccius productus	741	6.93	395,673	136	7.58	2,370	.79	58.00
Microgadus proximus	4	.04	607	1	.01	520	.17	.01
Theragra chalcogramma	700	6.54	483,245	116	9.26	8,852	2.96	79.92
Gasterosteus aculeatus	106	.99	18,809	11	.36	3,956	1.32	1.66
Unidentified Trachipteridae	9	.08	485	5	.01	9	-	-
Trachipterus altivelis	5	.05	3,221	2	.06	5	-	-
Trachurus symmetricus	116	1.08	31,909	42	.61	135	.05	.71
Sciaenidae	1	.01	10	0	-	1	-	-
Brama japonica	6	.06	2,813	1	.05	12	-	-
Medialuna californiensis	4	.04	254	0	-	5	-	-
Scomber japonicus	1	.01	T	1	-	1	-	-
Sebastes spp.	359	3.36	223,985	33	4.29	1,814	.61	16.46
Sebastes aleutus	6	.06	14,524	0	.28	39	.01	.02
Sebastes entomelas	2	.02	2,174	0	.04	8	-	-
Sebastes jordani	8	.07	6,735	0	.13	75	.03	.01
Anoplopoma fimbria	136	1.27	65,986	6	1.26	444	.15	1.79
Unidentified Hexagrammidae	3	.03	1,140	0	.02	8	-	-
Pleurogrammus monopterygius	154	1.44	51,904	21	.99	495	.17	1.67
Unidentified Cottidae	3	.03	315	1	.01	3	-	-
Unidentified Cyclopteridae	10	.09	1,438	1	.03	12	-	-
Aptocyclus ventricosus	2	.02	763	0	.01	4	-	-
Unidentified Trichodontidae	1	.01	120	0	-	1	-	-
Trichodon trichodon	5	.05	212	1	-	5	-	-
Ammodytes hexapterus	651	6.08	479,533	39	9.19	20,311	6.79	97.16
Unidentified Bathymasteridae	2	.02	133	0	-	2	-	-
Bathymaster signatus	1	.01	4,525	0	.09	26	.01	-
Unidentified Anarhichadidae	4	.04	62	0	-	5	-	-
Anarhichas orientalis	3	.03	538	0	.01	10	-	-
Zoarcidae	1	.01	T	1	-	1	-	-
Tetragonurus cuvieri	1	.01	912	0	.02	1	-	-
Atherinopsis californiensis	18	.17	15,819	2	.30	111	.04	.06
Unidentified Pleuronectiformes	1	.01	640	0	.01	2	-	-
Citharichthys sp.	8	.07	4,314	2	.08	67	.02	.01
Unidentified Pleuronectidae	34	.32	4,117	6	.08	106	.04	.04
Atheresthes stomias	9	.08	2,758	0	.05	11	-	-
Hippoglossus stenolepis	1	.01	2,736	0	.05	2	-	-
Lyopsetta exilis	4	.04	487	1	.01	36	.01	-
Reinhardtius hippoglossoides	128	1.20	12,102	37	.23	1,676	.56	.95
Porichthys notatus	8	.07	6,678	0	.13	102	.03	.01
Unidentified	1,422	13.29	27,035	1,143	.52	2,873	.96	19.67
Cephalopods:								
Unidentified Octopoda	4	.04	373	1	.01	5	-	-
Ocythoe tuberculata	30	.28	70	28	-	41	.01	-
Unidentified Squid	1,616	15.10	99,342	1,091	1.90	16,209	5.42	110.53
Loligo opalescens	770	7.20	130,253	454	2.50	10,395	3.48	43.08
Onychoteuthis sp.	540	5.05	97,069	268	1.86	9,059	3.03	24.69
Onychoteuthis borealijaponicus	310	2.90	32,315	183	.62	1,818	.61	3.57
Moroteuthis robusta	5	.05	129	4	-	5	-	-
Abraliopsis sp.	124	1.16	1,963	115	.04	1,692	.57	.71
Octopoteuthis sp.	4	.04	22	3	-	9	-	-
Unidentified Gonatidae	2,011	18.80	14,300	1,812	.27	35,033	11.71	225.22
Gonatus sp.	891	8.33	22,734	709	.44	3,918	1.31	14.58
Berryteuthis magister	708	6.62	229,523	217	4.40	8,294	2.77	47.47
Gonatopsis borealis	642	6.00	135,035	70	2.59	8,786	2.94	33.18
Unidentified Chiroteuthidae	10	.09	T	10	-	17	.01	-
Chiroteuthis sp.	20	.19	95	17	-	25	.01	-
Miscellaneous:								
Unidentified	3	-	-	-	-	-	-	-
Birds	43	.40	5,608	24	.11	44	.01	.05
Pebbles, gravel, sand	257	-	-	-	-	-	-	-
Inorganic material	2	-	-	-	-	-	-	-
Organic material	31	-	-	-	-	-	-	-
Unidentified invertebrates	5	-	-	-	-	-	-	-
Isopoda	40	-	-	-	-	-	-	-
Amphipoda	11	-	-	-	-	-	-	-
Mollusca	52	-	-	-	-	-	-	-
Crustacea	31	-	-	-	-	-	-	-
Pelecypoda	8	-	-	-	-	-	-	-
Cirripedia	3	-	-	-	-	-	-	-
Gastropoda	20	-	-	-	-	-	-	-
Caligoida and Lernaeopodoida	14	-	-	-	-	-	-	-
Unidentified Tube worm	1	-	-	-	-	-	-	-
Total	-	-	5,219,759	-	100.00	299,049	100.00	-
Selected groups:								
Fish	8,144	76.12	4,450,728	1,798	85.27	203,699	68.12	11,676.05
Clupeidae	1,138	10.64	708,449	83	13.57	9,625	3.22	178.65
Salmonidae	522	4.88	235,928	68	4.52	1,006	.34	23.73
Osmeridae	1,344	12.56	645,853	141	12.37	77,569	25.94	481.17
Gadidae	1,695	15.84	937,341	361	17.96	21,411	7.16	397.90
Scorpaenidae	373	3.49	247,418	33	4.74	1,936	.65	18.81
Hexagrammidae	157	1.47	53,044	21	1.02	503	.17	1.75
Pleuronectidae	185	1.73	27,054	46	.52	1,900	.64	2.01
Cephalopoda	5,144	48.08	763,423	3,501	14.63	95,306	31.87	2,235.72
Octopoda	34	.32	643	29	.01	46	.02	.01
Onychoteuthidae	851	7.95	129,513	452	2.48	10,882	3.64	48.65
Gonatidae	2,554	23.87	401,592	2,106	7.69	56,031	18.74	630.80
Squid	5,138	48.02	762,780	3,549	14.61	95,260	31.85	2,231.01

TABLE 10

Annual consumption by marine birds and mammals in the eastern Bering Sea (in 10^3 tons), as computed with DYNUMES II ("conservative" inputs). (NPFMC 1979)

Species/group of species	Species/group of species consumed										
	Herring	Other pelagic	Salmon	Pollock	Other gadids	Flatfish	Total finfish	Zooplankton	Squids	Benthos	"Others" (Unspecified)
Marine birds	11.7	40.3	1.5	26.3	+	1.9	81.7	105.2	13.2	2.8	14.3
Fur seal	26.5	8.8	8.8	322.3	22.1	-	388.5	-	44.2	-	8.8
Sea lion	16.8	11.2	22.4	182.2	19.6	-	252.2	-	+	-	+
Bearded seal	25.0	25.0	8.3	83.5	41.7	41.7	225.2	-	66.8	509.2	33.4
Harbor seal	66.9	31.2	6.7	89.2	13.4	8.9	216.3	-	89.2	104.8	13.4
Ringed/ribbon seal	24.2	47.5	3.0	84.7	30.3	-	189.7	-	30.3	+	9.1
Walrus	+	+	1.6	6.6	+	4.9	13.1	-	+	311.4	3.3
Total pinnipeds	159.4	123.7	50.8	768.5	127.1	55.5	1,285.0	-	230.5	925.4	68.0
Baleen whales	20.7	27.7	-	13.8	6.9	-	69.1	1,189.3	124.5	-	+
Toothed whales	231.5	408.5	0.5	340.4	68.1	68.1	1,117.1	-	-	-	245.1
Total, whales, porpoises, dolphins	252.2	436.2	0.5	354.2	74.0	68.1	1,186.2	1,189.3	124.5	-	245.1
Total by birds and mammals	423.3	600.2	52.8	1,149.0	201.1	125.5	2,552.9	1,294.5	479.5	928.2	327.4

TABLE 11

Estimates of total annual or seasonal food consumption by northern fur seals from the Pribilof Islands.

(McAlister and Perez 1977)

Estimated herd size (thousands)	Area	Season	Food consumption (thousands of metric tons)
1,530	North Pacific	Annual	689[1/]
1,300	S.E. Alaska, Bering Sea	Annual	318-340[2/]
203	Aleutians	June-Nov.	128.0[3/]
158	Aleutians	Dec.-May	90.5[4/]
551	Eastern Bering Sea	June-Nov.	347.5[3/]
69	Eastern Bering Sea	Dec.-May	39.5[4/]
256	Gulf of Alaska	June-Nov.	147.8[5/]
489	Gulf of Alaska	Dec.-May	280.0[4/]
95	South of Alaska[1/]	June-Nov.	54.8[5/]
650	South of Alaska[1/]	Dec.-May	372.2[4/]
1366	Eastern North Pacific	Annual	1460.3

1/ Scheffer (1950)

2/ Ancel Johnson (pers. comm.)

3/ Assumes a mean animal weight of 29.92 kg for June-Nov., and an average weight of pups of 10 kg based on data on the Pribilof Islands from September, and averaged by component age classes of the total fur seal herd in Table 1 after an 8% mortality of pups excluded; and also on a mean daily consumption rate of 11.71% of body weight for the entire fur seal population in the Bering Sea and Aleutians area. Includes only the portion of pups at sea in calculating the mean weight and mean daily consumption rate. Mean daily consumption rates weighted by fractions of the population at sea and on land.

4/ Assumes a mean animal weight of 23.7 kg for December-May and an average weight of pups of 7.5 kg and averaged by component age classes of the total fur seal herd in Table 1; after 8% mortality of pups excluded; and also on a mean daily consumption rate of 13.44% of body weight for the entire fur seal population.

5/ Assumes a mean animal weight of 23.77 kg for June-November for other areas of the North Pacific, and averaged by component age classes of the fur seal herd not in the Bering Sea and Aleutians area as shown in Table 1; and also on a mean daily consumption rate of 13.49% of body weight for this population.

TABLE 12

All-nation catch data of demersal fish in the eastern Bering Sea and Aleutian regions, 1970-77, and its relationship to annual fur seal fish consumption (metric tons).

(McAlister and Perez 1977)

Species	Average Yearly Catch (1970-76) 1/	1977 Allowable 1/ Catch	Biomass 2/ Estimate	Estimated Annual 3/ Fish Consumption By Fur Seals	Percent Biomass Consumed By Fur Seals	Ratio of Fur Seal Annual Fish Consumption to Average Annual Commercial Catch 4/	Ratio of Fur Seal Annual Fish Consumption to Allowable Commercial Catch 5/
Walleye pollock 5/	1,519,639	950,000	2,426,400	118,300	4.9	0.078	0.125
Pacific cod 3/	50,539	58,000	64,500	192 7/	0.3	0.003	0.003
Yellowfin sole 8/	136,904	211,000 9/	1,634,300	-	-	-	-
Pacific halibut	397	-	30,000	520 10/	1.8	-	-
Greenland turbot 11/	70,049	-	126,700	3,362 12/	2.7	0.047	-
Arrowtooth flounder	19,203	-	28,000	-	-	-	-
Pacific Ocean perch	35,671	21,500	-	40 13/	-	0.001	0.002
Pacific herring	50,322	21,000	-	16,500	-	0.328	0.786
Other Species	47,658	101,100	370,934	179,840	48.5 14/	3.774	1.779
Total Fish	1,939,343	1,362,600	4,600,834	317,000		0.163	0.233

1/ Bakkala, pers. comm.

2/ Pereyra, et al., 1976. These estimates reflect mostly portions of the biomass susceptible to trawl catch and are probably low for the amount of the actual standing stock.

3/ From Table 8, only the eastern Bering Sea portion is included to conform with areas of survey for biomass estimates.

4/ (Annual Fish Consumption by fur seals/Average yearly commercial fish catch)

5/ (Annual Fish Consumption by fur seals/Allowable commercial fish catch)

6/ Includes unidentified Gadidae.

7/ 0.05% of the annual food consumption by fur seals in the eastern Bering Sea is estimated to be Pacific cod based on stomach analysis of pelagic collections, 1950-74, NMD, NMFS.

8/ Includes yellowfin sole, rock sole, flathead sole and Alaska plaice.

9/ Includes yellowfin sole, pacific halibut, greenland turbot, arrowtooth flounder, rock sole, flathead sole and Alaska plaice.

10/ 0.13% of the annual food consumption by fur seals in the Bering Sea estimates to be Pacific halibut based on stomach analysis of pelagic collections, 1950-74, NMD, NMFS.

11/ Includes unidentified Pleuronectidae.

12/ 0.9% of the annual food consumption by fur seals in the eastern Bering Sea is estimated to be Greenland turbot.

13/ 0.01% of annual food consumption by fur seals in the eastern Bering Sea is estimated to be Sebastes sp. (probably Pacific Ocean perch) based on stomach analysis of pelagic collections, 1950-74, NMD, NMFS.

14/ Includes Pacific Ocean perch and Pacific herring in other species category (196,400 m.t.) to obtain percent of other species biomass consumed. This percent is probably too high due to both a low biomass estimate of the total standing stock of fish and an underestimate of the amount of squid consumed by fur seals.

TABLE 13

Consumption of fish in the eastern Bering Sea and Aleutians area (Thousands of metric tons) (McAlister and Perez 1977)

Estimated fish consumed by fur seals	507
Estimated fish consumed by northern sea lions	1,147
Estimated fish consumed by other pinnipeds	590
Estimated pinniped predation on fish	2,244
Estimated fish consumed by baleen whales	45
Estimated fish consumed by toothed whales	358
Estimated cetacean predation on fish	403
Estimated marine mammal predation on fish	2,647
Estimated fish consumed by sea birds	500
Estimated vertebrate predation of fish	3,147
Allowable catch by Commercial Fisheries, 1977	1,363
Estimated total catch plus vertebrate predation of fish	4,510
Estimated standing stock of all fish	27,260
Percent standing stock of fish annually consumed by fur seals	1.9%
Percent standing stock of fish annually consumed by northern sea lions	4.2%
Percent standing stock of fish annually consumed by other pinnipeds	2.2%
Percent standing stock of fish annually consumed by all pinnipeds	8.2%
Percent standing stock of fish annually consumed by baleen whales	0.2%
Percent standing stock of fish annually consumed by toothed whales	1.3%
Percent standing stock of fish annually consumed by all cetaceans	1.5%
Percent standing stock of fish annually consumed by mammals	9.7%
Percent standing stock of fish annually consumed by sea birds	1.8%
Percent standing stock annually consumed by marine mammals and sea birds	11.5%
Percent standing stock allowed to be consumed in 1977 by fisheries	5.0%
Percent standing stock consumed annually by man and all other vertebrates	16.5%

TABLE 14

ST. PAUL EMPLOYMENT - 1979
(Management and Planning Services, 1980)

	Year-Round	Seasonal/Part-Time	Total
NMFS	62[1]	62[6]	
Clinic	5[2]		
School	16[3]	6	
City	9	1	
Corporation	5		
Hotel		4	
Restaurant		11	
Store	9	2	
Tavern		3	
Gas Station		1	
Reeve/PO	1		
Alaska Tours & Marketing		1	
Coast Guard	3[4]		
Weather Service	4[5]		
Other			
	114	90	204

1 Includes 19 "permanent" and 43 "part-time indefinites"

2 Includes 1 non-native non-permanent

3 Includes 11 non-native non-permanent residents

4 Excludes military personnel

5 Includes 2 non-native non-permanent

6 Temporary classification

TABLE 15

ST. PAUL SALARIES AND WAGES - 1979

(Management and Planning Services, 1980)

Tanadgusix		
Administration	$ 106,678	
Directors Fees	5,225	
Hotel	11,905	
Restaurant	26,208	
Subtotal		$ 150,016
City		
Regular	$ 159,900	
CETA	37,500	
Subtotal		$ 197,400
NMFS		
Administration	$1,120,500	
Processing	232,950[1]	
Repayment	45,700	
Subtotal		$1,399,150
IRA		
Store	$ 160,000	
Tavern	11,000	
Subtotal		$ 180,000[2]
Clinic		$ 62,200[3]
School		$ 606,600[4]
Reeve/Post Office		$ 15,000[5]
Weather Service/Coast Guard		$ 75,000[5]
Total Salaries and Wages		$2,685,366
Less: Non-Local Households		504,800
Total Local Earned Income		$2,180,566

1 Total processing wages less percentage share for St. George and other non-local workers.
2 Estimated at 1976 levels plus 5% per year for 3 years.
3 Escalated from 1978 level.
4 Estimated from ratio of St. Paul employees total employees.
5 Estimated based on average salaries.

TABLE 16

ST. GEORGE EMPLOYMENT - 1979

(Management & Planning Services, 1980)

	Year-Round	Seasonal/Part-Time
NMFS	25[4]	11[1]
Clinic	2[2]	
School	2[3]	2
Store	2	
Canteen	1	
Company House	2	1
	34	14

---

1 Includes 5 in processing plant on St. Paul.

2 Includes 1 non-Native.

3 Includes 2 non-Natives.

4 Includes full-time permanent and part-time indefinities.

TABLE 17

ST. GEORGE SALARIES AND WAGES - 1979

(Management & Planning Services, 1980)

NMFS		
Administration	$732,400	
Processing	22,600[1]	
		$755,000
Clinic		24,900[2]
School		80,900[3]
Tanaq Corporation		
Salaries	$ 25,000[4]	
Fees	2,500	
		27,500
Canteen		20,000[4]
Total Salaries and Wages		$908,300
Less Non-Local		(60,000)
Total Local Earned Income		$848,300

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1 Percentage share of total NMFS processing wages.

2 Escalated from 1978 level.

3 Estimated as ratio of St. George employees to total employees.

4 Estimated based on average salaries.

TABLE 18

Pribilof Islands Program Budget 1979

(in thousands of dollars)

Seattle Program Office[1]	$ 275.3
Administration of St. Paul[2]	2,242.8
Administration of St. George[2]	1,690.0
Schools and Retirement[3]	317.7
Fur Seal Harvesting and Processing[4]	444.0
Total Expended	$4,969.8
Recovered Expenses[5]	-761.2
Appropriated Monies Spent	$4,208.6

[1]Planning, budgeting and administration of the Program, except for "Fur Seal Harvesting and Processing" which is included in that category.

[2]Operation and maintenance of electrical power generation, water, sewers, and oil and gas storage and distribution; purchases and maintenance of supplies, materials, and equipment for administration of the Islands; airport and road improvement and maintenance; community services such as air charter service and assistance in police protection; building improvement and maintenance; lighterage and cargo handling.

[3]Adult education, amortization of St. Paul School, and payment to Civil Service Commission for retirement benefits of those Pribilovians with government service prior to 1950.

[4]Includes all expenses for planning and administration; plant operations and maintenance; harvesting, blubbering, curing and packing of skins; and transportation and storage of skins.

[5]Use of electricity and fuel by citizens, school district, and community buildings; and repair and maintenance services for individuals and government entities. This category does not include monies received for the sale of fur seal skins.

The Fur Seal Act of 1966 requires that we administer the Pribilof Islands as "a special reservation". This responsibility includes the provision of supplies, transportation, utilities and other services to Island residents. The cost of the seal harvest, approximately 10 percent of the Pribilof Islands Program budget, is less than the amount of money returned to the Federal Treasury as proceeds from the sale of the processed sealskins.

TABLE 19

Pribilof Island Receipts, Expenditures & Payment to Alaska, 1960-1979.

Fiscal Year	Receipts from sale of sealskins	Expenditures+	Payment to Alaska
1960	$3,220,405	$1,720,402	$1,050,002
1961	$2,839,000	$1,981,000	$ 536,809
1962	$2,742,403	$1,998,000	$ 702,852
1963	$3,566,764	$2,468,000	$ 589,300
1964	$3,568,102	$2,442,000	$ 963,635
1965-66*	$5,422,992	$4,831,566	$ 300,017
1967	$2,638,393	$2,163,741	$ 332,256
1968	$2,894,048	$2,451,894	$ 309,508
1969	$3,040,488	$2,602,398	$ 306,663
1970	$2,232,525	$2,676,323	-0-
1971	$1,372,843	$2,816,006	-0-
1972	$1,623,224	$2,865,900	-0-
1973	$1,801,855	$3,113,000	-0-
1974	$1,852,775	$3,449,000	-0-
1975	$1,024,214	$4,351,000	-0-
1976	$1,624,427	$4,468,000	-0-
1977	$1,617,225	$4,893,000	-0-
1978	$ 684,036	$4,613,300	-0-
1979	$ 842,811	$4,208,600	-0-

+Approximately 10% of the cost of administration can be attributed directly to the harvest and support activities. The balance is spent to support facilities and service on the islands required to maintain the permanent Aleut communities.

*Computed pursuant to the Fur Seal Act of 1966.

TABLE 20

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friends of animals, inc. 11 West 60th Street, New York, N.Y. 10023 • (212) 247-8120

August 10, 1979

Mr. Terry Leitzell
Assistant Administrator for Fisheries
National Marine Fisheries Service
National Oceanic and Atmospheric Administration
United States Department of Commerce
3300 Whitehaven Street
Washington, D.C. 20235

Dear Mr. Leitzell,

Your department is distributing false and misleading information on the 1979 size of the northern fur seal herd with a view to misleading the public, environmental organizations, and the Congress in the hope of obtaining support for a renewal of the Fur Seal Treaty.

You are currently telling the public that the overall size of the seal herd is "1.8-2.0 million" and, for the Pribilof Segment, "1.5 million" and "1.4 million." The 1.8-2.0 million is in your press release of June 21, 1979 and was picked up by United Press; the 1.5 million figure was given by Walter Kirkness on the ABC/TV program 20/20. The 1.4 million is being distributed broadly. (It is from your July 1979 draft Environmental Impact Statement - EIS - Table 2, p. C-5.)

Table 2 is simply a re-hash of the meaningless Table 7 (EIS,p.C-9) of "estimates at sea..." averaged for the years 1969-1974:

"Component"	Table 2 "...Components of Pribilof Islands Fur Seal Population"	Table 7 "Fur seal population estimates at sea.."
Newborn pups	348,000	349,000
Females Age 4+	580,000	582,000
Yearlings	174,000	174,000
Age 2	122,000	122,000
Age 3, female	55,000	55,000
Males, Age 3+	112,000	112,000
Total	1,391,000	1,394,000"

This is the year 1979. Why do you give as 1979 population data, figures based on an average, at sea, for the years 1969-1974? Why did you not cite data from the report you published in February 1978 entitled "Fur Seal Investigations, 1977"? Were no data collected for the year 1978?

In 1971 you publicized the size of the Pribilof herd as 1.3 million seals. That figure was based on your 1968 report. In a letter to Senator Edward Kennedy dated 17 August 1971, over the signature of Philip Roedel, you stated that the size of the breeding population was "about one-quarter" (about 325,000) of the total.

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Senator Kennedy had requested your letter as a result of an advertisement we had placed in the New York Times in which we had picked up your 1968 count of bulls - 7,924 harem bulls and 4,383 idle males - used your average of 40 females per harem bull (316,960 females) and came up with a total for the breeding age population of 329,960. We were high by about 5,000 seals.

Your figure of "about 325,000" seals of breeding age (the 325,000 less bulls = 312,000 females) is verified by the listing of 312,000 pups born in 1968 (EIS Table 1, p.C-4). It also verifies a 100% pregnancy rate for females of breeding age.

For 1977 we estimate the size of the Pribilof breeding population at about 230,000: (Please note that this estimate is based on your actual count of bulls and estimates of pups for 1977, and on your statement that St. Paul has 80% of Pribilof seals - verified by the harem bull counts.)

1977 ESTIMATE OF BREEDING POPULATION OF NORTHERN FUR SEALS - PRIBILOF ISLANDS HERD

Data starred (*) are USDC statistics in "Fur Seal Investigations 1977". Non-starred figures are based on starred data.

*St. Paul has 80% of Pribilof seals (EIS, p.15).
*p.14 - "a 28.1% decrease in pups born from 1973-1977."
*p.23 - "The reduction in the number of females appears to be island-wide."

	St. George	St. Paul	Total
*p.57 Harem Bulls	* 1,610	*6,457	*8,067
*p.57 Idle Males age 7+	* 899	*3,845	*4,744
Breeding Females	43,407		217,000
(100% pregnancy)			
TOTAL BREEDING POPULATION			229,811

Verified by:			
*p.14 Pups Born 1973	*60,387		301,929) *28.1%
*p.14 Pups Born 1977	*43,407		217,000) decrease

You counted 1,610 harem bulls on St. George(p.57) and state (p.19) that the male/female ratio is between 1:10 and 1:12. Applying your average ratio of 11 females to each of the 1,610 harem bulls would result in 17,710 pups born on St. George Island in 1977. How, then, on page 14, do you get a figure that 43,407 pups were born?

DIRECTORS: Arnold Bernhard, Tom Bywaters, Regina Frankenberg, Alice Herrington, Jacques Lindon, Harrison D. Maas, Edward Dorson, J. Stanley Sharp

Reducing your publicized 1968 figures by 28.1% gives for 1977: Breeding population - 234,000; total Pribilof herd - 935,000. This is almost one-half million (465,000) below the 1.4 million figure you are distributing today.

And, the percentage decrease is more than 28.1%: In 1968 you contrived for succeeding years a 2% decrease by killing 13,335 pregnant females (EIS p.C-16) - 1% of the herd - each of which had a pup which starved to death (1%). Since you acknowledge a 28.1% decrease from 1971-1977 (a 7% reduction each year), it is then reasonable to assume there was a 14% decrease from 1977-1979. 2% + 28% + 14% = 44% decrease, from 1968 to 1979. Total herd for 1979: 728,000. The 44% decrease is verified by your kill statistics:

Males killed 1968: 45,625 (EIS p.C-16)
Males killed 1979: 25,625
20,000 (a 44% decrease)

But, if your figures for 1968's herd total were as inflated as are those you are issuing today, then the size of the herd in 1979 is well below 728,000. And I believe it is.

For example, you fail to consider the increase in pelagic kill, which increase is apparent in your current decision to issue "General permits for the take of northern fur seals incidental to fishing". And as pointed out on page 2, your methods of estimating pups (and, thus, breeding population) are suspect. We should therefore appreciate a response to the questions appended to this letter.

As to your current statistic of "1.8 to 2.0 million" for the combined Russian and U.S. herds, the figure must be cut in half. You say Russia has about 20% of the total and that is born out by the 1977 kill statistics (DIS p.C-17). The USSR breeding population in 1977 was about 69,501 (Tables 3 & 4, p.C-6) for a total Russian herd of 282,000. Combined with the U.S. herd of 935,000 the total for 1977 was about 1.2 million. Decrease this by 14%: In 1979 the total combined US and USSR herds would be one million. But, again, applying the verified percentage decreases to inflated base data would give an inflated herd total for 1979.

The undersigned was an observer on the Island of St. Paul in both 1970 and 1979, during the same week each time. Since seals are faithful in their date of return to the breeding grounds, I can believe my eye-ball count: The number of seals in the rookeries in 1979 was only about one-half the number in 1970.

In sum, as the Rurrians pointed out in 1970 "there is a serious depletion in the once huge herd." (New York Times 8 January 1970). It is far more serious in 1979.

Our members and the public at large base their concern in this massacre on unwarranted brutality and kill, the moral issue, and the ecological insanity. But, since you base your bureaucratic concern on the impossible task of "managing" the fur seal population, I have taken the trouble to play the numbers game.

I look foward to your reply.

Sincerely yours,

Fitzgerald

President

cc: Congressman Lester Wolff
Senator Edward Kennedy
Others

Attached: Information requested under the Freedom of Information Act.

Response: Thank you for your comments.

Our most recent population estimate of the Pribilof herd and a discussion of this new analysis may be found in Sec. III.B.4. Please refer to Lander (1980) for a complete technical discussion.

Your population estimates are based on a faulty assumption. Pup production and the counts of adult females do appear to be declining on St. George Island, but not on St. Paul. On the contrary, pup production on St. Paul has remained relatively constant for the past ten years. This may indicate, as discussed in Sec. III.B.2., that the population is approaching the carrying capacity of the present environment. Applying the same rates of decline in pup production cited for St. George, to the St. Paul population results in as erroneous population estimate for the Pribilof Island herd.

The method used to estimate pups born each year is discussed in Sec. III. B.2. The take of fur seals incidental to commercial fisheries is estimated in Sec. III.C.3.

GREENPEACE

240 FORT MASON / SAN FRANCISCO, CALIFORNIA 94123 / (415) 474-6767 / TELEX #340275

August 23, 1979

Dr. William Aron, Director
Office of Marine Mammals and Endangered Species
National Marine Fisheries Service
Washington, D.C. 20235

Dear Dr. Aron,

This letter is to state the position of Greenpeace Foundation of America on the action to be taken by the United States on the Interim Convention for the Conservation of the North Pacific Fur Seal that will expire in October 1980.

Greenpeace has considerable interest in this issue and a fair amount of on-site experience. Several Greenpeace members observed and filmed this year's hunt. We have been in contact with Tanadgusix Corporation and are well-informed as to the feelings of the Pribilof people regarding the hunt.

We feel that the United States government should choose option C, page 34 as stated in the July 1979 Draft Environmental Impact Statement with one very important change. The US should reserve the right to limit her take to less than the allowed 70% of the total quota in order to make management policy for this hunt consistent with the management policy of OSP. We would expect an immediate cutback within the 70% and a phase out to zero in as short a time as possible. A timed phase out to minimize the impact on the Aleuts would be acceptible, provided that this is not used as an excuse to prolong the hunt indefinitely.

At the same time, the US should investigate alternate forms of employment for the Aleuts and aid them in becoming self-sufficient. This should include not only a replacement of jobs involved in the hunt, but creation of additional jobs to ease the general unemployment problem on the island.

We do not feel that the impact on the Fouke Co. should be a consideration in making decisions about the seals.

If the above modified option C is not adopted, then we would favor no renewal of the treaty and management of the seals within the 200 mile limit by the United States. This would require a total and immediate end to the hunt on the Pribilof Islands to offset the damage the seal population cause by the pelagic sealing which would undoubtedly start up if the treaty were allowed to expire.

Sincerely,

John Frizell

John Frizell

Valerie McOuat

Valerie McOuat

Response: Thank you for your comments.

Please see Sec. II.C. and Sec. IV.C. for discussion of the renegotiation alternative. We believe we may be able to waive our share of the harvest under terms of the present Convention. However, there is no evidence that a reduction in the harvest is necessary to maintain the the population at a level consistent with the MMPA. Please see Sec. I. B.3. and III.B.5.c.

Please see Sec. III.E.1. for a discussion of plans for the economy of the Pribilofs.

We are required by the National Environmental Policy Act of 1969 to consider economic as well as biological impacts.

Please see Sec. II.B. and IV.B. for discussion of the possible consequences of a renewal of pelagic sealing. We believe this option presents an unacceptable risk to the fur seal population.

GREENPEACE ALASKA

551 L STREET, ANCHORAGE, ALASKA 99501 TELEPHONE (907) 277 5922

August 24

Thank you for soliciting comments on the upcoming Fur Seal Convention.
It is my opinion [redacted] that firstly the harvest must be stopped solely for the protection and well being of the majority of the Northern Fur Seal population.
Secondly and vitally important, that the Aleut community be maintained, specifically in the form of economic stability. The government must assist in the implementation of alternative means of selfsufficiency for the Aleut people. The government and the people must become motivated to this reality.
I believe that the cultural lifestyle of the Aleut has been virtually destroyed by the commercial sealing industry. To abandon them after halting the harvest would almost assuredly destroy the people. I believe that the Aleut is as much a part of the Bering Sea ecosystem as any other inhabiting specy, and therefore must be given equal consideration.
In regard to the DEIS I submit the following comments.
It seems to me that the practice of conservation was more widely in force prior to commercial hunting, with nature limiting the size of its own. The constant refferal in the [redacted] Fur Seal Act and Fur Seal treaty to "provide the greatest harvest year after year", leads me to believe that the political definition of conservation is nothing more then a disguise.
To terminate the treaty would halt present international research programs. Yet the majority of research conducted to date was done prior to 1975. I also have a problem with the statement that the Aleyts have longstanding cultural ties to the harvest and that restrictions on native subsistence hunting would be eliminated. I am quite sure that culture did not allow for the commercial slaughter of any species. I must reiterate that the phrase "governmentally imposed traditions" would be more fitting. A reduction or discontinuation of the U.S. take, would have detrimental effects on the villagers of St. Paul. With federal and state support and native and governmental motivation, this problem would only be temporary. I do not believe that damage would be inflicted upon native culture as the irreversable damage has already been done. Subsistence hunting by native Americans will never be abolished (or defined for that matter) in this country. We all know however, that regulations can be and are changed all the time. There may be a potential problem with the word "handicrafts". Seals taken under the guise of subsistence while being utilized for commercial gain, ie; walrus headhunters etc. We should require from NMFS a clear and precise definition of "handicrafts" and press for strict adherence.
Any economic losses incurred by the seal skin industry do not concern me in the least.

If renegotiation is in order, it would provide the U.S. an opportunity to introduce language consistent with the MMPA not currently included in the treaty. As is evident in past renegotiation conventions, this opportunity has not been accepted.
Renegotiation would not prevent Japan or Russia from introducing language calling for increased land harvests as well as the reintroduction of pelagic sealing. This will probably be the case regardless of the outcome of the convention.
As a final note, I contend that the best solution would be to dissolve the treaty, thus halting U.S. commercial harvesting.
The U.S. should continue and expand its research in the Pribilofs. If it becomes apparent that other signatories of the treaty will continue their lust for the slaughter then public and political pressure should be applied, ie; Pelly Amendment and others.
Not to be forgotten is the situation in relation to the Aleut peoples. Until such time as new livelihoods can be forged in the Pribilofs, the U.S. should recruit native assistance and participation in expanded marine research in the Bering Sea area, thus providing education to the people as well as re-channeling the current monetary flow.
The prime target should be updated investigations into chemical and metal contamination and their effects on the marine environment and ingestion levels in the native inhabitants of the area. The results of these investigations (the latest be in the early 70's) could have significant impact on the future of the subsistence harvest.

Let em live,

Mark A. Boberick

Mark A. Boberick
Coordinator Seal Support Group
[redacted]
Greenpeace Alaska

Response: Thank you for your comments.

Please see Sec. II.B. and IV.B. for our assessment of possible consequences of terminating this treaty.

Sec. 101(b) of the MMPA discusses limitations on subsistence take and provides a definition of native handicrafts.

International Association of Fish and Wildlife Agencies

1412 16th STREET N.W. WASHINGTON D.C. 20036 (202)232-1652

Jack H. Berryman, Executive Vice President

September 4, 1979

Mr. Terry L. Leitzell,
Assistant Administrator
for Fisheries, NOAA
National Marine Fisheries Service
U.S. Department of Commerce
Washington, DC 20235

Dear Mr. Leitzell:

On behalf of the International Association of Fish and Wildlife Agencies, I am pleased to make the following comments concerning the Draft Environmental Impact Statement on the Interim Convention on Conservation of North Pacific Fur Seals. The Association is a voluntary association of fish and wildlife managing agencies in the United States, Canada, and Mexico. As such, we have a deep interest and concern with the program for the conservation of the Pacific fur seals, both for their intrinsic value and in recognition of the fact that the restoration of Pacific fur seal populations continues to this day to be a model — the essence, if you will — of the conservation idea.

We support the extension of the present Convention. We believe that is the only way to insure the continued success of the management program for the Pacific fur seals and to realize the accessory and the dependent benefits from that program.

Our position is based first and fundamentally on concern for the resource, that is, the seal population. Since all other aspects are subservient to the existence of a healthy seal population, it follows that these aspects, important as they may be, must nevertheless not be permitted to interfere with a management system that has demonstrated a powerful capability to produce optimum benefits for all interests, primarily and notably those of the seals themselves.

The system permits the careful and deliberate control of the numbers of animals in the herd at optimum levels. No other management alternative possesses this one unalienable and essential characteristic. In fact, those other possibilities that have been considered, formally or informally, would have within them the nucleus of ultimate disaster for the seal herds and their dependent beneficiaries. For example, any regimen that would permit the resumption of pelagic sealing would lead to limitless exploitation marked by wounding and crippling, wanton wastage of unretrieved animals, and worst an indiscriminate take of the various sex and age groups that would frustrate all conservation efforts. Although the data from the experimental abstention on St. George Island

are not yet conclusive, a gradual increase in total natural morality, with all that implies in terms of increased disease, parasitism, pup deaths, and starvation, would likely occur with total abstention from rookery harvesting. It is clear that from the standpoint of the welfare of the species itself the Convention should be extended.

There are other supplemental but nevertheless extremely important benefits that will accrue from such a course. Of these, we consider the continued improvement in the lot of the Pribiloff Aleuts to be the most significant. The obvious humanitarian consequences of continuing to afford these isolated people an increasing measure of self-sufficiency and respect must be recognized.

An unrestrained seal population, were that to occur as a result of a total abstention policy, would probably lead to at least a temporary increase in consumption of fishes by a growing seal herd. This would come at a time when, by reason of an apparently unchecked human population, the world will be hard put to supply essential protein foods.

Finally, we see the fur seals not as a potential renewable resource but as a real one that has contributed to the support of government and the public both directly and indirectly. It is a resource ideally suited to make these contributions by virtue of the necessity to constrain the natural increase in the fur seal's population size.

We are perfectly aware that there are those among our citizenry who find both the method of slaughter and the idea of using living creatures for any human purpose repugnant. Considering the alternatives required to implement these ethical hypotheses and their adverse effects on the fur seals, it appears to us that the apparent remedy is more abhorrent than the questioned practices.

This letter is being written under the broad authority formally delegated to me by the Association. However, it is anticipated that a formal resolution on the subject, supporting the position espoused herein, will be considered and adopted at our 1979 annual meeting next week. A report of the relevant actions taken at that meeting will be sent to you shortly after the close of that meeting.

Sincerely yours,

John S. Gottschalk
Legislative Counsel

Response: Thank you for your comments.

The Fund for Animals

1765 P STREET N.W.
WASHINGTON D.C. 20036

TELEPHONE
(202) 234-4002

September 4, 1979

Dr. William Aron
Office of Marine Mammals and Endangered Species
NMFS
3300 Whitehaven Street N.W.
Washington, D.C.

Dear Bill,

This letter is sent in response to Sidney R. Galler's letter of July 20, 1979, inviting written comments or questions on the Interim Convention on Conservation of North Pacific Fur Seals DEIS, dated July 1979.

The Fund for Animals recommends that the Interim Convention Parties be notified prior to mid - October 1979, that the United States desires to renegotiate the present Interim Convention.

We do not agree with the DEIS concept of Alternative 2b "Renegotiate the Convention" as described on page 11 and page 32 of the DEIS. We will have detailed recommendations for developing the U.S. negotiating position on renegotiation subsequent to mid - October in the light of the DEIS hearing transcript and the nature of the notification to the Parties.

Our recommendations will be based on achieving the ultimate U.S. objective of stopping all killing by man of North Pacific Fur Seals by all countries. While we would prefer to accomplish this objective immediately, because of the policies of the other nations involved, it will probably have to be achieved on a time-phased basis, with the immediate goal of not killing the U.S. 70% share of the U.S. Pribilof Islands harvest, followed by cessation of all killing on the Pribilofs. We will support necessary Congressional action to achieve these objectives.

We appreciate the opportunity which you have provided to comment on the DEIS. We will have a number of questions to ask at the DEIS hearing on September 6, 1979.

Sincerely,

Lewis Regenstein

Lewis Regenstein
Executive Vice-President

68

The Fund for Animals

1765 P STREET N.W.
WASHINGTON D.C. 20036

TELEPHONE
(202) 234-4002

The Fund for Animals cannot emphasize too strongly the immediate halt to the killing of fur seals on the Pribilof Islands. However, if it is impossible to persuade the other countries (Japan, Russia and Canada) to negotiate an agreement, the very least that should be done is:

A. Near-term objectives: (From the present through the end of the period to be covered by the renegotiated Convention).

1. Stop all commercial killing of the U.S. 70% share of the annual kill on the Pribilof Islands (under the terms of the present convention the U.S. gets the procedes of the sale of 70% of the skins). This will save approximately 17,500 seals per year. This killing of the 70% share will be phased down as alternative sources of livelihood for the Pribilof Aleuts is phased in. All killing of the 70% is to stop within five years after the new Convention is in force. Gross profit from the sale of U.S. skins to go into Pribilof Trust Fund to be used to develop new sources of Aleut livelihood.

2. During the renegotiations for a new Convention the U.S. should propose a Convention compatible with the protection and animal welfare provision of the Marine Mammal Protection Act of 1972.

3. We will support necessary Congressional action to achieve objectives A, B and C.

B. Mid-term objectives: Stop all seal killing on the Pribilofs, except for subsistence killing under the same terms as the existing Interim Convention, (at sea, in canoes, and no firearms).

C. Long range objective: Stop all killing of North Pacific Fur Seals by all countries.

Response: Thank you for your comments.

FUND FOR ANIMALS INC.

September 6, 1979

ASSESSMENT&SUGGESTIONS FOR THE DRAFT ENVIRONMENTAL IMPACT STATEMENT ON THE INTERIM CONVENTION OF NORTH PACIFIC FUR SEALS

The Draft Environmental Impact Statement (DEIS) is weak and void of information vital in determining concrete alternatives to the Interim Convention for the protection of North Pacific Fur Seals.

In your discussion of extending the Convention you state that "The present programs of international management and research will continue which provide for consideration of the species...pelagic sealing will only be allowed for research purposes."

How much consideration was given to the species when the U.S. Government annually killed thousands of seals pelagically for some fifteen years, ending in 1975 and to this day the information collected has not been assessed! Or how much consideration is given to the species when one of your head scientists, in an interview on the Pribilofs stated "There are 120 different species of Marine Mammals - we can't all compete for fish stocks." Implying that these animals are competitors of the food chain and not an important factor of the Bering Sea ecosystem.

The Russians are critized for their wanting to harvest the 50% of baby seals considered surplus since they will be lost in the first year of life. How is our position different when nature may provide the herd with enough idle 3 and 4-year-old males to to become productive bulls if they survive natural causes of death.

The report states that if the Convention is extended "there would be no new socioecqnomic impacts on the natives."

In other words we'll continue the alcoholism and apathy on the island that are the result of an unstable future and only being able to look forward to five weeks of work a year.

I'm tired of conservation groups constantly being blamed for not considering the needs of the Aleuts when we ask that the harvest be stopped!

How much consideration was given to native Aleuts by National Marine Fisheries Service (NMFS) when the position of Seal Skin Processing Plant Manager was given to an inexperienced NMFS man - rather than an Aleut, familiar with the operation.

Or when the sealing was stopped on St. George for scientists experiments leaving higher unemployment on the island.

Or when the contract for seal meat processing was turned over to the Tanadgusix village corporation with equipment, that, to say the least, had seen better days. Not to mention a de-clining market for processed seal meat as exemplified by the dumping of one million pounds of unused seal meat into a pit in the center of St. Paul, and this program is to be the least wasteful for the fur seal?

Just as the Department of Commerce forbids the sale of hard liquor to native Aleuts and only treats the symptoms rather than the problem, we realize any ideas to move the natives from their home would only add to a lack of self-esteem and not eliminate the disease.

I hope that the native Aleuts in their striving to save their culture have analyzed just how unattractive a future hancuffed to five weeks of killing seals must look to the youth of the island who have been educated on the mainland and seen all the opportunities that our environment provides.

For these reasons I recommend a renegotiation of the Con-vention. The renegotiation should notify the Party Governments of the U.S. intention to phase out sealing as economic alternatives are developed. Alternatives include the development of a fishing industry whose cost of building would be more than outweighed by the profitable market of bottom fish. Such an optimistic cost/profit ratio does not exist in sealing. The necessary precautions can and should be taken to maintain control of the islands by the native Aleuts.

Another alternative might be an experimental one. Fishing

es we know it today is exploitive. Certainly with the resources and technology available to the NMFS and National Oceanic and Atmospheric Administration, fish "farming" could be developed on the Pribilof Islands. Fish farming is not a new idea. It has existed in China for hundreds of years. This program could provide unlimited opportunities and responsibilities to the Aleuts, young and old alike. This active role by those not able to partake in fishing because of age handicaps would allow for community involvement. This would be like the traditional Aleut ancestors whose elderly and young were given the responsibility of collecting shallow water shellfish and tundra berries. The stable future, without controversy from reactionary groups, would take the first step in curing the problem of alcoholism and ease the effects of elderly retirement.

Internationally, suggestions should be made to the Party Governments to strive for an Optimum Sustainable Population program, aligning this treaty with the Marine Mammal Protection Act, even though the possibilities of acceptance are dim.

Studies should be continued on St. George's seal population vs. St. Paul's population until the termination of the treaty. Results will hopefully show "natures" automatic game management.

Bilateral agreements, similar to the agreement between Canada and the U.S. from 1941 to 1956 could be reinstated, protecting the seals from pelagic sealing (providing the tuna industry does not hamper Canadian relations). Considering the Russian land harvest it is doubtful the USSR would allow pelagic sealing. The pressure is from Japanese and Korean fishermen. Perhaps the fish farming project which adds to the fish stock of the Bering Sea would convince the fishermen that pelagic sealing is not necessary for increased catches.

I would much rather see my tax dollars, if to be lost in the administration of a project, go to a project that looks to the future of fishing and a society rather than the past.

Thank you,

David L. MacKenney

David MacKenney

David MacKenney is a representative of the Fund for Animals, however, this statement expresses his personal opinion and not necessarily the policy of the Fund for Animals.

Response: Thank you for your comments.

Data collected by Canada and the United States from 1958-74 from research done at sea forms the basis of a report by Kajimura, et al. 1980. Please see our Literature Cited Section for complete citation.

Fur seals are predators on fish. The degree of competition with commercial fisheries remains uncertain. Please see Sec. III.D.

We have not criticized the U.S.S.R. proposal on a pup harvest on biological grounds. We oppose a pup harvest because it conflicts with the MMPA prohibition on take of animals under 8 months of age.

Please see Sec. III.E.1. for discussion of current economics of the Islands.

The development of a fishing industry for the Pribilof Islands is under active consideration by Island residents.

"Fish Farming" is not a practical suggestion for this environment.

Please see Sec. I.B.3, II.C. and IV.C. for discussions of efforts to introduce OSP.

The tentative results of the St. George experiment indicate that, at least in the short-term, cessation of harvesting results in lowered pup production, declining numbers of adult females and increased pup mortality on land.

Canadian representatives indicated that their government is under increasing pressure from fishing interests to resume pelagic sealing, and this result is likely should the treaty be terminated.

National Wildlife Federation

1412 16TH ST., N.W., WASHINGTON, D.C. 20036 202-797-6800

September 5, 1979

Dr. William Aron, Director
Office of Marine Mammals
and Endangered Species
National Marine Fisheries Service
3300 Whitehaven St., N.W.
Washington, D.C. 20235

Dear Dr. Aron:

The National Wildlife Federation is pleased to offer the following comments concerning the draft environmental impact statement on the Interim Convention on Conservation of North Pacific Fur Seals. The Federation is a conservation education organization which has always supported and encouraged the sound management of our natural resources. We are therefore concerned with all programs which affect renewable wildlife resources such as North Pacific fur seals.

After careful review and analysis of the data presented in the draft statement, we conclude that the only viable alternative is extension of the present convention. The present management strategem is responsible for restoring fur seal populations to their present level of abundance and must not be abandoned or replaced by a detrimental strategy. The present program is beneficial to all parties concerned, including the seal population.

Consider the alternatives to the present management program. Terminating the convention would not prove beneficial. On the contrary, protection outside the fishery conservation zone would be lost and pelagic sealing by other nations would be almost certain. History has clearly shown that pelagic sealing has severe impacts on the seal herds. In addition the cessation of a U.S. harvest would have serious economic and cultural impacts on Pribilof natives and the sealskin industry.

Renegotiation of the convention, while admirable in concept, would open the door to other changes which the U.S. could not accept. Examples include harvest of pups and indiscriminate take to offset perceived interference with commercial fishery operations. The possible result would be a convention without U.S. participation, but with all, or many, of the detrimental impacts of convention termination.

Detractors of the present convention cannot deny the success of present management in terms of healthy, viable seal populations at or near the carrying capacity of the habitat. Therefore their objections must be based on the fact that harvest occurs and/or the method of that harvest. The former is a basic philosophical objection which cannot be overcome with any amount of scientific data. The National Wildlife Federation does not oppose the regulated harvest of surplus individuals of a population so long as the basic brood stock is maintained in a healthy and productive condition. The present program certainly meets these criteria. The latter objection--the method of harvest--on cursory examination may seem inhumane, however several investigations over many years have demonstrated that it is not only the most practical method, but also extremely humane.

In conclusion the present fur seal management program is a model of sound, scientific wildlife management. It encompasses habitat, biological, and behavioral considerations. Its continuation will insure both a healthy seal population and the benefits which are derived from harvest of a renewable resource.

Specific portions of the draft statement could be improved or modified. These are:

p. 14, ll. 14-16. The EIS should expand this statement to extent possible with existing data. What percentage of the herd passes outside the 200 mile zone? How long do they spend in this high seas area? Would it be physically or financially possible to engage in pelagic sealing in this area?

p. 17, ll. 14-15. The phrase "near depletion" is meaningless. It should be changed to read "almost completely eradicated".

pp. 21-22. The EIS discusses the current population level of fur seals on the Pribilofs in relation to MSY. Perhaps this would be an appropriate place to discuss the relationship between the existing population level and OSP.

pp. 31-32. The section on fur seal migrations outside the U.S. fisheries zone needs to be expanded for the reasons expressed above.

p. 31. Option to terminate the Convention. The impact statement conclusions for the option assume that harvest of fur seals would be permanently prohibited under the Marine Mammal Protection Act. However, the moratorium on taking the fur seals could be waived and commercial harvest allowed if the Secretary of Commerce determined that the population was above OSP levels and the other requirements of the act were met. The EIS should discuss whether or not such a finding would be likely.

p. 34, ll. 2-3. "The United States can support such an extension if the Convention provided for management principles that advance the northern fur seal towards, or maintains it at, a level consistent with OSP." This sentence is noninformative. Does it mean that changes must be made to the Convention before the U.S. could support extension? Does it mean that regulations or programs have to be adopted before the U.S. can support an extension? Does the convention already satisfy this test?

We appreciate the opportunity to make these comments and recommendations.

Sincerely,

Michael E. Berger

MICHAEL E. BERGER Ph.D
Assistant Director
Resources Defense Division

Response: Thank you for your comments.

Please see Sec. III.B.1. and IV.B. for a discussion of the range of the fur seal and the numbers of seals at risk from pelagic sealing.

Pelagic sealing would probably be profitable as an opportunistic adjunct to the already extensive commercial fishing operations in the North Pacific.

Please see Sec. III.B.5. for a discussion of productivity and optimum levels of population.

Should the treaty be terminated, the NMFS probably would not request a waiver of the MMPA moratorium, in order to resume the commercial harvest.

We believe the Convention is consistent with the goals of the MMPA.

Department of Fish and Wildlife
OFFICE OF THE DIRECTOR
506 S.W. MILL STREET, P.O. BOX 3503, PORTLAND, OREGON 97208

September 5, 1979

Dr. William Aron, Director
Office of Marine Mammals and Endangered Species
National Marine Fisheries Service
3300 Whitehaven Street, NW
Washington, D. C. 20235

Dear Bill:

We have reviewed the draft environmental impact statement on The Interim Convention on Conservation of North Pacific Fur Seals and have the following comments.

Northern fur seals are found in Oregon waters from July to May during their annual migration between the Pribilof Islands where they breed, and southern California waters. These animals are unquestionably feeding on fish in our waters, including some salmon. Under the terms of the Marine Mammal Protection Act of 1972, all other pinnipeds that we are concerned with are completely protected. The effect these animals are having on our fishery resources is unknown, but we believe it may be significant.

The data presented in the DEIS shows that the fur seal population is at a healthy level and is being well managed by the standing scientific committee. To cease harvest would create economic hardship for native Americans as well as the 135 full-time mainland employees who process sealskins. Allowing the Convention to expire would have serious economic consequences not only for the people directly involved in the harvest but for the Federal government as well.

The Oregon Department of Fish and Wildlife strongly supports option "C" of the alternatives presented to extend the Convention. We believe that the fur seal resource is in a healthy condition and is being well managed.

Your consideration of our viewpoint is appreciated.

Sincerely,

John R. Donaldson, PhD
for Director

jkh
cc: Sidney R. Galler
Deputy Assistant Secretary for Environmental Affairs
Room 3425
U. S. Department of Commerce
Washington, D. C. 20235

Response: Thank you for your comments.

friends of animals, inc. 11 West 60th Street, New York, N.Y. 10023 • (212) 247-8120

September 6, 1979

Dr. William Aron, Director
Office of Marine Mammals and Endangered Species
National Marine Fisheries Service
Washington, D. C. 20235

Re: Fur Seal Treaty

Dear Sir,

The draft Environmental Impact Statement dated July 1979 is so out of date that it represents solely an effort to implement Parkinson's Law rather than U.S. law.

1. Your office is totally aware that the Fur Seal Treaty - the purpose of which was to eliminate the pelagic kill of seals - has been unenforced for years. I quote your 1978 report: "The incidental mortality of fur seals in the Japanese mothership salmon fishery west of 175° has been estimated to be as high as 7,000 annually (Pers. comm. Nishiwaki, 1976)." In sum, you have been giving the Japanese 15% of the U.S. kill of seals and Japan has added to this another 7,000 skins from a pelagic kill.

2. You have now effectively ended the Fur Seal Treaty by pressing for the renewal of the "International Convention for the High Seas Fisheries of the North Pacific Ocean," signed in 1978 by the United States, Canada and Japan. Under this treaty the pelagic kill of marine mammals is authorized. This treaty also permits the Japanese to fish in the vicinity of the Pribilofs from June to August, a period during which female seals in particular are in the waters around their breeding grounds. And you are busily issuing permits for the pelagic kill of northern fur seals and other marine mammals.

3. Further, it has not escaped you that the Japanese method of fishing is in violation of U.S. policy and law, including the Fur Seal Treaty, the Marine Mammal Protection Act, and the Fishery Conservation and Management Act of 1976. The Japanese utilize gillnets which U.S. policy does not permit for domestic salmon fishermen because: "Fishing for salmon on the high seas with nets is wasteful, because it does not distinguish between stocks, results in dropout, takes fish before they reach maturity, and makes domestic management more difficult. It also results in incidental mortality to fish, marine mammals, and birds." (EIS for the Renogotiation of the International Convention for the High Seas Fisheries of the North Pacific Ocean, p.ii.) There are 6 Japanese motherships with 245 catcher boats and daily the gillnets scoop up everything in the water for a distance of 2,000-2,500 statute miles per day, drowning an unknown number of marine mammals. (In 1976 the Japanese killed 14,000 Dall porpoise, 7,000 northern fur seals and untold numbers of other marine mammals in these gillnets. There is every reason to believe the number is just as high in 1979 since you signed away to the Japanese the right to continue this kill.)

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4. Your excuse for permitting this mass kill of marine mammals is a neat promotion of Parkinson's Law. Your bureaucracy will increase because the Japanese will permit your personnel aboard as observers. Beyond that your excuse is ludicrous, namely if you let the Japanese kill marine mammals in U.S. waters they may come to decrease their kill in waters over which you have no jurisdiction!

5. The U.S. can continue to permit the Japanese to fish in the vicinity of the Pribilofs - provided you establish regulations that they utilize United States domestic techniques of catch. And this would be forced upon you by passage of Mr. Lester Wolff's bill (H.R.5033) now before the Congress in that it would declare U.S. waters around the breeding grounds a sanctuary.

6. Your numbers game, aimed at showing your tremendous success in "managing" fur seals is also way out of date. You say 1.4 million seals are in the Pribilof segment of the population. We append data, using your more valid counts, to reveal that the herd has dwindled to about one-half of what you claim.

7. We suggested to you, on August 24, that you investigate the probability of "crookery in the rookery" - the illegal kill of pregnant females for private gain, a kill which results in starvation of pups. This request (appended) is based on your published figures of pup mortality which, in 1971, were more than double the norm. Poaching on the breeding grounds, coupled with the pelagic kill in which 80% are female seals, explains what your 1977 report says you cannot explain, namely the vast decrease of females and pups in the Pribilof herd.

8. Your EIS carefully avoids mentioning that in the Bering Sea Japan, the USSR and the Republic of Korea have "over-exploited" walleye pollock, yellowfin sole, Pacific ocean perch, sablefish, herring and shrimp and that all other fish are "fully exploited." (Table 3, 1978 Commision report). Instead you put forth carefully culled data to prove that seals eat fish wanted commercially for human consumption. Your June press release says that 70% of those fish are pollock. But the 1978 Commission report says 26% are walleye pollock and that "squid predominates in frequency of occurence (number of stomachs in which they are found)." Further your EIS fails to expound on this fact: walleye pollock eat, primarily, walleye pollock. Therefore, if a seal eats a pollock, a smaller pollock will be spared being eaten by another pollock. Nor does the EIS give any data on the number of fish being eaten by sharks, orca whales, stellar sea lions and other predators which normally dine on seals and which today cannot find enough seals to satisfy their appetites. In addition, you fail to point out that from 1958-1974 over 18,000 seals were taken pelagically by the U.S. and Canada in the name of "research" and their stomach contents analyzed with this conclusion: "The effects of predation on food species with economic value are impossible to assess with any degree of confidence." And, in your 1978 report, in response to the directive "What is the relationship between fur seals and other living marine resources?" you admit you do not know.

DIRECTORS: *Arnold Bernhard, Tom Bywaters, Regina Frankenberg, Alice Herrington, Jacques Lindon, Harrison D. Moos, Edward Dorson, J. Stanley Sharp*

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9. You should stop trying to preserve your bureaucracy by hiding behind the Aleuts. Your out-of-date EIS fails to point out that the 600 residents (about 100 families) on the Islands of St. Paul and St. George are now wealthy. In 1979 the courts granted them $8.5 million for past persecution by your bureaucracy and in addition they have received $4.5 million under the Alaska Native Claims Settlement Act. These U.S. citizens are not primitive aboriginies as the EIS would have the reader believe. They are English-speaking, educated, capable and in the main-stream of American life. What they need now is assistance and advice in investing their new wealth to provide year-round employment in place of the demeaning 5-weeks a year employment in killing and stripping seals. And this is provided for in Mr. Wolff's bill.

10. Your research under the Fur Seal Treaty is strictly a boon-doggle - compounded by excessive cruelty to animals. One of the most extensive is your hanging of metal tags on pups and from 1947 to 1966 you killed annually some 5,000-7,000 as a result. Nor is your mutilation of flippers and shearing of pups to be condoned. This also certainly condemns many to death, and none of this is valid nor necessary. You don't need techniques for "estimating" the fur seal population. It can be done in a door-to-door census manner, coupled with some aerial photography.

Your EIS shows no interest in the art of biology which would cause you to ponder the possibility that the fur seal may be naturally as monogamous as the hood seal. Under your science of destruction you insist males are "surplus". Yet, the harem system may be simply nature's way of compensating for centuries of man's persecution and thus she keeps this species in existence. Your St. George counts bear out such an hypothesis: As the number of males increases with the cessation of the kill on that Island, the harem of females decreases in number - from 40 to 11 in a few years' time. This indicates that mother nature and the seals function under less stress without your "managed" kill.

Conclusion: The Fur Seal Treaty, which you have already ended by issuing permits for the pelagic kill of northern fur seals incidental to fishing, should be ended by the Congress to make it official. And Congressman Lester Wolff's bill (H.R. 5033) proposes an alternative which your EIS does not mention, namely: To end the treaty; declare the seals' breeding grounds a refuge where they will be protected; designate the waters within 200 miles of the Pribilofs a marine sanctuary (thereby forcing you to eliminate Japanese gillnets); and require the Department of Commerce to aid and advise the citizens residing on the Pribilofs in finding a year-round source of employment to replace the kill of seals.

Sincerely yours,

Alice Herrington

Alice Herrington
President

Response: Thank you for your comments.

Please see Sec. III.C.3. for a discussion of incidental take of fur seals, including estimates of mortality in the Japanese gillnet fishery.

Please see our response to your letter of 8/10/79 for a discussion of your population estimating methods.

Please refer to our letters to you of September 21, 1979 and January 23, 1980 for response to your questions on pup mortality and alleged poaching on the Pribilof Islands. The increase in pup mortality on land in certain years does not indicate "poaching" of female seals, but is the result of periodic disease epidemics. Please refer to the Pathology Reports we sent you on January 23, 1980.

Please see Sec. III.D.2. and III. D.3. for a discussion of the food of fur seals. The results of stomach content analysis are variously reported as volume, weight, frequency of occurrence and index of relative importance. Please refer to Tables 10-14 and Kajimura (1980) for a complete discussion of the feeding habits of fur seals. Sec. III. D. discusses fur seal-fishery interactions.

Sec. III.E.1. discusses the economy of the Islands. We understand that the compensatory monies due the Aleut residents to which you refer, have not been paid in full as yet, but are to be pro-rated over a number of years.

Tagging of animals gives us an accurate estimate of individual animal movements and thereby allows for estimates of intermixture among populations and general migratory patterns. Please see Sec. III.B.1.

The number of adult females has declined on St. George since the cessation of the commercial harvest.

Termination of the treaty would place the fur seal under the MMPA, which would protect the seals only within our 200-mile zone.

The American Cetacean Society

New York New Jersey

P.O.Box 232
New Milford,
New Jersey
07646

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September 6, 1979

Dr. William Aron, Director
Office of Marine Mammals and Endangered Species
National Marine Fisheries Service
Washington, D.C.

The following comments are respectfully submitted to the National Marine Fisheries Service by the Amer--can Cetacean Society New York/New Jersey.

THE NATIONAL MARINE FISHERIES SERVICE IS INCORRECT IN IT'S CONTENTION THAT SECTION 108 OF THE MARINE MAMMAL PROTECTION ACT OF 1972 REQUIRES ONLY ONE EXTENSION OF THE, NORTH PACIFIC FUR SEAL CONVENT--ION.

On page 5 paragraph 3 of Section I(C) of the draft environmental impact statement on the, Interim Convent--ion on Conservation of North Pacific Fur Seals, the National Marine Fisheries Service (NMFS) paraphrases Section 108 of the Marine Mammal Protection Act of 1972 (MMPA). NMFS states that section 108(b) of the act requires the Secretary (of Commerce) to initiate negot--iations to modify the Convention to bring it into accord with the principles of the MMPA. If such modifi--cation negotiations fail then section 108 requires the Secretary to secure the extension of the existing Convention beyond its then-existing termination date of October 14, 1976. The NMFS then states that after unsuccessful negotiations followed by an extension of the Convention, the law gives no specific guidance as to future renegotiations and extentions of the Convén--tion.

In light of the actual wording and purpose of sec--tion 108 (b) of the MMPA, the NMFS statement that the MMPA gives no specific guidance as to future Convention extensions is incorrect. Section 108 (b)(2) of the MMPA states that if negotiations to modify the Convention are unsuccessful, then, "the Secretary shall, through the Secretary of State, take such steps as may be nec--essary to continue the existing Convention beyond its present termination date so as to continue to protect and conserve the North Pacific fur seal and to prevent a return to pelagic sealing." The act uses the word, "continue," not, "extend". The act also states that the purpose of this continuation is to maintain the protection and conservation of the North Pacific fur seals, and prevent the return of pelagic sealing of these seals. Therefore, it would seem reasonable that so long as the Convention can not be successfully modified, and the existing Convention protects and conserves fur seals, while preventing a return to pelagic sealing, then the existing Convention must continue. The DEIS does not give the impression that the Convention is ineffective in protecting the North Pacific fur seals, and the DEIS

does state that with the termination of the Convention, "Japan, Taiwan, and others may be expected to initiate pelagic sealing," (page 32, paragraph 2). Because the need for the Convention is still present, the United States is legally bound to seek the Convention's cont--inuation in modified or present form.

THE UNITED STATES IS LEGALLY OBLIGATED TO RENEGOTIATE THE NORTH PACIFIC FUR SEAL CONVEN--TION, AND TO TRY TO AMEND THE CONVENTION TO BE CONSISTENT WITH THE PRINCIPLES OF THE MARINE MAMMAL PROTECTION ACT OF 1972. IF SUCH RENEGOT--IATIONS ARE UNSUCCESSFUL, THEN THE UNITED STATES IS LEGALLY OBLIGATED TO SEEK THE CONTIN--UATION OF THE EXISTING CONVENTION.

The preceding discussion makes it clear that the termination of the North Pacific Fur Seal Convention (presently titled," Interim Convention on Conservation of North Pacific Fur Seals) would be in violation of the Marine Mammal Protection Act, thus making the term--ination of the Convention a nonviable alternative action.

Section 108 (a)(4) of the MMPA requires the Sec--retary to seek the amending of any existing internat--ional treaty which protects and conserves marine mam--mals, and to which the United States is a party. Such amending is to make the treaty consistent with the principles of the MMPA. As stated before, Section 108 (b) of the act specifically requires the Secretary to seek the amending of the North Pacific Fur Seal Conv--ention to make it consistent with the MMPA. Therefore, to continue the Convention without attempting to ren--egotiate it inorder to make it consistent with the principles of the MMPA would be in violation of section 108 of the MMPA.

Respectfully submitted,

Herbert F. Yellin

Herbert F. Yellin
President
American Cetacean Society
New York/New Jersey
Chapter

Response: Thank you for your comments.

We believe that an extension of the treaty is necessary in order to "continue to protect and conserve the northern fur seal and to prevent a return to pelagic sealing." (Sec. 108(b)(2) of the MMPA.)

Please see Sec. II.C. for a report of recent discussions with Party Governments on OSP.

Wildlife Management Institute

709 Wire Building, 1000 Vermont Ave., N.W., Washington, D.C. 20005 • 202/347-1774

DANIEL A. POOLE
President
T. R. JAHN
Vice President
T. L. WILLIAMSON
Secretary
JACK S. PARKER
Board Chairman

September 7, 1979

Dr. William Aron, Director
Office of Marine Mammals
and Endangered Species
National Marine Fisheries Service
3300 Whitehaven Street, NW
Washington, D.C. 20235

Dear Dr. Aron:

The alternatives outlined in the draft environmental impact statement on "The Interior Convention of North Pacific Fur Seals" have been examined.

It would not be in the best interests of the northern fur seals to terminate the convention at this time. Pelagic sealing should not be encouraged or permitted.

It definitely seems best to extend the convention and assure sound management of the animals on a sustained basis. Simultaneously, and with a bit more time for consideration and negotiation, management ultimately should incorporate the concept of optimum sustainable population.

Actions taken along these lines would be in the best interests of the fur seals, the parties to the Convention, and the native peoples involved.

Sincerely,

Daniel A. Poole

Daniel A. Poole
President

DAP:lbb

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Response: Thank you for your comments.

NORTH PACIFIC FUR SEAL COMMISSION

C/O NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL MARINE FISHERIES SERVICE
WASHINGTON, D C 20235 U S A

September 7, 1979

Dr. William Aron, Director
Office of Marine Mammals and
Endangered Species
National Marine Fisheries Service
3300 Whitehaven St., N.W.
Washington, D. C. 20235

Dear Sir:

As one who has been closely associated with the Pribilof Islands fur seal program for forty-five years, I welcome this opportunity to offer a few comments on the draft environmental impact statement of the National Marine Fisheries Service on "The Interim Convention of North Pacific Fur Seals".

As an employee of the Bureau of Fisheries, Department of Commerce, in 1934, I was concerned with the procurement of supplies in Seattle, Washington, for shipment to the Government operated fur seal industry on the Pribilof Islands. In 1949 I designed and implemented the first wage payment plan for the Pribilof Aleut workmen in the fur seal industry. From 1957 to 1968 I had staff responsibility for the Pribilof Islands fur seal program, and at the same time served as the U.S. representative on the North Pacific Fur Seal Commission. During the past nine years I have served as the Executive Secretary for that Commission, and continue at present in that capacity.

Reduced to basics, it appears to me that the question posed by the environmental impact statement is whether or not the international management and research programs for North Pacific fur seal resources, and the rational harvest of sealskins on the Pribilof Islands shall be terminated after nearly seventy years. Until very recent years these programs have been considered highly successful, by every yardstick that might be applied. I believe that the well being of the fur seal herds and the welfare of the Aleut residents of the Pribilof Islands requires that the Convention and the fur seal industry be continued.

The paramount advantage of the Interim Convention is that it prohibits commercial pelagic sealing. In the absence of this international agreement there is every reason to believe that the Japanese, and perhaps others, will resume pelagic sealing on a wide scale. Despite the general recognition of the 200 mile coastal fishing zone, it appears

inevitable that the resumption of pelagic sealing in the western North Pacific will again decimate fur seal populations in that area, and at the same time adversely affect the Pribilof Islands herd. Before the United States moves in the direction of terminating the Convention this problem should be resolved.

In the same manner, before the harvesting of sealskins on the Pribilof Islands is discontinued the welfare of the resident Aleuts should be very carefully considered. In this regard, I am distressed by the type of thinking reflected in H.R.5033 (Sec. 302), introduced by Congressman Wolff, which seems to advocate endless financial assistance for the Pribilof Islands natives and their children and children's children. I have serious doubts as well concerning proposals for a small boat harbor and native fishing industry for the Aleuts of St. Paul Island. It seems to me that thought should be given to placing responsibility for the harvesting of sealskins - and the profits thereof - in the hands of the Pribilof Aleuts, with harvest limits fixed by the Federal Government, and with research only financed by the Government. In this way an effective limit would be placed on the size of the Aleut communities on the Islands, commensurate with the economic potential of those Islands.

All things considered, within the limits of information available to me, I strongly recommend that the Interim Convention be extended and that the rational use of the Pribilof Islands fur seal resource be continued.

Sincerely yours,

R. C. Baker

Ralph C. Baker
Secretary

Copy to Commissioner Blondin

Response: Thank you for your comments.

157 East 18th Street
New York, N. Y. 10003

September 9, 1979

Dr. William Aron
Director, Office of Marine Mammals and
Endangered Species
National Marine Fisheries Service
Washington, D. C. 20235

Dear Dr. Aron:

I am writing to urge that the International Convention on Conservation of North Pacific Fur Seals be continued in its present form, in the best interests of both the Alaskan fur seal -- which is not an endangered species -- and the Aleut residents of the Pribilof Islands of Alaska.

Sincerely,

Jack Taylor

Response: Thank you for your comments

R. D. #3, Pond Brook Road
Newtown, Connecticut 06470

September 9, 1979.

Dr. William Aron, Director
Office of Marine Mammals and Endangered Species
National Marine Fisheries Service
Washington, D. C. 20235

Dear Dr. Aron:

I am disturbed to learn that the Department of Commerce is thinking of terminating the treaty for the conservation of the Pacific fur seal. A friend, Mrs. Charlotte Pinkel, has just returned from the Pribiloffs and also from the meeting you chaired last week in Washington, where she also spoke on behalf of the seals.

I am the oldest grandchild of Henry Wood Elliott who spent much of his life fighting to get treaty protection of the seals. As a child I remember his elation when the treaty with Japan and Russia was finally signed and his beloved seals had a breathing space in which to repopulate from the previous wholesale slaughter in the ocean as well as on land.

I sincerely hope that the convention will be extended, not only to protect the seals, but also the life style of the Aleuts, who, under various governments have been badly treated.

Incidentally I belong to the Audubon Society, Florida Wild Life, and Natural History Museum of New York.

Very truly yours,

Dorothy D. DeGraff

(Mrs. Arthur C. DeGraff)

Response: Thank you for your comments.

Alexandra D. Schultze Pond Brook Rd., R. F. D. 3 Newtown, Conn. 06470

September 11 1979

Dr. William Aron, Director
Office of Marine Mammals and Endangered Species
National Marine Fisheries Service
Washington D.C. 20235

Dear Dr. Aron:

As a granddaughter of Henry Wood Elliott, I have realized since childhood that the fur seal treaty has been the salvation of the fur seal herd; and unless the treaty is now extended, pelagic sealing will again decimate the herd, soon the fur seal will be an extinct mammal; and the plight of the Aleut will be pitiful.

I urge you to use what power you have in behalf of the extension of the present treaty.

Sincerely yours

Alexandra D. Schultze

Response; Thank you for your comments.

4100 W Street, N.W.
Washington, D.C. 20007

September 8, 1979

Dr. William Aron, Director
Office of Marine Mammals and Endangered Species
National Marine Fisheries Service
Washington, D. C. 20235

Dear Dr. Aron:

It is not possible that a large, informed, and vocal electorate will develop an interest in all of the issues decided by our government. The pending decision of the North Pacific Fur Seal Commission regarding the extension of the four nation treaty is one of these obscure problems where lack of public interest should not influence the outcome. Rather, common sense, an understanding of the success of past management, recommendations by truly involved and knowledgeable parties of different categories should be the basis for making the final federal decision.

I have given thought to the history of the Pribilof Islands fur seal herd and that of the Aleuts whose lives are directly involved. I urge extending the Convention which will mean the continuation of the past management principles both by our government and that of the other international parties.

Yours very truly,

Marjorie McPhillamey

Mrs. Robert H. McPhillamey

Response: Thank you for your comments.

ANIMAL
PROTECTION
INSTITUTE
OF AMERICA

5214 South Land Park Drive
P.O. Box 22505
Sacramento, CA 95822
(916) 422 1921

September 10, 1979

Dr. William Aron, Director
Office of Marine Mammals
and Endangered Species
National Marine Fisheries Service
3300 Whitehaven Street, N.W.
Washington, D.C. 20235

Dear Dr. Aron:

Thank you very much for your letter of September 5th, and the accompanying Draft Environmental Impact Statement on the Interim Convention on Conservation of North Pacific Fur Seals. Since we only received this copy of the DEIS today, we hope you will consider our comments on this document despite the apparent September 10th deadline.

As you may know, API strongly opposes the federal government's participation in the annual clubbing of bachelor fur seals. We firmly believe that this subsidy of clubbing activities is grossly inconsistent with many U.S. policies, especially the clear expression of Congressional intent against the somewhat similar Canadian clubbing of harp seals. With this in mind, we favor a "hybrid" Alternative "b" as set forth in the DEIS. In other words, our first preference would be to renegotiate the Convention with the goal of reaching a consensus by all signatory parties that no further seal killing should occur. If this attempt should fail, the U.S. should pursue Alternative "a" by terminating the Convention. Under this approach, the U.S. should make every effort to provide maximum protection for the seals both in the Pribilofs and elsewhere within U.S. jurisdiction.

Thank you very much for considering our views.

FOR THE ANIMAL PROTECTION INSTITUTE OF AMERICA

Most sincerely,

Belton P. Mouras

Belton P. Mouras
President

BPM/rbc

Response: Thank you for your comments.

Please see Sec. II. B. and Sec. IV.B. for a discussion of the termination option.

North Pacific Fishery Management Council

Clement V. Tillion, Chairman
Jim H. Branson, Executive Director

Suite 32, 333 West 4th Avenue
Post Office Mall Building

Mailing Address: P.O. Box 313601
Anchorage, Alaska 99510

Telephone: (907) 274 4563
FTS 265 5435

September 11, 1979

Dr. William Aron, Director
Office of Marine Mammals
National Marine Fisheries Service
3300 Whitehaven Street, Page #2
Washington, D.C. 20235

Dear Bill:

The North Pacific Fishery Council reviewed the Environmental Impact Statement on the Interim Convention on Conservation of North Pacific Fur Seals at its meeting on August 23 and 24, 1979 in Anchorage. I testified on their behalf at the public hearing on the DEIS in Anchorage on August 27, and am sending you this summary of the Council's comments on the EIS for inclusion in the record.

Of the three alternatives offered in the EIS, (A) Terminate the Convention, (B) Renegotiate the Convention, and (C) Extend the Convention, the Council believes that Alternative C, extending the Convention, is by far the most desirable. Termination or renegotiation would, as is pointed out in the EIS, remove the economic base for the community of St. Paul by terminating the harvest of Northern Fur Seals. There is no evidence presented to indicate that population levels are such that harvest should be terminated. In fact, there is evidence in the EIS that indicates the harvest could be increased substantially, perhaps to the general improvement of the health and well being of the fur seal population. Either of the first two Alternatives could lead to a resumption of pelagic sealing, which I think we all agree would be much more detrimental to the general fur seal population than the carefully controlled humane harvest now conducted.

In addition to the (1) potential adverse impacts to the St. Paul community, (2) the possible resumption of pelagic sealing, and (3) probable drastic fluctuations in northern fur seal populations as they attempt to seek their own level under nature, there's a fourth consideration that the Council considers very important: that is the continuation of the current research programs on northern fur seals.

We need greatly increased research on fur seals and the other marine mammals inhabiting the Bering Sea, particularly on their interaction with the other animal communities and the way they are all impacted by man's activities in the area.

The Council is just beginning to work with the Marine Mammal Commission to develop additional data that will enable us to move closer to ecosystem management of the complex animal communities in the Bering Sea and the Gulf of Alaska. While it is obvious that there is a relationship between northern fur seals and fisheries in the Bering Sea, that relationship is ill defined and poorly known at this time. Future ecosystem management, if at all possible, will necessitate the ability to manage the various elements of that system in consideration of the whole. To lock ourself out of the possibility for management of one of the larger segments of the system would be a great handicap.

In summary, the Council recommends extending the Convention with a continued harvest of Northern Fur Seals and increased emphasis on research to define the role of the Northern Fur Seal in the ecosystem of the Bering Sea and Gulf of Alaska. In addition, they believe that it appears feasible to increase the harvest to carry the full costs of administration and make the operation self-sustaining. In no case, of course, should the harvest be increased to the point where the overall health and viability of the fur seal population is harmed.

Thank you for the opportunity to comment on the draft Environmental Impact Statement. We look forward to working with you in developing some of the answers to the very complex questions involved in the interaction between the Fisheries Conservation and Management Act of 1976 and the Marine Mammal Protection Act.

Sincerely,

Jim H. Branson
Executive Director

Response: Thank you for your comments.

THE AMERICAN CETACEAN SOCIETY

NATIONAL HEADQUARTERS

P. O. Box 4416
San Pedro, Ca. 90731
(213) 548-6279

COMMENTS ON THE DRAFT EIS FOR THE INTERIM CONVENTION ON THE CONSERVATION OF THE NORTH PACIFIC FUR SEALS

The following comments are respectfully submitted by the American Cetacean Society (ACS), a national, non-profit organization whose major goal since 1967 has been the protection of marine mammals. We strongly support the position that the US should renegotiate or modify the current Convention to ensure its congruence with the intentions of the Marine Mammal Protection Act of 1972 by making its primary objective one of maintaining the optimum sustainable population rather than one of maximum sustained yield. We can support this position only on the assumption that the U.S. is in a strong bargaining position. If it is felt, by the negotiator, that the Treaty's effectiveness as far as a tool for seal conservation would be placed in jeopardy by a complete renegotiation, we would support a continuance of the existing Convention rather than a termination altogether. We question, however, whether Congress can extend such a treaty indefinitely.

We realize that the determination of what the U.S. might expect to receive as far as support or opposition in an entirely new treaty is beyond our scope of investigation. Therefore, we should state that our primary concern is for the welfare of the entire fur seal population and that we do not in any way wish to see management deviate from sound practices.

More knowledge needs to be obtained concerning the differences in impact between management programs based on optimum sustainable population (OSP) limited by the ecosystem's carrying capacity and the present program predicated on maximum sustainable productivity. It may prove that there is minimal impact difference and that the risks of negotiating for a system based on OSP would not be justified. We would hope to see a broad analysis of the impact differences between the two management systems discussed in the Final Impact Statement.

After reviewing the Draft Environmental Impact Statement, the American Cetatean Society feels it necessary to make the following comments, and in addition to the above, make further comment and rationale for our above recommendations.

The American Cetacean Society cannot condone the use of fur as a luxury clothing item and we would like to see a reduced market for furs in general. We are hopeful that human consciousness will focus on this issue at the consumer level and that people will reject furs as simply the useless slaughter of intelligent, functional animals for a non-intelligent, non-functional fashion usage. Reducing demand by changing public opinion seems a wiser course of action, as it should avoid the dangers of poaching, pelagic hunting, black marketeering, etc., that may occur through artificial constraints on trade of a relatively abundant resource such as the fur seal. Phasing out the industry slowly would also minimize the impact on the Aleuts involved in the fur seal business.

We do recommend an additional subject be added to the Convention's areas of required research, Article II, Section 2, if the Convention is indeed extended. Further studies should again be undertaken to determine the most humane method of kill of these intelligent animals. This is consistent with the Convention's intention that the fur seals be spared pain and suffering to the greatest possible extent practicable (Article IX, Section 3). If it is found that the current method is, in fact, the most humane, then adequate communication of that fact should be made to the general public.

We advocate that pelagic sealing, except that already provided for under the Fur Seal Act relevant to subsistance and scientific data collection, not be permitted to enter the Convention. Pelagic sealing presents a great risk to the fur seals both from a humane killing standpoint and a population standpoint. At sea there exists a struck/loss factor not present on shore. It is difficult, at best, to determine the sex (age) of the animals at sea. One NMFS administrator estimates that pelagic sealing would result in about an 80% female kill ratio. There is also a preponderance of pregnant females in the migratory groups. Additionally, a host of enforcement problems are introduced which could only increase management costs.

Furthermore, no form of pup harvest, despite a high first year mortality, should be permitted. The American public is growing increasingly aware of worldwide seal hunting operations and already opposes one type of seal pup harvest. Existing methods involved in harvesting the immature male fur seals currently need justification as awareness increases. This increased awareness can only create problems if a pup harvest is allowed. In terms of maintaining the population, it is questionable whether a pup harvest would offer a greater risk to the overall management scheme.

It is essential that impact on other fur bearing animals, particularly other species of fur seal, be assessed for the United States to consider foregoing its share of the harvest. The economic impact on the Fou ke Company, the fur processor, would be adverse and the loss of receipts to the Pribilof Island Fund would mean a loss of approximately $1.3 million which goes primarily to support the people of the Pribilofs.

Also, the absence in the present system of limited welfare-type support of the Pribilof Aleuts provides a dis-incentive to an unregulated system in which the Aleuts could harvest and market the furs themselves. (This system seems to provide further justification for the extension of the Treaty. However, further analysis of this question needs to be provided in the final EIS. Is federal regulation of the fur seal trade the most feasible in order to minimize social and economic impacts to the Aleuts and the fur industry?)

The draft EIS fails to explain the degree of variation in price paid per pelt from year to year. There has been a generally consistent total receipt payment (see Table #17, DEIS) despite large variations in the number of seals harvested. To illustrate the point: In 1960, 40,639 seals were harvested. Receipts totaled $3,220,405. The price per pelt equaled $113.20 for the U.S. 70% share of pelts (40,639 x 70% = 28,447.3, $3,220,405 ÷ 28,447.3 = 113.20). The following year for over 88,000 pelts the price was just over $32.00 per pelt. What is the governing economic principle? Does a larger quantity lower the price? If so, a lower harvest which provided equivalent funds might actually result in increased profits. Is the price actually determined at auction or does the Fou ke Company dictate the price? Can the Fou ke Company pass on higher prices without driving away its market? If the demand for Pribilof seal furs went down would the demand for other more endangered animals' fur go up, e.g. South African fur seal? We feel an analysis of the economics of the fur seal trade should be covered in the final EIS. In particular, we want to see a breakdown of the flow of all related monies involved. This information is critical to understanding the entire issue. Are the taxpayers actually subsidizing the fur seal kill and harvest, or are they merely providing support to the Pribilof Aleuts that would be provided even if seal hunting didn't exist on the islands?

The final EIS should address the issue of what will happen to the Aleut population if the fur seal industry is phased out. What social and economic impacts would the Aleuts face? Would aboriginal sealing increase? Would the Federal government respond with subsidies to encourage fishing or other productive pursuits, or would they simply hand out welfare or unemployment checks? There must be long term plans for a potentially displaced Aleut population.

With only the present information available, ACS cannot advocate the termination of the Convention. We see no evidence that the seal population would be sufficiently protected through use of the 200 mile Fishery Conservation Management Zone. Since the present international management and research program has provided smooth international cooperation and has been a source of a large amount of baseline marine mammal research data, its termination would represent a great loss. With no management program there is no

assurance the Pribilof herd would increase or even stabilize, as the St. George study has shown so far. A high percentage of the Pribilof female seals migrate annually through Canadian waters and up to 20% may migrate to or through Soviet or Japanese waters. Termination of the Convention would probably encourage Japan, Canada, and probably others to engage in pelagic sealing as it would become another source of furs.

Although riskier, the renegotiation of the Convention would provide the U.S. with an opportunity to introduce language consistent with the MMPA which is not presently in the Convention. In particular, the United State could negotiate for the inclusion of optimum sustainable population. As pointed out in the DEIS, the U.S. may not have success in getting the other parties to accept this concept. Should this reluctance be exhibited again at the time of renegotiation or extension, we feel the United States' most prudent position would be to extend the Convention and seek more information on the issue of OSP.

These, then, are the further studies or statements that should appear in the Final Environmental Impact Statement:

1) An analysis comparing impact differences between an international management system based on OSP and one based on MSY.

2) An analysis of the governmental role as regulator and benefactor of the Pribilof Aleut population, both in the presence and absence of the Fur Seal Convention.

3) A detailed presentation of the economics in the fur seal trade, i.e., pricing methods, cash flow, supply and demand effects on the fur market.

4) Environmental impact on other fur-bearing animals worldwide in response to a decrease in fur seal pelts. This should include both directly related animals e.g. South African fur seals, as well as indirectly related fur-bearers such as leopard, fox, etc.

5) An analysis of the U.S. ability to regulate the fur seal take, or lack of, within its 200 mile fishery zone through direct physical enforcement and/or other sanctions which could be applied to cooperating or violating countries.

6) Long term plans for a potentially displaced Aleut population (as well as a potentially displaced population of NMFS personnel, scientists, and Fou ke fur company employees).

The American Cetacean Society strongly supports H.R. 5033, and urges the Congress to adopt this legislation. Provisions in the bill would serve to protect both the fur seals and the life-style and livelihood of the Aleuts. Even without a complete ban on commercial seal harvesting, the U.S. should continue its research programs, further investigation of humane methods of killing, exchange of information with the other interested nations, delineation of quotas, and development of enforcement/observer programs.

We are extremely interested in the possibility of renegotiating the Treaty without U.S. participation in the harvest. The U.S. position in the International Whaling Commission might serve as a prototype for this situation also. That is, the U.S. could continue its research programs and input, as well as participate in the determination of quotas and humane killing methods. In this regard, we are aware of the potential, as described in the DEIS, that the other parties to the Treaty might express dissatisfaction with the 30% reduction in seal pelts. Japan, at least, has advocated a return to pelagic sealing on the grounds that excessive seal populations were damaging fisheries.

Fur seals are thought to consume approximately 15 percent of the current commercial pollack catch. Recent reductions in stock size failed to decrease pup mortality. It is suspected that changes in species composition and reduction of the stock size of food sources due to extensive commercial fishing were responsible for the increase in pup mortality. Causation for this was attributed to extra time and energy expended by nursing females in search of food. However, availability of food is only one aspect of survival. No conclusion can yet be reached about what the sizes of the seal or fish populations would be as a result of increased harvesting of one or the other. Research to document this relationship is essential before pelagic sealing could be renewed.

In addition, it is known that the size and yield of the Pribilof harvest of fur seals have fluctuated greatly even though the industry is long established. The populations encompass many reproductive age classes and changes in population size and vital rates are inevitably slow. Thus a harvesting regime that is concerned with only a specific age class cannot rapidly reduce species abundance. Fur seals, due to their land breeding and population structure, are well suited to both extensive long-term population studies and well-designed management strategies. Such studies should include investigations of reproductive rates, including changes over time associated with various levels of exploitation, natural mortality rates, and the potential effects of pelagic sealing on the selective nature of the migrating seal groups.

There are certain issues related to the possible renegotiation of the Treaty with termination of U.S. harvest of fur seals which we would

like to see addressed further in the FEIS. Information has been publicized concerning extremely high levels of mercury contained in seal meat consumed by the Aleuts. Documentation of this contamination, its levels and sources, needs to be done. This issue relates directly to subsistence activities of the Eskimos, as well as to the commercial seal harvest, particularly pelagic sealing by Japan.

The decline in numbers of pups born on St. George Island, and its possible relation to commercial fisheries activities, should be considered further. Any such changes in population abundance and density would bear directly on the question of pelagic sealing.

The DEIS does not include a discussion of possible pelagic sealing activities which might be undertaken by the other Treaty parties. There are numerous aspects of this contingency which must be considered, especially its economic feasibility. The method and times of harvest, pelt usability, and control of kill are important areas for discussion. It would seem that the present level of harvest would not be sufficient to render a return to pelagic sealing economical. What increase, if any, in number of pelts taken would be necessary to balance the costs of a pelagic harvest? ACS is also concerned about the accuracy of sex and age identification of fur seals in the water, and what impact problems with identifiability would have on the seal populations.

The ACS believes that the fur seal populations can be better protected under the management procedures of an international treaty, even without any seal harvest or related activities by U.S. citizens. The sanctions contained in the Pelly Amendment and the newly-enacted Packwood-Magnuson Amendment are operable only if a conservation/management agreement exists. The protection afforded by these two laws, in addition to the 200 mile U.S. exclusive economic zone, could prove adequate for dissuading other nations from returning to pelagic hunting of fur seals.

Response: Thank you for your comments.

Please see Sec. III.B.5. for a discussion of OSP and current population status, also Sec. II.C. and IV.C. for impacts of renegotiation.

Humane harvesting practices were a major subject of discussion at the 23rd annual meeting of the North Pacific Fur Seal Commission in April 1980. Both the U.S. and the U.S.S.R. presented reports of research on this topic. We believe current methods are the most humane possible.

The price per pelt at public auction is not uniform, but varies according to the quality of the skin. Please see Sec. III.E.3. for a discussion of the economics of the trade and Table 19 for a detailed budget of our Pribilof Island Program.

Please see Sec. II.B., III E.1., and IV.B. for discussion of economic impacts of an end to the harvest.

Under terms of the MMPA, the U.S. can fully protect the fur seal only within our 200-mile zone.

Since we do not intend to "displace" the residents of the islands, no long terms plans for this possibility are required.

American Museum of Natural History

September 11, 1979

Dr. William Aron, Director
Office of Marine Mammals and Endangered Species
National Marine Fisheries Service
Washington, D.C. 20235

Dear Dr. Aron:

I am writing to you to express my concern at the uncertain future status of the North Pacific Fur Seal Convention -- and therefore of the fur seal industry in the Pribilof Islands of Alaska.

For the past four years, as a zoologist on the staff of this Museum, I have led the Museum's wildlife field study tour to Alaska, and each year have visited the island of St. Paul. As a result I have made some good friends among the Aleut people there, and have developed a very keen interest in their welfare, as well as in that of the fur seals.

I am sure you are familiar with the long-term research which has been carried out on the fur seals, and certainly you have a far greater knowledge than myself regarding the significance of the North Pacific Fur Seal Convention of 1957, and the Fur Seal Act of 1966. It seems to me that anything other than an extension of this legislation would have two almost inevitable results:

1. A return to pelagic sealing by other nations, with consequent great wastage, and a decimation of the carefully rebuilt herds.
2. A drastic impact on the lives of the Aleut people of St. Paul, for most of whom the only earned income derives from the brief period during which the fur seals are harvested.

As a person with a great feeling of respect toward all wildlife, I deplore the fact that there has to be an annual killing of young fur seal bulls, but as a professional zoologist I realize that, ecologically, such culling makes very good sense in maintaining the well-being of the species as a whole. The efforts of some wildlife organizations to undermine the wise provisions of the Fur Seal Convention are doubtless well-intentioned, but they display a lamentable lack of understanding regarding the long term effects of any changes in the status quo. The Russians and the Japanese would certainly welcome any opportunity to exploit such changes in the Convention (let alone its complete termination!) and another fine marine mammal would almost certainly join the ranks of endangered species.

Central Park West at 79th Street New York, New York 10024 Telephone (212) 873-1300

The Aleut people of St. Paul and St. George have suffered greatly from past federal mismanagement of their affairs. Now, finally, they are just beginning to find themselves. They are proud people, and do not welcome governmental hand-outs. They deserve better than to have their primary source of livelihood taken from them, especially when its only effect on the fur seals is to help to maintain them as a viable species.

The handling, by the United States, of the fur seal herds has been an outstanding example of wise, successful wildlife management. I hope you will strive to withstand the pressure now being brought upon you to terminate or renegotiate the Convention. I urge you and the Fur Seal Commission to extend the Convention as it now stands, when it comes up for renewal. Any change can have only adverse effects on both fur seals and the Aleut people of the Pribilofs.

Sincerely yours,

Kenneth A. Chambers

Kenneth A. Chambers
Lecturer in Zoology

N.B. These are my personal views. They do not necessarily represent those of the American Museum of Natural History.

K.A.C.

Response: Thank you for your comments.

MARINE MAMMAL COMMISSION
1625 EYE STREET, N. W.
WASHINGTON, DC 20006

12 September 1979

Dr. William Aron (F-6)
Director, Office of Marine Mammals
and Endangered Species
National Marine Fisheries Service
NOAA/DOC - Page Building 2
Washington, D.C. 20235

Dear Bill:

The Marine Mammal Commission, in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the Draft Environmental Impact Statement (DEIS) on the Interim Convention on Conservation of North Pacific Fur Seals. I attach our comments on the DEIS and suggestions as to how it might be improved, and I hope that these prove helpful.

If you have any questions concerning the comments or suggestions, please let me know.

Sincerely,

John R. Twiss, Jr.
Executive Director

Enclosure

MARINE MAMMAL COMMISSION
1625 EYE STREET, N. W.
WASHINGTON, DC 20006

COMMENTS AND SUGGESTIONS CONCERNING
THE DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)
ON THE INTERIM CONVENTION ON THE
CONSERVATION OF NORTH PACIFIC FUR SEALS

The purpose of this DEIS is to identify and describe the possible consequences of alternative actions that the U.S. might take with respect to the Interim Convention on Conservation of North Pacific Fur Seals. As such, the draft needs to be expanded to: broaden consideration of possible options and the possible consequences thereof; discuss the present status of the fur seal population in more detail; address the possible impact of past, present, and future fishery development in the North Pacific on the fur seal population; and describe how the various alternatives might be expected to effect the size of the fur seal population. To provide the basis for identifying the most appropriate option, the Final Environmental Impact Statement (FEIS) should identify the pros and cons of each option with respect to: (1) the size of the fur seal population; (2) the stability and productivity of the Bering Sea ecosystem; (3) the well-being of the Pribilof Island natives; and (4) U.S. efforts, in general, to protect and conserve marine mammals and other living resources in the Bering Sea and elsewhere.

SPECIFIC COMMENTS AND SUGGESTIONS

The following discussions indicate some of the specific deficiencies in the DEIS and how they might be corrected.

1. Additional Alternatives or Options

The DEIS lists and discusses three alternatives or options with regard to the Interim Convention on Conservation of North Pacific Fur Seals: (1) terminate the Convention; (2) renegotiate the Convention; and (3) extend the Convention. It also mentions one of several possible variations in option 2 -- i.e., the U.S. could remain a signatory to a renegotiated Convention but forego harvesting its share of the annual allowable take.

There are a number of additional variations of the basic options listed that could and, perhaps, should be considered. As an example, the present Convention could be extended with a view toward renegotiation or termination at a later date. Among other things, this variation would provide additional time to search for alternative employment for the St. Paul natives and to undertake a more in-depth analysis of the pros and cons of the possible options.

This variation and, perhaps, others should be considered in the Final Environmental Impact Statement (FEIS).

2. Population Status and Carrying Capacity

The DEIS notes the intent and relevant provisions of the Marine Mammal Protection Act (p. 5). It also presents the Service's published definition of optimum sustainable populations (OSP) and notes (p. 22) that the fur seal carrying capacity of the North Pacific Ocean, especially the Bering Sea, may be considerably less at the present time than it was in the 1950's. The DEIS does not identify present population status with respect to the published OSP definition, or how each of the alternative actions can be expected to affect population size. Neither does it identify how much the fur seal carrying capacity may have been reduced since the 1950's, or how the possible reduction in carrying capacity could or should be factored into the decision-making process.

The FEIS should include an analysis of data and findings relative to the Service's published OSP definition and, as possible, a determination as to how fishery development in the North Pacific Ocean, especially the Bering Sea, may have affected, or be affecting, the size of the fur seal population. As possible, the FEIS also should indicate how continued fishery development and each of the alternative actions, including the additional one noted earlier, could be expected to affect the size of the fur seal population.

3. Fisheries and Food Consumed by Northern Fur Seals

Information concerning fishery development and the kinds and amount of fish eaten by fur seals is presented in several tables and the text of the DEIS. While this information is relevant, it has not been analyzed fully. As suggested above, for example, the fishery data summarized in Section D

should be compared to the fur seal population data to determine, as possible, how fishery development may be affecting the size of the fur seal population. Since the fur seal competes with fishermen for many of the same fish resources, available data also should be analyzed to identify the difference in total fur seal food consumption, if any, that might be realized given the fur seal population size that would be expected to result from each of the possible alternative actions.

It may be that the available options would result in little or no difference in the size of the fur seal population or the amount of food consumed by fur seals. Consequently, the effect of the available options on total population size, and hence food consumption, should be examined carefully. Additionally, the FEIS should indicate the number, ages, and sexes of fur seals taken incidentally during the course of commercial fishing operations, and how this incidental take might be affecting population size.

4. Possible Impact on U.S. Efforts to Protect and Conserve Other Marine Mammal Species

The U.S.' position and action relative to the fur seal convention could affect efforts to protect and conserve other marine mammals and marine living resources. As examples, the U.S. position with respect to the fur seal could influence other nations' positions, and U.S.' efforts, relative to the International Whaling Convention, the Canadian/Norwegian harp seal harvest, the negotiation of an Arctic ice seal convention, and/or other international marine mammal conservation efforts or initiatives.

The possible effects of the alternative actions on other marine mammal conservation efforts should be identified and examined in the FEIS to help determine the most appropriate course of action with regard to the interim fur seal convention.

5. History of the Convention

The DEIS notes (p. 6) that the U.S. attempted to renegotiate the interim fur seal convention in 1975 and that, during that renegotiation, the U.S. delegation submitted a working paper on the OSP concept. It would be desirable to append the working paper to the FEIS and to include an assessment as to whether the Japanese, Soviet, and/or

Canadian attitudes toward the OSP concept may have changed since 1975. It may be significant, for example, that both Japan and the Soviet Union apparently have accepted a multi-species approach to the conservation of marine living resources in the Antarctic.

6. Pelagic Sealing

The DEIS notes that termination or renegotiation of the interim fur seal convention could result in resumption of pelagic sealing. It does not provide information on the economics of pelagic sealing or the number, ages, and sexes of seals that might be taken if the U.S. terminated the Convention and prohibited sealing within the Fishery Conservation Zone. Additionally, it does not examine the possibility of a bilateral agreement with Canada prohibiting pelagic sealing in the economic zones of both countries.

The FEIS should include: a map showing the at-sea distribution of fur seal sightings and collections relative to the economic zones of the U.S., Canada, the U.S.S.R. and Japan; an assessment of the likelihood of pelagic sealing being resumed by one or more nations if the U.S. terminates the Convention; and, given the possible resumption of pelagic sealing, an assessment of the number, ages, and sexes of seals that might be taken outside the U.S. and Canadian economic zones, and how such a harvest likely would affect the size of the fur seal population.

7. Impact on Pribilof Island Natives

The DEIS suggests that termination of the fur seal convention would have a significant adverse effect on the Pribilof Island natives. Table 17 of the DEIS indicates, however, that only about 8 percent of the administrative cost of the Pribilof Islands can be attributed directly to harvest and support activities. That is, approximately 92 percent of the Federal contribution apparently would be made under any of the three options presented in the DEIS.

The FEIS should provide a more comprehensive analysis of how the Pribilof Island natives would be affected by each of the possible alternative actions.

8. Miscellaneous

In addition to the points discussed above, it should be noted that the DEIS: (a) makes no mention of what happens to the carcasses of the fur seals that are harvested; (b) cites or uses little data collected since 1975; and (c) fails to indicate the status of the San Miguel Island fur seal population or how it might be affected by each of the alternative actions. These oversights should be corrected in the FEIS.

SUMMARY COMMENTS AND SUGGESTIONS

In summary, the DEIS does not identify all of the possible options or the pros and cons of each option relative to: (a) the North Pacific fur seal population; (b) the Bering Sea ecosystem; (c) the Pribilof Island natives; or (d) U.S. efforts to protect and conserve marine mammal and other living resources in the North Pacific and elsewhere. To provide a better basis for selecting the most appropriate option, the FEIS should:

- provide a more complete discussion of the possible alternatives;
- identify, as possible, how the fur seal population and its habitat have changed in response to past fur seal harvest strategies, incidental take, and fishery development in the North Pacific Ocean, especially the Bering Sea;
- indicate the present status of the fur seal population with regard to the Service's published definition of OSP;
- include a map showing the number of at-sea sightings and collections of fur seals in and outside the economic zones of the U.S., Canada, the U.S.S.R. and Japan;
- provide an assessment as to whether pelagic sealing likely would be resumed if the U.S. terminated the Convention and, if so, the number, ages, and sexes of seals that likely would be taken and how this take likely would affect population size;

- describe other U.S. conservation initiatives and efforts in the North Pacific and elsewhere that could be affected by the U.S. position and action relative to the fur seal convention; and

- identify, as possible, how each of the alternative actions would be expected to effect: (a) the size of the fur seal population; (b) the stability and productivity of the Bering Sea ecosystem; (c) the well-being of the Pribilof Island natives; and (d) U.S. initiatives and efforts to protect and conserve marine mammals and other living resources in the North Pacific Ocean and elsewhere.

To do less very well could result in basing a decision on less than an adequate review and evaluation of relevant factors.

Response: Thank you for your comments.

We have attempted to revise the EIS in light of your recommendations. Please see especially, Sec. II, III.B.1-5., III.C., III.D. and IV.

We have recommended only a four year extension of the treaty. Article XIII, 4 and 5 provide a mechanism for continual review of the treaty.

Please see Sec. III.B.5. for an assessment of population status.

Please see Sec. III.D. for discussion of food consumption by fur seals, and Sec. III.C.3. for a discussion of incidental take.

Impacts on our efforts to protect marine mammals worldwide are discussed in Sec. II. and IV.

The attitude of Party Governments towards OSP is discussed in Sec. II.C.

Pelagic sealing is discussed in Sec. II.B. and IV.B., as well as Sec. III.B.1. Please see Figures 2 and 3.

Impacts on Pribilof Aleuts are discussed in Sec. II and IV, and the economics of the islands in Sec. III.E.

The fur seal meat had until recent years been sold for mink food. Currently a market for meat excess to subsistence needs is lacking. Apparently the cost of transportation from the Islands, in this time of rising fuel costs, outweighs the value of the product.

Data analyses since 1975 have been incorporated, where relevant, into the text of the EIS. Please see our Literature Cited section.

Sec. III.B.1. includes a discussion of possible range and intermixture with other populations of the small herd on San Miguel Island.

Fairbanks Environmental Center

218 DRIVEWAY
FAIRBANKS, ALASKA 99701
(907) 452-5021

September 17, 1979

Dr. William Aron
Office of Marine Mammals
and Endangered Species
National Marine Fisheries Service
3303 White Haven St., N.W.
Washington, D.C.

Dear Dr. Aron:

Because we did not know about the DEIS on the North Pacific Fur Seal Convention until reading about it in the newspaper last week, I hope that you will be kind enough to accept our tardy comments and include them in the record.

Sincerely,

Glynn Hoerner
President
Fairbanks Environmental
Center

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copy to:

Sidney R. Galler
Deputy Ass. Secretary for Environmental Affairs
United States Department of Commerce
Washington, D.C. 20230

"Cherish, Conserve, Consider, Create"

COMMENTS ON DRAFT ENVIRONMENTAL IMPACT STATEMENT-
NORTH PACIFIC FUR SEAL CONVENTION

The Fairbanks Environmental Center feels strongly that the North Pacific Fur Seal Convention should be continued. We feel that proper management of the seals would suffer without it. We also feel that the Aleut people who depend upon the harvest of these animals would be greatly and adversely impacted.

Although we do wish to see a continuation of the convention, we feel that there is a great deal of room for improvement in management. For example, we question the wisdom of employing maximum sustained yields for harvest. We would prefer to see the use of optimum harvests. We would also like to see much closer cooperation between those who manage the bottom fisheries and those who manage the fur seals within your agency. It would seem much more desirable to manage the fur seals and fish together under one ecosystem than separately, as if they had no relationship to each other.

Finally, we found the DEIS to be quite skimpy in its coverage. For example, it provided no data on how many seals would be vulnerable to foreign harvests beyond the 200 mile limit, although it states that this would be a concern. Such information should be provided. We suggest that the final EIS include more detail and supporting data in this area.

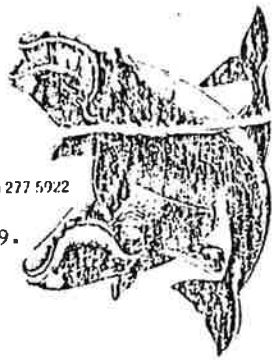
Thank you for this opportunity to comment.

Glynn Hoener
President
Fairbanks Envirmental Center

Response: Thank you for your comments.

Please see Sec. III.B.1, II.B.5 and III.D. for response to your comments.

GREENPEACE ALASKA



550 L STREET, ANCHORAGE, ALASKA 99501 TELEPHONE (907) 277 5922

September 19, 1979.

Dr. William Aron, Director
Office of Marine Mammals and Endangered Species
National Marine Fisheries Service
Washington, D.C. 20235

Mr. Aron,

Please enter into the record the following comments and questions that pertain to the Draft Environmental Impact Statement on THE INTERIM CONVENTION ON CONSERVATION OF NORTH PACIFIC FUR SEALS. Much of this action has been very rushed. Little time existed between receiving the DEIS and the deadline, and such short notice (in hours) of a public hearing in Anchorage have impaired the public's ability to participate in this action.

The first section of these comments will address the DEIS on particular points, and the second will address the proposed action in more general terms.

PAGE

16 "The number of pups born on St. Paul Island in 1975 (278,000) was substantially below Chapman's(1973) estimate.....in the early 50's ....(average 449,000).....". A great deal of estimated populations, carrying capacities, and MSY's are based upon Chapman's work on pages 15 and 16. But why does the DEIS wait until page 21 to tell us that Chapman revised his estimates? Although population estimated were based upon his pup counts, we see nothing of revision or mention that the past discussion was unreliable. It is all very confusing and poorly presented. We are given the number of pups on one island, the number of bulls on another, age classes on still another.

17 "It is still too early to draw conclusions concerning this(St. George) experiment. If 1975 was indeed the last year pups were counted on each St. Paul rookerie (page 16) is there any current data that would show that there is not a parrallel decrease on St Paul as well? We understand that the harvest on St. Paul was stopped at 11,000 this year. If true, why? Are there any other biological indicators?

1a Since we are mandated to change management to OSP instead of MSY, please interpolate the MSY figures to those of OSP so that we can better understand the consequences of not getting "our way", as intended by the MMPA,(section 108,a,4).

19 Please translate item 3, para. 1 into a range of possible numbers of Pribilof seals likely to be exposed to pelagic sealing. In addition, estimate from this unproven number at sea in foreign waters(excluding Canada) which could actually be caught if such an effort were begun. Certainly we are not talking about 100 per cent, and the number of seals involved may not be economically feasible for a company to to begin a species specific operation. More likely, it would be an incidental catch to present pelagic sealing. The pelagic issue has been bannered about as the great threat. Please supply the public with actual numbers that can be evaluated.

19 Section 6. A great deal is mentioned of fur seal predation on fisheries resources, yet nothing is said of the role they play in such basics as recycling of fish producing nutrients via excretements and the eventual return to the cycle of the carcass itself. The explanation and diagram do not indicate how much more productivity is produced by the combination of these recycled nutrients, sunlight, and lower organisms on the fish food chain. The EIS process is educational in nature in many instances, and must be cautious in misleading the public perception by maintain-balance and neutrality.

PAGE

19 Please translate the "From 12 to 21% of the..." into actual numbers of fur seals(503 to 879 seals).

21 Section 7. In the first patagraph under this section please insert inparentheses that providing the greatest harvest year after year (which is the goal of other signatories) is inclnsistent with the MMPA mandate of OSP even though mentioned elsewhere.

22 As mentioned earlier, Chapman's revision should be inserted earlier in the DEIS. Again we find figures expressed in MSY and not (except indirectly) in OSP.

25 Despite our overall position, we feel that the Socio Economic/ Pitilof Island Natives section does not convey the actual history and hardship endured by these people at the hands of two governments, nor is there an adaquet description of the current culture living in the shadow of two ancestries. Ther is no indication that the current economic dilemma is the result of past Federal policies. They need to be seen in the present light of mitigating the perpetuation of this treaty-in other words, extending this treaty <u>will</u> have an impact in that it will continue to enforce dependance upon a non-diversified economy.

27 It is untrue that failure to build a harbor on St. Paul will end other opportunities for economic diversification. Even though title to lands has been completed on the islands proper, the inhabitants also have claims to land in the Aleutian chain. Among the selections is a natural harbor rated as one of the best for anchorage. In fact, we have been told that the Aleuts would prefer to develope there before on the Island . Please insert data from the Aleut corporation proper. Another missing ingredient is that there is no mention of recommendations/study teams/incentives/mitigating actions that would soften treaty change impacts.

31 The last three lines on this page state that "up to 20 precent of the herd may migrate to the western North Pacific and Bering Sea.". This is surprizing, since no data we have read comes close to this. Are the authors confusing this statement with the one on page19, item 3, where 20 percent of the seals found near Japan"may" be from the Pribilof herd? If not, please give the reference. It is an

PAGE

31 important item.

32 Please indicate how many seals may be estimated to be killed if pelagic sealing resumes.
We have been told that residents on St. Paul use some 500 seals annually, and that the figure is decreasing. Although we have no objection to subsistence without waste, we would like a more accurate figure for baseline information. Wasteful use , if it occured after the end of the treaty, is controllable by enforcement of the MMPA. Admittedly, such enforcrment is near impossible at this time due to understaffing and funding.

33 Recognizing that the other parties to the convention are not likely to agree with the OSP concept, is this commission going to allow non OSP management of wildlife within our borders to maintain MSY populations in other countries? The Japanese have long blamed competitive carnivores for the decline of fisheries. Looking at their poor environmental record at home, we should not automaticly support their scapegoating(as referred to on the second paragraph).

<u>CONCLUSION AND RECOMMENDATIONS</u>

Pelagic sealing for other species than the Northern Fur Seal is an ongoing event by many nations around the world, including the signatory governments of this convention. The marine mammals are being killed and removed from the ecosystem for products which have no socially redeeming value. They are being killed for vanity. The present treaty, though invaluable for the rebuilding of the population, is no longer necessary for the survival of the Pribilof population. The treaty gives sanctimony to using animal life for for vanity purposes. We would rather have uncondoned, and ethically condemned sealing occur if such action does not endanger the species.
Although the United States does not whale, we belong to the International Whaling Commission. We are able to maintain input while maintaining a position of environmental and ethical leadership.

Throughout the DEIS, one gets the feeling that we have a guarantee that the other signatories will not control the convention. Do we have that control, or will we be party to killing greycoats(pups of

the year)?

We recommend item P, renogiation of the convention, but only with the following conditions (a) that the U.S. end its portion of the hunt and proceeds. To kill seals here in trade for seals not killed in another country is ridiculous(p.33). If the Soviets or Japanese are killing for coats and threaten to over harvest in addition, then the issue should be clarified and not clouded by bizarre trade offs. There are many ways to entice these governments to do otherwise, be it trade sanctions or world opinion.
In addition, we would ask that the negotiating team send recommendations to Congress that land transfers be sped up, and monies recently granted them under the Native Claims Commission be freed for immediate use. There are studies and projects(demonstration) which the Aleuts could use as tools in their quest for economic diversification.

If these conditions could not be met, we recommend choice A, termination of the treaty. In its place should be direct and immediate negotiations with Canada in order to reach agreement and protection of the Pribilof population. Such was the case from 1941 to 1957, a period of 16 years.

Sincerely,
Will Anderson
Will Anderson
Executive Director

Response: Thank you for your comments.

Please see Sec. III.B.2. and 5. for discussion of population trends and productivity. Estimates of pup production on St. Paul Island are given in Sec. II.B.2.

Please see Sec. IV.B. for discussion of the risk of pelagic sealing, also III.B.1. for the range of the fur seal.

The goals of the Convention and the MMPA are not, in our view, inconsistent.

United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

ER-79/771

NOV 2 9 1979

Dr. William Aron
Director, Office of Marine Mammals
and Endangered Species
National Marine Fisheries Service
3300 White Haven Street N.W.
Washington, D. C. 20235

Dear Dr. Aron:

The Department of the Interior has reviewed the Draft Environmental Impact Statement on the Interim Convention on the Conservation of North Pacific Fur Seals. The Department believes that alternatives on termination and renegotiation should be further expanded to provide additional information on the likely outcomes of such actions. The discussion of renegotiation versus extension is particularly important and further discussion of the present positions of the signatory parties and their likely objectives in seeking an extension or renegotiation is needed.

Additional research should be conducted to identify the social, cultural and economic importance of the seal harvest to the Aleut people. Their needs also require further discussion within the statement.

Thank you for the opportunity to comment on this statement.

Sincerely,

James H. Rathlesberger
Special Assistant to
Assistant SECRETARY

Response: Thank you for your comments. Please see Sec. II.B. and C., III.E., and IV.B. and C. for response to your comments.

VI. B. Public Hearings

Public hearings were held on the draft EIS on August 27, 1979 in Anchorage, Alaska; on August 29, 1979 in St. Paul, Pribilof Islands, Alaska; and on September 6, 1979, in Washington, D.C. Over 50 people testified at these proceedings resulting in almost 400 pages of transcript. Copies of the hearing record are available upon written request from the Office of International Fisheries, National Marine Fisheries Service, 3300 Whitehaven Street, Northwest, Washington, D.C. 20235. Information obtained from the hearings, as well as questions raised here and in written comments, have been incorporated into the text of the final EIS. Following is a list of those who testified, their affiliations, and their positions in relation to the three alternatives considered in the draft EIS:

(Anchorage)

Testimony submitted by:	Position:
Charles Meacham Office of the Governor State of Alaska	Extend
Commissioner Lee McArerney Alaska Department of Community and Regional Affairs	Extend
Ron Philemonoff Cook Inlet Native Association	Extend
Agafon Krukoff Aleut Corporation	Extend
Pat Pletnikoff Executive Director, Pribilof Islands Association	Extend
Hugh Fleischer Attorney, City of St. Paul	Extend
Morris Thompson President, Alaska Federation of Natives	Extend
Ilarion Pletnikoff Anchorage, Alaska	Extend

Belle Dawson Anchorage, Alaska	Phaseout harvest
Will Anderson President Greenpeace Alaska	Phaseout harvest
Victor Fischer, Professor Institute of Social and Economic Research University of Alaska	Extend
Denny Victor Martin Victor Furs	Extend
Clark Gruening Attorney for Tanadgusix Corporation	Extend
Jim Branson Executive Director, North Pacific Fishery Management Council	Extend
(St. Paul)	
Larry Merculieff President, Tanadgusix Corp. Chairman of the Board Aleut Corporation	Extend
George Pletnikoff Orthodox Priest, St. George Island	Extend
Mike Zacharof Vice President Tanadgusix Corporation	Extend
Pat Pletnikoff Executive Director Aleutian-Pribilof Island Association President of the St. George Tanaq Corporation	Extend
Anthony Philemonoff Chairman of the Board, Aleutian-Pribilof Island Association	Extend

Daria Krukoff St. Paul Island	Extend
Nicholas Kozloff St. Paul Island	Extend
Anatol Lekanof Anchorage, Alaska	Extend
Terenty Philemonoff, Jr. President, Aleut Community of St. Paul	Extend
Max Lestenkof Alcoholic Counselor Rural Community Action Program	Extend
Lester Hanson St. Paul	Extend
Nicholi Philemonoff President Aleut Community Council of St. George	Extend
Chris Hooten President Pribilof Regional Education Association	Extend
Max Stepetin St. Paul, Alaska	Extend
Agafon Krukoff President Aleut Corporation	Extend
Mrs. Charlotte Cunningham Finkel Southbury, CT.	Extend
Victor Merculieff Mayor of St. Paul	Extend
Mrs. Misikin St. Paul, Alaska	Extend
David Fratis, Jr. St. Paul, Alaska	Extend

Alex Calanin Board of Directors, Tanadgusix Corporation St. Paul City Council	Extend
Jacob Kochutin St. Paul, Alaska	Extend
Reverend Capner Pastor Assembly of God Church St. Paul, Alaska	Extend
(Washington, D.C.)	
John Gottschalk Legislative Council International Association of Fish and Wildlife Agencies	Extend
Rod Moore Representing Congressman Don Young of Alaska	Extend
Mrs. Charlotte Cunningham Finkel Southbury, CT.	Extend
Richard Denny Executive Director The Wildlife Society	Extend
Nick Philemonof President of the Traditional Government of St. George	Extend
Michael E. Berger Assistant Director for Fish and Wildlife, The National Wildlife Federation	Extend
Adrian Melovidov Chairman of the Board Tanadgusix Corporation Vice President, Aleut Community of St. Paul	Extend
Mike Zacharof Vice President Tanadgusix Corporation	Extend

Al Johnson Greenpeace Foundation and the Earth Force Environmental Society	Terminate
Mark Pyle American Fur Industry	Extend
Glenn Chase Fund for Animals	Renegotiate/phaseout harvest
David McKenney Fund for Animals	Renegotiate/phaseout harvest
Jowanda Shelton Washington Director Committee for Humane Legislation	Terminate
John Walsh International Society for the Protection of Animals	Questioned harvest methods
Paul Watson Operator of the Fund for Animals Marine Mammal Protection Vessel Sea Shepherd	Canadians view United States opposition to harp seal as "hypocritical" in light of our Pribilof Island harvest.

(Testified in writing only)

George G. Heinz President The Fouke Company	Extend
Honorable Mike Gravel U.S. Senate	Extend
Honorable Lester C. Wolff U.S. House of Representatives	Terminate

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INTERIM CONVENTION ON CONSERVATION OF NORTH PACIFIC FUR SEALS

Note: The Interim Convention was signed in Washington on February 9, 1957, on behalf of the Governments of Canada, Japan, the Union of Soviet Socialist Republics, and the United States of America. The Interim Convention came into force on October 14, 1957, and has since been amended as follows:

By a Protocol which was signed in Washington on October 8, 1963, and entered into force on April 10, 1964. The 1964 Protocol extended the term of the Convention for six years and affected several changes in the scientific research programs to be carried out by the Party Governments;

By an exchange of notes among the Party Governments which became effective on September 3, 1969, and which extended the term of the Convention, as amended, for an additional period of six years;

By a Protocol which was signed in Washington on May 7, 1976, and entered into force on October 12, 1976. The 1976 Protocol extended the term of the Interim Convention for a period of four years, and made several changes in the scientific research programs to be carried out by the Party Governments and in the duties of the North Pacific Fur Seal Commission.

The text of the Interim Convention, as amended, is as follows:

The Governments of Canada, Japan, The Union of Soviet Socialist Republics, and the United States of America,

Desiring to take effective measures towards achieving the maximum sustainable productivity of the fur seal resources of the North Pacific Ocean so that the fur seal populations can be brought to and maintained at the levels which will provide the greatest harvest year after year, with due regard to their relation to the productivity of other living marine resources of the area,

Recognizing that in order to determine such measures it is necessary to conduct adequate scientific research on the said resources, and

Desiring to provide for international cooperation in achieving these objectives,

Agree as follows:

Article I

1. The term "pelagic sealing" is hereby defined for purposes of this Convention as meaning the killing, taking, or hunting in any manner whatsoever of fur seals at sea.

(Printed - Nov. 1976)

2. The words "each year", "annual" and "annually" as used hereinafter refer to Convention year, that is, the year beginning on the date of entry into force of the Convention.

3. Nothing in this Convention shall be deemed to affect in any way the position of the Parties in regard to the limits of territorial waters or to the jurisdiction over fisheries.

Article II

1. In order to realize the objectives of this Convention, the Parties agree to coordinate necessary scientific research programs and to cooperate in investigating the fur seal resources of the North Pacific Ocean to determine:

(a) what measures may be necessary to make possible the maximum sustainable productivity of the fur seal resources so that the fur seal populations can be brought to and maintained at the levels which will provide the greatest harvest year after year; and

(b) what the relationship is between fur seals and other living marine resources and whether fur seals have detrimental effects on other living marine resources substantially exploited by any of the Parties and, if so, to what extent.

2. The research referred to in the preceding paragraph shall include studies of the following subjects:

(a) size of each fur seal herd and its age and sex composition;

(b) natural mortality of the different age groups and recruitment of young to each age or size class at present and subsequent population levels;

(c) with regard to each of the herds, the effect upon the magnitude of recruitment of variations in the size and the age and sex composition of the annual kill;

(d) migration routes of fur seals and their wintering areas;

(e) numbers of seals from each herd found on the migration routes and in wintering areas and their ages and sexes;

(f) relationship between fur seals and other living marine resources, including the extent to which fur seals affect commercial fish catches, the damage fur seals inflict on fishing gear, and the effect of commercial fisheries on the fur seals;

(g) effectiveness of each method of sealing from the viewpoint of management and rational utilization of fur seal resources for conservation purposes;

(h) quality of sealskins by sex, age, and time and method of sealing;

(i) effects of man-caused environmental changes on the fur seal populations; and

(j) other subjects involved in achieving the objectives of the Convention, as determined by the Commission established under Article V, paragraph 1.

3. In furtherance of the research referred to in this Article, the Parties agree:

(a) to continue to mark adequate numbers of pups;

(b) to devote to pelagic research an effort which, to the greatest extent possible, should be similar in extent to that expended in recent years, provided that this shall not involve the annual taking by all the Parties combined of more than 2,500 seals in the Eastern and more than 2,200 seals in the Western Pacific Oceans, unless the Commission, pursuant to Article V, paragraph 3, shall decide otherwise; and

(c) to carry out the determinations made by the Commission pursuant to Article V, paragraph 3.

4. Each Party agrees to provide the Commission annually with information on:

(a) number of black pups tagged for each breeding area;

(b) number of fur seals, by sex and estimated age, taken at sea and on each breeding area; and

(c) tagged seals recovered on land and at sea;

and, so far is practicable, other information pertinent to scientific research which the Commission may request.

5. The Parties further agree to provide for the exchange of scientific personnel; each such exchange shall be subject to mutual consent of the Parties directly concerned.

6. The Parties agree to use for the scientific pelagic research provided for in this Article only government-owned or government-chartered vessels operating under strict control of their respective authorities. Each Party shall communicate to the other Parties the names and descriptions of vessels which are to be used for pelagic research.

Article III

In order to realize the purposes of the Convention, including the carrying out of the coordinated and cooperative research, each Party agrees to prohibit pelagic sealing, except as provided in Article II, paragraph 3, in the Pacific Ocean north of the 30th parallel of north latitude including the seas of Bering, Okhotsk, and Japan by any person or vessel subject to its jurisdiction.

Article IV

Each Party shall bear the expense of its own research. Title to sealskins taken during the research shall vest in the Party conducting such research.

Article V

1. The Parties agree to establish the North Pacific Fur Seal Commission to be composed of one member from each Party.

2. The duties of the Commission shall be to:

(a) formulate and coordinate research programs designed to achieve the objectives set forth in Article II, paragraph 1;

(b) recommend these coordinated research programs to the respective Parties for implementation;

(c) study the data obtained from the implementation of such coordinated research programs;

(d) recommend appropriate measures to the Parties on the basis of the findings obtained from the implementation of such coordinated research programs, including measures regarding the size and the sex and age composition of the seasonal commercial kill from a herd and regarding a reduction or suspension of the harvest of seals on any island or group of islands in case the total number of seals on that island or group of islands falls below the level of maximum sustainable productivity; provided, however, that due consideration be given to the subsistance needs of Indians, Ainos, Aleuts, or Eskimos who live on the islands where fur seals breed, when it is not possible to provide sufficient seal meat for such persons from the seasonal commercial harvest or research activities, and

(e) study whether or not pelagic sealing in conjunction with land sealing could be permitted in certain circumstances without adversely affecting achievement of the objectives of the Convention, and make recommendations thereon to the Parties at the end of the twenty-first year after entry into force of the Convention.

3. In addition to the duties specified in paragraph 2 of this Article, the Commission shall, subject to Article II, paragraph 3, determine from time to time the number of seals to be marked on the rookery islands, and the total number of seals which shall be taken at sea for research purposes, the times at which such seals shall be taken and the areas in which they shall be taken, as well as the number to be taken by each Party, taking into account any recommendations made pursuant to Article V, paragraph 2 (d).

4. Each Party shall have one vote. Decisions and recommendations shall be made by unanimous vote. With respect to any recommendations regarding the size and the sex and age composition of the seasonal commercial kill from a herd, only those Parties sharing in the sealskins from that herd under the provisions of Article IX, paragraph 1 shall vote.

5. The Commission shall elect from its members a Chairman and other necessary officials and shall adopt rules of procedure for the conduct of its work.

6. The Commission shall hold an annual meeting at such time and place as it may decide. Additional meetings shall be held when requested by two or more members of the Commission.

7. The expenses of each member of the Commission shall be paid by his own Government. Such joint expenses as may be incurred by the Commission shall be defrayed by the Parties by equal contributions. Each Party shall also contribute to the Commission annually an amount equivalent to the value of the sealskins it confiscates under the provisions of Article VI, paragraph 5.

8. The Commission shall submit an annual report of its activities to the Parties.

9. The Commission may from time to time make recommendations to the Parties on any matter which relates to the fur seal resources or to the administration of the Commission.

Article VI

In order to implement the provisions of Article III, the Parties agree as follows:

1. When a duly authorized official of any of the Parties has reasonable cause to believe that any vessel outfitted for the harvesting of living marine resources and subject to the jurisdiction of any of the Parties is offending against the prohibition of pelagic sealing as provided for by Article III, he may, except within the territorial waters of another State, board and search such vessel. Such official shall carry a special certificate issued by the competent authorities of his Government and drawn up in the English, Japanese, and Russian languages which shall be exhibited to the master of the vessel upon request.

2. When the official after searching a vessel continues to have reasonable cause to believe that the vessel or any person on board thereof is offending against the prohibition, he may seize or arrest such vessel or person. In that case, the Party to which the official belongs shall as soon as possible notify the Party having jurisdiction over the vessel or person of such arrest or seizure and shall deliver the vessel or person as promptly as practicable to the authorized officials of the Party having jurisdiction over the vessel or person at a place to be agreed upon by both Parties; provided, however, that when the Party receiving notification cannot immediately accept delivery of the vessel or person, the Party which gives such notification may, upon request of the other Party, keep the vessel or person under surveillance within its own territory, under the conditions agreed upon by both Parties.

3. The authorities of the Party to which such person or vessel belongs alone shall have jurisdiction to try any case arising under Article III and this Article and to impose penalties in connection therewith.

4. The witnesses or their testimony and other proofs necessary to establish the offense, so far as they are under the control of any of the Parties, shall be furnished with all reasonable promptness to the authorities of the Party having jurisdiction to try the case.

5. Sealskins discovered on seized vessels shall be subject to confiscation on the decision of the court or other authorities of the Party under whose jurisdiction the trial of a case takes place.

6. Full details of punitive measures applied to offenders against the prohibition shall be communicated to the other Parties not later than three months after the application of the penalty.

Article VII

The provisions of this Convention shall not apply to Indians, Ainos, Aleuts, or Eskimos dwelling on the coast of the waters mentioned in Article III, who carry on pelagic sealing in canoes not transported by or used in connection with other vessels, and propelled entirely by oars, paddles, or sails, and manned by not more than five persons each, in the way hitherto practiced and without the use of firearms; provided that such hunters are not in the employment of other persons or under contract to deliver the skins to any person.

Article VIII

1. Each Party agrees that no person or vessel shall be permitted to use any of its ports or harbors or any part of its territory for any purpose designed to violate the prohibition set forth in Article III.

2. Each Party also agrees to prohibit the importation and delivery into and the traffic within its territories of skins of fur seals taken in the area of the North Pacific Ocean mentioned in Article III, except only those taken by the Union of Soviet Socialist Republics or the United States of America on rookeries, those taken at sea for research purposes in accordance with Article II, paragraph 3, those taken under the provisions of Article VII, those confiscated under the provisions of Article VI, paragraph 5, and those inadvertently captured, which are taken possession of by a Party; provided, however, that all such excepted skins shall be officially marked and duly certified by the authorities of the Party concerned.

Article IX

1. The respective Parties agree that, of the total number of sealskins taken commercially each season on land, there shall at the end of the season be delivered a percentage of the gross in number and value thereof as follows:

By the Union of Soviet Socialist Republics	to Canada	15 percent
	to Japan	15 percent
By the United States of America	to Canada	15 percent
	to Japan	15 percent

2. Each Party agrees to deliver such sealskins to an authized agent of the recipient Party at the place of taking, or at some other place mutually agreed upon by such Parties.

3. The respective Parties will seek to ensure the utilization of those methods for the capture and killing and marking of fur seals on land or at sea which will spare the fur seals pain and suffering to the greatest extent practicable.

Article X

1. Each Party agrees to enact and enforce such legislation as may be necessary to guarantee the observance of this Convention and to make effective its provisions with appropriate penalties for violation thereof.

2. The Parties further agree to cooperate with each other in taking such measures as may be appropriate to carry out the purposes of this Convention, including the prohibition of pelagic sealing as provided for by Article III.

Article XI

The Parties agree to meet in the twenty-second year after entry into force of the Convention to consider the recommendations in accordance with Article V, paragraph 2(e) and to determine what further agreements may be desirable in order to achieve the maximum sustainable productivity of the North Pacific fur seal herds.

Article XII

Should any Party consider that the obligations of Article II, paragraphs 3,4, or 5 or any other obligation undertaken by the Parties is not being carried out and notify the other Parties to that effect, all the Parties shall, within three months of the receipt of such notification, meet to consult together on the need for and nature of remedial measures. In the event that such consultation shall not lead to agreement as to the need for and nature of remedial measures, any Party may give written notice to the other Parties of intention to terminate the Convention and, notwithstanding the provisions of Article XIII, paragraph 4, the Convention shall thereupon terminate as to all the Parties nine months from the date of such notice.

Article XIII

1. This Convention shall be ratified and the instruments of ratification deposited with the Government of the United States of America as soon as practicable.

2. The Government of the United States of America shall notify the other signatory Governments of ratifications deposited.

3. This Convention shall enter into force on the date of the deposit of the fourth instrument of ratification.

4. The Convention shall continue in force for twenty-two years and thereafter until the entry into force of a new or revised fur seal convention between the Parties, or until the expiration of one year after such period of twenty-two years, whichever may be the earlier; provided, however, that the Convention shall terminate one year from the day on which a Party gives written notice to the other Parties of an intention of terminating the Convention.

5. At the request of any Party, representatives of the Parties will meet at a mutually convenient time within ninety days of such request to consider the desirability of modifications of the Convention.

6. The original of this Convention shall be deposited with the Government of the United States of America, which shall communicate certified copies thereof to each of the Governments signatory to the Convention.

IN WITNESS WHEREOF the undersigned, being duly authorized by their respective Governments, have signed this Convention.

DONE in Washington this ninth day of February 1957, in the English, Japanese, and Russian languages, each text equally authentic.

FOR THE GOVERNMENT OF CANADA:

A. D. P. Heeney

G. R. Clark

FOR THE GOVERNMENT OF JAPAN

Masayuki Tani

FOR THE GOVERNMENT OF THE UNION OF SOVIET SOCIALIST REPUBLICS:

G. Zaroubin

FOR THE GOVERNMENT OF THE UNITED STATES OF AMERICA:

William C. Herrington

Arnie J. Suomela