
CRS Report for Congress

Received through the CRS Web

Marine Mammal Protection Act: Reauthorization Issues for the 107th Congress

Updated January 9, 2001

Eugene H. Buck
Senior Analyst in Natural Resources Policy
Resources, Science, and Industry Division

Marine Mammal Protection Act: Reauthorization Issues for the 107th Congress

Summary

The Marine Mammal Protection Act was reauthorized in 1994. This Act's authorization for appropriations expired at the end of FY1999. At issue for the 107th Congress are the terms and conditions of any provisions designed to reauthorize and amend the Act to address concerns relating to marine mammal management. The Congressional Research Service queried commercial fishing, scientific research, public display, animal protection, Native American, and environmental interests to identify issues that might be brought before Congress during a reauthorization debate.

Several issues relate to modifying management of the interactions between marine mammals and commercial fishing operations. Other concerns relate to marine mammals in captivity and subsistence use of marine mammals by Native Americans. Additional issues include providing for trade in marine mammal products, managing robust marine mammal stocks, understanding the effect of noise on marine mammals, fostering international cooperation, regulating large incidental takes, modifying the scientific research permit process, improving agency compliance with MMPA deadlines, facilitating marine mammal research by federal scientists, dealing with harassment of marine mammals, considering a directed research program, improving care for stranded marine mammals, and appropriating adequate funding for agency programs. While some of these issues could be addressed administratively, in regulations proposed and promulgated by the National Marine Fisheries Service, the U.S. Fish and Wildlife Service, or the Animal and Plant Health Inspection Service, others likely would require changes to the statute.

Most potential participants in the reauthorization debate anticipate extended negotiations on some of these issues. Although the authorization for appropriations expired at the end of FY1999, the Act itself did not expire. Eventually, however, an extension of funding authority will need to be considered to continue federal program operations. Most of the issues associated with this law are not time-sensitive, and oversight hearings may be scheduled to increase understanding of various positions and possibilities.

This report lays out the issues likely to be raised during any reauthorization debate, the reasons behind them, and possible proposals that could be offered to address these concerns.

Contents

Introduction	1
Constituency Groups	2
Commercial Fishing Industry	2
Environmental Groups	3
Public Display Community	3
Animal Protection Advocates	3
Native Americans	3
Marine Mammal Scientists	3
Marine Mammal Managers	4
Marine Mammal Protection Act	4
1994 MMPA Reauthorization	5
Implementation of the 1994 Amendments	6
Issues for the 107 th Congress	8
Commercial Fishing Interactions with Marine Mammals	8
Optimum Sustainable Population	8
Calculating Potential Biological Removal	9
Zero Mortality Rate Goal	11
Stock Assessment Process	11
Deterrence	12
Reinstate Limited Authority for Intentional Lethal Taking	14
Integration with Fishery Management	14
Fishery Impacts and Southern Sea Otters	15
Marine Mammals in Captivity	16
Return Authority for Captive Marine Mammals to NMFS/FWS	16
Export of Captive Animals	17
Import of Captive Animals	18
Scientific Research on Captive Marine Mammals	18
More Extensive Medical Exams for Transferred Animals	19
Necropsies	21
Genetic Mixing	22
Wild Versus Captive Survivorship	23
Air Quality and Noise at Facilities	23
Rehabilitation and Release	23
Quality of Captive Environments	24
Programs Promoting Human Interaction with Captive Dolphins	25
Insurance Requirement	25
Native Americans and Marine Mammals	26
Co-Management with Native American Tribes	26
Reporting Subsistence Takes	26
Limitation on the Sale of Edible Subsistence Takes	27
Definition of Subsistence Whaling	29
Definition of Subsistence	30
Cultural Exchange	30

Permits and Authorizations	30
Polar Bear Sport Hunting in Alaska	30
Large Incidental Takes	30
Noise and Its Effects	31
Research Permits for NMFS and FWS Scientists	33
Scientific Research Permits	34
State Approval of Federal MMPA Permits	34
Program Management and Administration	35
Definition of “Take”	35
Trade in Marine Mammal Parts and Products	35
Management of Robust Stocks	36
Fostering International Cooperation	37
Harassment	38
Management Consistency Between FWS and NMFS	39
Directed Research Program	39
Stranded Marine Mammals	40
Federal Agency Roles	40
Agency Delays in Compliance with MMPA Deadlines	40
Appropriation of Agency Funding	41
Congressional Outlook	41

Marine Mammal Protection Act: Reauthorization Issues for the 107th Congress

Introduction

The Marine Mammal Protection Act (MMPA) of 1972 (P.L. 92-522, as amended; 16 U.S.C. 1361, *et seq.*) was reauthorized in 1994 (P.L. 103-238). The authorization for appropriations under this Act expired at the end of FY1999. The 104th, 105th, and 106th Congresses enacted additional amendments.¹ At issue for the 107th Congress are the terms and conditions of any provisions to reauthorize and amend the Act to address concerns related to marine mammal management. Legislation introduced, but not enacted, in the 105th and 106th Congresses suggests a number of issues that may be discussed during a reauthorization debate in the 107th Congress. To identify relevant concerns, the Congressional Research Service queried commercial fishing, scientific research, public display,² animal protection, Native American, and environmental interests to identify additional issues that might surface during a reauthorization debate.³ This report identifies these concerns and provides background to facilitate a better understanding of various positions on these issues. These concerns, along with other factors, are likely to influence whether and how Congress addresses MMPA reauthorization.

Other than recommendations contained in reports to Congress mandated by the MMPA Amendments of 1994 (discussed later in this report) and in testimony presented at a June 29, 1999 oversight hearing before the House Resources Subcommittee on Fisheries Conservation, Wildlife, and Oceans, the Administration has not released any comprehensive proposals related to MMPA reauthorization. Congress has been active and supportive of marine mammal protection issues in recent years, responding primarily to balancing concerns of the commercial fishing industry and environmental interests. Congress generally views this Act as working well, but possibly needing changes to address several concerns that have arisen since

¹MMPA amendments were included in P.L. 104-297 (§405(b)(3)), P.L. 105-18 (§2003 and §5004), P.L. 105-42 (International Dolphin Conservation Program Act), P.L. 105-277, and Title II of P.L. 106-555 (Marine Mammal Rescue Assistance Act of 2000). For additional information, see archived CRS Report IB98020, *Fishery, Aquaculture, and Marine Mammal Legislation in the 105th Congress* and CRS Report IB10010, *Fishery, Aquaculture, and Marine Mammal Legislation in the 106th Congress*.

²Zoos and aquariums holding marine mammals for public education and entertainment.

³To facilitate a candid discussion of issues, individual respondents were guaranteed they would not be identified by name. Opinions of individuals and groups may not accurately reflect the opinion of the majority. Presentation of constituent opinion in this report represents a sampling, and is not a quantitative assessment.

the 1994 amendments. In the House, the Committee on Resources has jurisdiction over any MMPA reauthorization legislation. In the Senate, the Committee on Commerce, Science, and Transportation has jurisdiction over any legislation on this issue.

In the 106th Congress, the House Resources Subcommittee on Fisheries Conservation, Wildlife, and Oceans held a general oversight hearing on June 29, 1999, to review MMPA implementation.⁴ The same Subcommittee held a second oversight hearing on April 6, 2000, on implementation of the 1994 amendments related to Take Reduction Plans, cooperative agreements with Alaska Native organizations, and co-management of subsistence use of marine mammals by Alaska Native communities.⁵

Constituency Groups

An array of groups and individuals hold common and conflicting interests in our nation's marine mammals. Despite their diversity, they generally share the goals of ensuring sustainable marine mammal populations and maintaining healthy marine ecosystems. These groups, however, sometimes disagree about how best to achieve these goals and use our common resources, and thus, conflict is inevitable. As Congress considers reauthorization of the MMPA, these diverse groups will advocate a wide variety of policy proposals.⁶

Commercial Fishing Industry. In 1998, there were more than 75,000 commercial fishing vessels estimated to be operating in U.S. marine fisheries,⁷ and 4,733 processor and wholesale plants employing 85,735 individuals.⁸ In 1999, the total catch of marine fish was 9.3 billion pounds, with an estimated ex-vessel value⁹

⁴A list of witnesses appearing at and selected testimony presented at this hearing can be found at [<http://www.house.gov/resources/106cong/fisheries/99jun29/agenda990629.htm>].

⁵U.S. Congress. House. Committee on Resources. Subcommittee on Fisheries Conservation, Wildlife, and Oceans. *Hearing on the Marine Mammal Protection Act (Sections 118 and 119)*. 106th Congress, 2d session, April 6, 2000. Serial No. 106-79. 266 p.

⁶These are general characterizations. There is enormous variability and crossover of membership in these groups, which often blurs the distinction among the concerns within each group. For example, marine mammal scientists may act as objective independent analysts or serve as advocates for a specific sector.

⁷NMFS. *Fisheries of the United States, 1999*. Current Fishery Statistics No. 9900. October 2000. p. 94.

⁸*Id.*, p. 95. This number represents individuals employed by processors and wholesale plants. It does not include catching, transporting, or retail marketing of commercially caught fish, nor does it include jobs supported by commercial fisheries.

⁹Ex-vessel value is the money paid to the harvester for fish, shellfish, and other aquatic plants and animals, *i.e.*, dollar value of the harvest as it is offloaded from the boat.

of \$3.5 billion.¹⁰ For 1999, the overall economic contribution of commercial fishing to gross national product (in value added) was estimated to be \$27.2 billion.¹¹

This sector is chiefly concerned with ensuring sustainable fisheries that balance environmental protection with the continued short-term and long-term viability of the industry. Within this sector is a diverse group of interests, each with specific concerns regarding the rational use of living marine resources and the allocation of resources among user groups. These sectors divide according to scale of operation; type of activity (fishermen, catcher-processor, processor); type of fishing gear used (trawl, longline, gillnet, pots, seine); and location (inshore or offshore).

Environmental Groups. More than 50 U.S. environmental organizations focus primarily or largely on marine issues. Membership in these groups ranges into the millions. With respect to the MMPA, environmental groups are principally concerned with the lack of assessment data for many managed stocks, the direct and indirect harm to less resilient marine species (including marine mammals), the protection of marine biodiversity, and the continuing loss of marine habitat.

Public Display Community. This community includes 129 U.S. marine life parks, aquariums, and zoos dedicated to the conservation of marine mammals and their environments through public display, education, and research. The public display community has not taken a formal position on any of the issues raised in this report.

Animal Protection Advocates. More than 30 U.S. animal protection organizations have programs focusing on the protection of marine mammals and other marine species. Animal protection groups are concerned with impacts on individual animals as well as species, with harassment as well as killing and injury, and with captive as well as free-ranging animals. They share concerns with environmental groups regarding habitat loss and degradation, but are also concerned with intentional and incidental takes that result in animal suffering. Their key focus is on protection.

Native Americans. Because of their culture, tradition, and subsistence needs, many tribes and indigenous groups are concerned about the management of marine mammals. Some are represented by Commissions that coordinate management of certain species with federal agencies. The long-term goals of tribes and indigenous groups generally include economic stability, resource sustainability, and regulatory certainty. Of particular concern during MMPA reauthorization will be cooperative management of marine mammals, which they believe fosters economic vitality, environmental health, and rational management of natural resources.

Marine Mammal Scientists. Scientists from academia, the private sector, and state and federal agencies are principally involved in analyzing the ecological, social, and economic effects of MMPA provisions and marine mammal management policy. Like the other groups, they are concerned with the health and integrity of marine ecosystems and the rational use of marine resources. Specifically, they are

¹⁰*Supra* note 6, p. iv.

¹¹*Id.*, p. v.

interested in the availability of adequate funding and accurate data to perform the necessary analyses. Such scientists are also often members of or associated with other constituent groups.

Marine Mammal Managers. Federal and state marine mammal managers are charged with implementing the MMPA and complementary state programs. Because of this responsibility, their interests and concerns are more keenly focused on the pragmatic aspects of the MMPA. Specifically, they are interested in clarity in the intent of management requirements and in authorizations to fund data collection and research.

Marine Mammal Protection Act

Due in part to the high level of dolphin mortality (estimated at more than 400,000 animals per year in the late 1960s) in the eastern tropical Pacific tuna fishery, Congress enacted the Marine Mammal Protection Act (MMPA) in 1972. The Act established a moratorium¹² on the “taking” of marine mammals in U.S. waters and by U.S. nationals on the high seas.¹³ The Act also established a moratorium on importing marine mammals and marine mammal products into the United States. This Act protected marine mammals from “clubbing, mutilation, poisoning, capture in nets, and other human actions that lead to extinction.” It also expressly authorized the Secretaries of Commerce and the Interior to issue permits for the “taking” of marine mammals for certain purposes, such as scientific research and public display.

Under the Act, the Secretary of Commerce, acting through the National Marine Fisheries Service (NMFS, in the National Oceanic and Atmospheric Administration), is responsible for the conservation and management of whales, dolphins, porpoises, seals, and sea lions. The Secretary of the Interior, acting through the U.S. Fish and Wildlife Service (FWS), is responsible for walrus, sea otters, polar bears, manatees, and dugongs. This division of authority derives from agency responsibilities as they existed when the MMPA was enacted. Title II of the Act established an independent Marine Mammal Commission (MMC) and its Committee of Scientific Advisors on Marine Mammals to oversee and recommend actions necessary to meet the requirements of the Act.

Prior to passage of the MMPA, states were responsible for marine mammals on lands and in waters under their jurisdiction. The MMPA shifted all marine mammal management authority to the federal government. It provides, however, that management authority, on a species-by-species basis, could be returned to a state that adopts conservation and management programs consistent with the purposes and policies of the Act. It also provides that the moratorium on taking can be waived by the federal government or states with management authority for specific purposes, if

¹²Some consider this action a ban or prohibition, rather than a moratorium, because it was (and is) permanent.

¹³Under the MMPA, in 16 USC §1362(13), take means “to harass, hunt, capture, or kill, or attempt to harass, hunt, capture, or kill.”

the taking will not disadvantage the affected species or population. Permits may be issued to take or import any marine mammal species, including depleted species, for scientific research or to enhance the survival or recovery of the species or stock. Non-depleted species may be taken or imported for purposes of public display. The Act allows U.S. citizens to apply for and obtain authorization for taking small numbers of mammals incidental to activities other than commercial fishing (*e.g.*, offshore oil and gas exploration and development), if the taking would have a negligible impact on any marine mammal species or stock, and the monitoring requirements and other conditions are met.

The Act's moratorium on taking does not apply to any resident Alaskan Indian, Aleut, or Eskimo who dwells on the coast of the North Pacific or Arctic Oceans, if such taking is for subsistence purposes¹⁴ or for creating and selling authentic Native articles of handicrafts and clothing, and is not done wastefully. However, such taking can be regulated or even prohibited if the Secretary determines a stock is depleted. The Act also provides for co-management of marine mammal subsistence use by Alaska Native groups, under which authority Native commissions have been established.

The Act also authorizes the taking of marine mammals incidental to commercial fishing operations. In 1988, most U.S. commercial fish harvesters were exempted from otherwise applicable regulations and permit requirements for 5 years, pending development of an improved system to govern the incidental taking of marine mammals in the course of commercial fishing operations.¹⁵

The Endangered Species Act of 1973 (ESA; P.L. 93-205, as amended; 16 U.S.C. 1531, *et seq.*) provides additional protection for marine mammal species that are determined to be threatened or endangered with extinction. When protective actions are taken under both ESA and MMPA authorities, interactions between implementation efforts under these two statutes may increase management complexity and legal uncertainty in dealing with some species, such as the southern sea otter in California.

1994 MMPA Reauthorization

The 1988 commercial fishing exemption expired at the end of FY1993, and new provisions were enacted in P.L. 103-238, which reauthorized the MMPA through

¹⁴Section 109(f)(2) defines subsistence uses as “the customary and traditional uses by rural Alaska residents of marine mammals for direct personal or family consumption as food, shelter, fuel, clothing, tools, or transportation; for the making and selling of handicraft articles out of nonedible byproducts of marine mammals taken for personal or family consumption; and for barter, or sharing for personal or family consumption.”

¹⁵ Subsequently, the MMPA Amendments of 1994 established a new regime to govern the incidental taking of marine mammals by commercial fishing operations.

FY1999.¹⁶ These new provisions indefinitely authorized the taking of marine mammals incidental to commercial fishing operations and provided for: 1) preparing assessments for all marine mammal stocks in waters under U.S. jurisdiction, 2) developing and implementing take reduction plans for stocks that may be reduced or are being maintained below their optimum sustainable population levels due to interactions with commercial fisheries, and 3) studying pinniped¹⁷-fishery interactions. In addition, provisions relating to public display of marine mammals were substantially changed, imports of polar bear trophies from Canada were authorized, the limited lethal removal of pinnipeds was authorized, and a general authorization for research involving only low levels of harassment was enacted.

The taking of marine mammals incidental to the eastern tropical Pacific tuna fishery is governed by separate provisions of the MMPA, and was not considered as part of revisions to the incidental take regimes enacted in 1988 or 1994. Additional MMPA amendments enacted in 1997 (P.L. 105-42) modified dolphin conservation provisions of the MMPA applicable to the eastern tropical Pacific tuna seine fishery. In addition, a “good samaritan” exemption allowing individuals to free marine mammals entangled in fishing gear or debris was separately enacted as §2003 of P.L. 105-18.

Implementation of the 1994 Amendments

Implementation of the 1994 MMPA amendments by NMFS and FWS has been controversial on several issues. In some cases, implementation of new provisions has either not been completed or has taken almost the full 5 years of the authorization to complete. One of the most difficult and controversial amendments to implement was the convening of Take Reduction Teams (TRTs) and the development of Take Reduction Plans by these TRTs. Critics believe an insufficient number of TRTs have been convened and that development of Plans is far behind schedule. In addition, no formal mechanism provides for interaction between TRTs and the committees that develop marine mammal stock assessments as well as those that consider total allowable catch and other fishery management decisions.

As of mid-1999, NMFS had convened 5 TRTs to reduce bycatch of strategic stocks of marine mammals in selected commercial fisheries. Four of the TRTs addressed bycatch issues on the Atlantic Coast while another TRT addressed marine mammal bycatch in the Pacific driftnet fishery for swordfish and sharks. In addition, the Steller Sea Lion Recovery Team appears to have served as a *de facto* TRT.

Two separate TRTs were convened to reduce bycatch of harbor porpoise in the Gulf of Maine sink-gillnet fishery and several coastal gillnet fisheries in the mid-Atlantic region. The bycatch reduction measures for porpoise in the Gulf of Maine accompanied serious reductions in fishing to rebuild groundfish stocks under the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1801, *et seq.*). The Plan developed by this TRT tried to combine measures that would both

¹⁶For more information, see CRS Report 94-751 ENR, *Marine Mammal Protection Act Amendments of 1994*.

¹⁷Pinnipeds include seals, sea lions, and walrus.

reduce porpoise bycatch and rebuild groundfish stocks. Also, the Plan developed by the mid-Atlantic TRT was combined with that of the Gulf of Maine TRT to arrive at bycatch reduction measures throughout the range of the harbor porpoise population as well as the fisheries that take this species as bycatch. The result was several years of discussions and revisions by several TRTs, which led to litigation, but also an eventual resolution which was published as a final rule in December 1998,¹⁸ and which is intended to reduce bycatch to below the required potential biological removal (PBR) throughout the range of the species.

The most contentious TRT and Plan was proposed by NMFS to reduce the bycatch of right whales in the sink gillnet and lobster fisheries in the Gulf of Maine. The discussions by this TRT were also clouded by litigation not related to the convening of the TRT, but related to its outcome. After nearly 2 years of discussion, NMFS published a Plan that established a Gear Advisory Group to work with the industry to reduce mortality of large whales due to entanglement, an expanded disentanglement network throughout New England, and expanded survey efforts.¹⁹ Meanwhile, some critics who were involved in the TRT process alleged that NMFS changed TRT recommendations unilaterally and without explanation.

Several TRTs have yet to be convened and Plans developed. The highest priority TRT on the Atlantic Coast that has yet to be convened will address the bycatch of coastal bottlenose dolphin in state/coastal gillnet fisheries. Because these are not offshore federal fisheries, there were no bycatch data and little effort data upon which to base discussions on bycatch reduction, despite the belief by some experts that the PBR for coastal bottlenose dolphin is exceeded considerably by these coastal fisheries. NMFS spent 3 years collecting data and hopes to initiate this TRT's discussions by spring 2000.

Overall, NMFS believes that the time allowed by the MMPA to convene a TRT and develop a Plan has been adequate. However, NMFS found it difficult to publish a final rule based on a Plan in the time allotted by the Act, due primarily to the complexity and difficulty of implementing an action while minimizing impacts to the industry as required by the Act, and by the economic analyses and requirements of other statutes. The difficulties in meeting statutory deadlines and implementing Plans for these strategic stocks has been both frustrating to many, sometimes resulting in litigation, and satisfying in that the most serious of the bycatch/fishery issues have been addressed.

In response to the 1994 MMPA amendments at 16 USC 1386, by early 1999, NMFS and FWS had completed more than 100 stock assessment reports for different marine mammal stocks as required by the Act, and developed a list of fisheries that monitor the annual takes of marine mammals by stock in each of these fisheries. These lists are frequently being revised and are also the target of controversy as new information is incorporated into the assessments. However, some of the stock assessments conducted by the FWS have been criticized for using outdated (*e.g.*, decades old) data. In addition, Alaska Native interests continue to be concerned that

¹⁸63 *Federal Register* 66464-66490 (Dec. 2, 1998).

¹⁹64 *Federal Register* 7529-7556 (Feb. 16, 1999).

some stock assessment reports have little information on incidental take from commercial fishing operations. The sparse information in these reports, based on data collected during the 1988-1992 exemption, was the result of an emphasis on some U.S. fisheries having interactions with marine mammals at a rate that was considered more serious than that occurring in fisheries of concern to Native Alaskans. An observer program was therefore not initiated in Alaska until 1998. NMFS anticipates soon being able to better address the concerns of Alaska Natives.

The 1994 amendments also directed the federal government to undertake an ecosystem-based research and monitoring program for the Bering Sea to identify the causes of ecosystem decline. There is controversy over the extent to which this provision has been fulfilled. Meanwhile, the Alaska Native community would like to initiate a complimentary effort to understand Bering Sea ecological processes by drawing upon traditional Native knowledge and wisdom. The Alaska Native community was unable to obtain public funding to convene meetings among affected villages to review the draft federal Bering Sea research plan, and eventually sought independent funding to support a March 1999 Bering Sea conference.

Issues for the 107th Congress

The remainder of this report reviews issues that may be raised during discussions of reauthorizing the MMPA in the 107th Congress. The major issue categories include: commercial fishing interactions with marine mammals, marine mammals in captivity, Native Americans and marine mammals, and other miscellaneous issues. Some of these issues could be addressed administratively, in regulations implemented by NMFS, the FWS, or the Animal and Plant Health Inspection Service (APHIS, Department of Agriculture). Others would require legislative action.

Commercial Fishing Interactions with Marine Mammals

Optimum Sustainable Population. Optimum sustainable population (OSP) is defined in 16 USC §1362(9) as “the number of animals which will result in the maximum productivity of the population or the species, keeping in mind the carrying capacity of the habitat and the health of the ecosystem of which they form a constituent element.” However, the variable nature of populations in marine ecosystems makes it nearly impossible to determine carrying capacity. In addition, for many species, the limiting habitat factors that govern carrying capacity are not known or well understood.²⁰

Conservation, animal protection, scientific, and environmental interests generally agree that OSP is an important concept for assessing the viability of a population or stock. Some scientists, however, express concern that, if current rather than historic population data are used to calculate OSP, OSP levels may be calculated

²⁰Some scientists have attempted to define OSP for a population based on the carrying capacity for an ecosystem that may no longer exist for many reasons, both human-made and natural.

too low for some marine mammal stocks.²¹ Some in the commercial fishing industry, however, argue that OSP, as currently defined, is complex and vague in concept. They contend that “maximum productivity” is difficult to determine and imprecise,²² and complicates work on developing take reduction plans for marine mammal stocks. The difficulties in declaring that a species is at OSP frustrate fishing industry interests by impeding the ability of the federal government to transfer management authority to states and prevents or delays fishermen from gaining authority to deliberately kill marine mammals. In addition, commercial fishing interests chafe when the MMPA, through OSP, grants marine mammals priority access to certain fish stocks and allocates marine mammals *de facto* “harvest quotas” in direct competition with and to the detriment of the fishing industry. Conservation and scientific interests counter that marine mammals are part of the marine ecosystem and should have their prey species protected from excessive fishing. These interests also believe that critics within the commercial fishing industry may be too quick to blame marine mammals for reductions in target fish populations where predator-prey relationships are incompletely understood.

Commercial fishing interests would like to see the MMPA amended to modify, simplify, and clarify the definition of OSP as the objective for marine mammal management. Scientific, conservation, animal protection, and environmental interests believe that OSP, as the central “core” innovation of the MMPA, should be retained and improved. Other suggestions include directing the MMC to host a workshop, involving marine ecologists, oceanographers, and climatologists, to further examine the methods for determining OSP and its derivative potential biological removal (see section below). Appropriation of funds necessary for this task would probably be required.

Calculating Potential Biological Removal. The potential biological removal (PBR) level is used to establish limits on incidental marine mammal mortality for commercial fishing operations. It is defined in 16 USC §1362(20) as “the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population.” PBR is calculated by multiplying a stock’s minimum population estimate by half the known or presumed maximum net productivity of the stock. This product is multiplied by a fractional multiplier known as the recovery factor.²³ Take Reduction Plans are based on two assumptions: 1) that a stock or population currently within its OSP range will remain so, and 2) that any stock or population below its maximum net productivity level will increase to that level if the

²¹These scientists are concerned that, since most marine mammal species have suffered dramatic population decreases over the last two centuries, the true carrying capacity of the environment is unknown. In addition, they believe that carrying capacity for some species would increase if certain commercial fish harvests were curtailed and other human uses of the marine environment were modified.

²²Maximum productivity is based on inexact population surveys subject to natural fluctuations and can be derived scientifically in several ways. Improving survey techniques with more advanced technology holds promise for improving the precision of these variables. Full realization of this potential may be dependent upon increased funding.

²³The recovery factor accounts for uncertainty in population estimates and reproductive rates.

total human-caused mortality is kept below PBR. However, some scientists believe both these assumptions might be questionable in light of today's much better information.

MMPA critics in the fishing industry and Native Alaskan community believe that NMFS has been so restrictive in calculating PBRs that the economic viability of certain fisheries (*e.g.*, the New England and mid-Atlantic gillnet fisheries, Bering Sea pollock fishery) are being compromised. NMFS and FWS managers counter that the lack of critical data used in PBR calculations limits their ability to calculate precise PBR values for many species. These issues are particularly acute for Alaskan species where population surveys, productivity rates, and harvest data are absent or based on crude estimates several decades old. Some scientific and animal protection interests, however, are concerned that, in changing the method for calculating them, PBRs could be set too high to provide adequate incentive for commercial fishermen to develop better ways of targeting and catching certain species of fish (*e.g.*, phasing out indiscriminate harvesting methods). They are further worried about changes that might retard the process of approaching the MMPA's zero mortality rate goal (ZMRG), especially if PBR is used as the basis for determining attainment of the ZMRG.

Segments of the commercial fishing industry would like to have the concept or definition of PBR revised to be less restrictive by, for example, manipulating one of the multipliers (particularly the recovery factor). Scientific, conservation, animal protection, and environmental interests believe that PBR is an extremely important concept and excellent management tool that should be maintained.²⁴ Without a way to calculate concrete limits on take, they argue, NMFS would have no way of adequately determining the impact of human-caused mortality on marine mammal stocks or of adequately enforcing regulations. Some scientists contend that the necessary monitoring and research to accurately calculate useful PBRs is lacking. These critics suggest a deadline be set for completing development of models to address these concerns.

As mentioned in the previous section, suggestions for MMPA reauthorization include directing the MMC to host a workshop, involving marine ecologists, oceanographers, and climatologists, to further examine the methods for determining OSP and its derivative PBR. Considerations for such a workshop might include: 1) multiple mortality factors such as subsistence harvest, commercial fishery interactions (including entanglement in net discards), and industrial activities (*e.g.*, noise, contaminants); 2) standardized guidelines for using the recovery factor (*e.g.*, endangered species that continue to decline should use 0.1 or less; endangered but increasing should use 0.2); and 3) variability in natural mortality due to extreme events (*e.g.*, mass stranding, *El Niño*). Appropriation of funds necessary for this task would probably be required.

²⁴These interests see PBR as a means of invoking the precautionary principle in marine mammal management — by which the federal government takes action to avert possible harm to marine mammals, even when the causal link between human behavior and those damages is not 100% clear. For additional information on the precautionary principle, see [<http://www.eel.nl/virtue/precprin.htm>].

Zero Mortality Rate Goal. In 16 USC §1387(b)(3), the MMPA requires “the immediate goal that incidental kill or incidental serious injury of marine mammals permitted in the course of commercial fishing operations be reduced to insignificant levels approaching a zero mortality and serious injury rate.” As of September 1999, NMFS was more than 16 months late in delivering a mandatory report to Congress on the progress of all commercial fisheries in reducing incidental mortality and serious injury to levels approaching the ZMRG. NMFS has tentatively defined insignificant levels approaching the ZMRG as 10% or less of the PBR for any stock.

The animal protection and conservation communities believe the objective of approaching the ZMRG must be maintained, and that the criteria for satisfying this objective can be set at a level greater than zero for most species.²⁵ However, while marine mammal mortality in many fisheries has been reduced (in some cases, substantially), animal protection and conservation interests do not consider these reductions to be significant. They believe that the ZMRG can be implemented in ways that do not impose burdensome costs on the fishing industry, and that promote marine ecosystem sustainability that is in the interest of all parties.

The fishing industry is concerned that ZMRG not be interpreted as requiring absolute zero mortality and is expected to argue strongly for a reasonable balance between marine mammal protection and economically viable fisheries. Thus, the fishing industry may propose to include in the MMPA the current NMFS working definition of approaching the ZMRG — that is, 10% of the PBR or less.

Stock Assessment Process. The MMPA outlines a stock assessment process in 16 USC §1386. Several scientists and managers contend that this process is insufficient to assess most marine mammal populations with a reasonable degree of certainty. In addition, these critics believe federal funding is insufficient to improve species-specific methods for assessing marine mammal stocks,²⁶ and that Congress should authorize specific and substantial multi-year funding to improve our basic knowledge of marine mammal populations, especially for Arctic species.²⁷ Alaskan Native interests suggest that the MMPA (16 USC §1386(d)) be amended to confer greater authority to Regional Scientific Review Groups, authorizing these groups to exercise more power in addressing concerns of where research is needed, rather than be only advisory. In addition, they suggest amendments to 16 USC §1386(c) to alter the timing of stock assessment reviews, feeling that healthy stocks may not need review every 3 years — every 5 years would be more reasonable. Three years may be too short an interval to detect meaningful trends and can be burdensome on the agency performing the assessments. For most strategic stocks, since little new

²⁵The only possible exception being extremely rare animals, such as north Atlantic right whales.

²⁶New methodology might include both population numbers and ecological relationships and be reviewed by independent scientists.

²⁷“For updated stock assessments to be meaningful, this absence of sound scientific data needs to be addressed by providing for enhanced capability to conduct high priority population surveys, and studies for development of alternative population indices.” Marshall Jones, Acting Deputy Director, U.S. Fish and Wildlife Service, June 29, 1999, hearing before the House Resources Subcommittee on Fisheries Conservation, Wildlife, and Oceans.

information is gathered to necessitate an annual review, every 2 years might be sufficient.

Deterrence. In 16 USC §1371(a)(4), the MMPA allows the use of deterrents to discourage marine mammals from damaging fish catch or gear. Currently, the burden falls on the federal government to prove that a deterrent is harmful before it can be prohibited. For example, the long-term effects on marine mammals of acoustical harassment devices (AHDs), such as “seal bombs” and “seal scarers,” are not known.²⁸ NMFS and the Marine Mammal Commission sponsored a 1996 scientific workshop that raised significant concerns about AHDs and recommended that their use be severely limited. Action has not yet been taken on these recommendations,²⁹ although the use of AHDs has increased substantially in recent years. Similarly, some scientists are concerned that there has been insufficient research³⁰ to determine at what threshold a deterrent device might become harmful to marine mammals.³¹

With huge gaps of knowledge in marine mammal science,³² some animal protection advocates argue that it would be prudent to allow only proven harmless deterrents on marine mammals interacting with fishing vessels and/or fish farms. Some have argued for reliance on the precautionary principle that would require manufacturers to prove that a deterrent does not cause permanent harm to any age/sex class of affected marine mammal species before allowing its use.³³ In

²⁸Marine mammals are persistent when they discover a food source. They may habituate to acoustic devices unless these devices are quite loud, in which case the animal’s hearing could become impaired. The ways and extent to which widespread use of acoustic alarms and deterrents may affect the natural ability of marine mammals to find food and use the full extent of their foraging range is not well known, but may have unintended consequences. For example, if the sense of hearing is impaired by loud noise, this might increase the dependency of marine mammals upon fishing boats and fish farms for food. In addition, AHDs could displace non-target species (such as porpoises) several miles away from the devices when they are used (*e.g.*, Retreat Passage, British Columbia).

²⁹Guidelines and regulations for use of deterrents were proposed at 60 *Federal Register* 22345-22348 (May 5, 1995), but NMFS has not yet promulgated final regulations.

³⁰Some of this research has been conducted on captive marine mammals, which may have limited applicability to the behavior of wild, free-ranging animals.

³¹Even low-sound-output devices (*e.g.*, “pingers”) may displace animals from critical feeding habitat.

³² For example, in physiology of different species interrelated within a particular habitat, sensory processes, ecosystem implications, stock assessments, and specific behavioral characteristics/region. Studies that have been conducted are inconclusive with respect to 1) effects of a single deterrent device on multiple species inhabiting a given area (including fish stocks); 2) audiological and physiological understanding of the marine mammal ear (and hearing thresholds); 3) impacts of both broad- and narrow-band spectra signals on the marine mammal auditory system; 4) frequency, intensity levels, and duty cycles of such devices with respect to ambient noise, vessel operations, *etc.*; and 5) acoustic behavior of the animals.

³³Others assert that it is an extreme standard to be required to prove a negative — that an
(continued...)

addition, some scientists and managers believe that not enough emphasis has been placed on encouraging fishermen to change their fishing practices, rather than use a proven deterrent, to reduce interactions with marine mammals.³⁴ However, fishermen are likely to make their choice between deterrents and changes in fishing practice on the basis of their relative cost.

Some parties critical of the current situation may endorse proposals to alter the burden of proof for deterrents found in 16 USC §1371(a)(4)(C); others may support efforts to direct NMFS to study the causes of fishery-marine mammal interaction problems to develop a different basis for regulating deterrents. Others suggest that the MMPA be revised to require permits for AHD users, thus allowing NMFS to better monitor the amount of ocean noise generated by these devices.³⁵ NMFS has recommended that Congress consider removing impediments to testing non-lethal deterrent technologies and funding additional research, development, and evaluation of innovative non-lethal pinniped deterrence techniques.³⁶ Some managers and scientists caution, however, that considerable care must be taken to fully assess the “side effects” of noise and other emissions of non-lethal deterrents to identify any potential for damage to targeted and non-targeted marine mammals, fish stocks that may be more sensitive to noise (*e.g.*, herring, cod, other schooling fish), and divers. Any potential for damage will need to be weighed against the benefits of these deterrents before their use becomes even more widespread.

Reinstate Limited Authority for Intentional Lethal Taking. Prior to the 1994 MMPA amendments, commercial fishermen were allowed to kill certain pinnipeds as a last resort to protect their gear or catch. The 1994 amendments eliminated authorization for such lethal taking and replaced it with authority to use deterrence measures that do not kill or seriously injure marine mammals. However, conflicts between fishermen and pinnipeds have become more frequent, and economic losses have increased. NMFS recommends that Congress consider authorizing the intentional lethal taking of California sea lions and Pacific harbor seals in specific areas

³³(...continued)

AHD does not cause harm. They claim a much more reasonable standard might be to prohibit the use of AHDs that have been shown to cause any kind of permanent damage.

³⁴Some fishery practices (*e.g.*, discarding bycatch and fish waste) invite the marine mammals into close proximity with humans. In addition, an increase of fishery interactions with sperm whales in Alaskan waters appears to have coincided with a change from a “derby fishery” (where the whole fleet fished for a short period of time) to an individual fishing quota (IFQ) system (where individual fishermen choose when to fish during most of the year). The IFQ system may have enabled sperm whales to develop their skill in taking fish from fishermen. Before the change to IFQs, whales had, at most, two weeks to interact with longline fisheries and, since all vessels were fishing at the same time, not every vessel experienced problems with the whales. Now, sperm whales apparently go from boat to boat in time and space, practicing their skills most of the year.

³⁵A simplified permit process might address the impacts to non-target species and establish a research program to assess the long-term impacts to target and non-target species from the use of AHDs.

³⁶NMFS. *Impacts of California Sea Lions and Pacific Harbor Seals on Salmonids and West Coast Ecosystems*. Report to Congress, Feb. 10, 1999. p. 15.

and fisheries to protect gear or catch until effective non-lethal methods are developed.³⁷ Critics oppose reinstating this authority, fearing that allowing fishermen to kill California sea lions and Pacific harbor seals could reduce the incentive to modify fishing practices or develop non-lethal deterrents, and would likely result in accidental kills of similar appearing species that are endangered, such as the ESA-listed Steller sea lions.³⁸ These critics suggest that more attention be given to modifying fishing practices and fishery management policies to reduce contact between commercial fishermen and marine mammals. One possible means for accomplishing this might involve the creation of marine reserves or protected areas around key marine mammal habitats.

Relating to sea otters rather than pinnipeds, Washington State sea urchin fishermen are becoming more concerned about harmful interactions by increasingly abundant sea otters, and may seek some means for limiting or controlling sea otter abundance to benefit the sea urchin fishery. The state lists sea otters as endangered, but no federal protection is afforded this population under the Endangered Species Act. However, a 1996 stock assessment report prepared under MMPA authority indicated this population was below OSP. In addition, Alaskans who blame sea otters, in part, for declining fish catch may advocate a more liberal killing of sea otters by Alaska Natives interested in expanding commercial trade in handicrafts, although others are concerned about reported recent declines in Alaska sea otter abundance.

Integration with Fishery Management. On several issues, better integration between the management programs under MMPA and the Magnuson-Stevens Fishery Conservation and Management Act might be helpful.³⁹ Currently, no formal mechanism exists providing for interaction between Take Reduction Teams (TRTs) and the regional fishery management council committees which assess fish stocks, determine total allowable catch (TAC), and make other fishery management decisions. However, marine mammal take reduction is clearly an essential part of reducing fishery bycatch and other incidental mortality associated with fisheries. The Steller Sea Lion Recovery Team has so far been the only quasi-TRT that has been included in formulating fishery management plans (*i.e.*, by the North Pacific Fishery Management Council for Gulf of Alaska groundfish and for Bering Sea/Aleutian Islands groundfish). Some marine mammal scientists suggest amending the MMPA and the Magnuson-Stevens Act to require TRT input in fishery management planning, to better address marine mammal-fisheries interaction problems.

Fishery Impacts and Southern Sea Otters. Because vessels conducting trap and other inshore fisheries off southern California are often too small to carry

³⁷*Ibid*, p. 15-16.

³⁸The federal courts ruled that the federal government cannot issue permits to kill an abundant animal when they know that a protected animal is also likely to be killed. See *Kokechik Fishermen's Association v. Secretary of Commerce*, 839 F.2d 795 (D.C. Cir. 1988) cert denied, 488 U.S. 1004 (1989).

³⁹It has been suggested that some actions could be administrative (*e.g.*, NMFS consultation on designating "essential fish habitat") such that protection for sensitive fish habitat might also acknowledge the importance of critical foraging areas for sub-adult and reproductively active female marine mammals.

observers, monitoring the impacts of these fisheries on southern sea otters has been especially challenging. Without evidence that significant mortality results from these particular fishing activities, funds provided to NMFS under the MMPA are not available to identify and monitor potential sources of mortality for southern sea otters, much less to evaluate how trap design might affect sea otter entrapment or otherwise help identify means to minimize conflicts. Some scientists and managers suggest amending the MMPA to facilitate monitoring in small vessel fisheries and to authorize funding to address potential interactions.

Southern sea otters appear to be attempting to extend their range southward. Such behavior may be significant to the long-term survival of this population, scientists contend. However, the commercial fishing industry opposes any expansion of southern sea otter range. When FWS was authorized to establish an experimental population of southern sea otters in 1986, the agency was required to limit the potential impacts of the translocated southern sea otters on existing commercial fisheries.⁴⁰ However, southern sea otters are now reportedly leaving the translocation zone and are increasingly affecting commercial fisheries. Commercial fishermen suggest that the MMPA and the Endangered Species Act might be amended to impose more stringent requirements on managing this and other experimental populations to limit the potential for conflict with existing uses. Opposing this, some environmental and animal protection interests suggest that language establishing the 1986 experimental population and translocation be repealed, eliminating the management zone and allowing sea otters to expand their range naturally to meet their recovery needs.

⁴⁰Section 1 of P.L. 99-625.

Marine Mammals in Captivity

While some issues involving marine mammals in captivity discussed in this section may require amendment of the MMPA, many could be addressed administratively in regulations implemented by APHIS (Department of Agriculture). Congressional oversight of agency implementation of the MMPA and Animal Welfare Act (AWA) in some of these issue areas may identify regulatory concerns where further direction from Congress may be helpful in refocusing federal agency implementation of existing law.

Many issues relating to the care and maintenance of captive marine mammals also could be addressed under the authority of the AWA. Procedurally, Congress faces the decision on whether to treat these issues within the MMPA reauthorization process, to treat them as AWA issues and consider them concurrently with MMPA reauthorization, or to address these issues as strictly AWA concerns to be considered at another time.

Many of the issues in this section reflect the contentious situation between animal protection interests and holders of captive marine mammals. The scientific and public display communities view some animal protection advocates as extremists conducting a concerted lobbying campaign of misrepresentation to unfairly harass institutions which maintain animals in captivity for research, education, or public display. Animal protection advocates claim a right to use a variety of means to secure better conditions for animals.

Return Authority for Captive Marine Mammals to NMFS/FWS. Prior to the 1994 MMPA amendments, NMFS, FWS, and APHIS shared responsibility for the care and maintenance of marine mammals held by public display facilities. However, the 1994 MMPA amendments delegated primary authority for captive marine mammals to APHIS to regulate under provisions of the Animal Welfare Act.⁴¹ APHIS has conducted a negotiated rulemaking process to revise requirements for the humane handling, care, treatment, and transport of marine mammals in captivity.⁴² It involved representatives of animal protection groups, marine mammal facilities, veterinary professionals, trainers, and government managers working cooperatively.

The animal protection community, believing that APHIS's expertise and experience is primarily with non-aquatic species, may propose to return jurisdiction to NMFS and FWS, who they feel are better qualified to monitor marine mammal care and maintenance. On the other hand, some in the public display community see no

⁴¹In August 1998, NMFS, FWS, and APHIS signed a memorandum of understanding (MOU) outlining their respective independent and collaborative roles. This MOU provides implementation strategies to ensure priority care for marine mammals, and formalizes information sharing among the agencies to promote enforcement and compliance.

⁴²APHIS began the process of amending marine mammal regulations under the AWA in 1990. Subsequently, APHIS published an advanced notice of proposed rulemaking at 58 *Federal Register* 39458 (July 23, 1993). Proposed regulations were published at 64 *Federal Register* 8735-8755 (Feb. 23, 1999). APHIS anticipates issuing a final rule after reviewing comments on the proposed regulations.

basis for stripping APHIS of primary authority for captive marine mammals, since APHIS has a long history of developing and enforcing standards of animal health and care and has vigorously exercised its jurisdiction.⁴³ This has included conducting broad rulemaking proceedings on revised requirements for marine mammals in captivity. In contrast, NMFS and FWS do not typically deal with or involve the animal husbandry sector and have limited expertise in the captive maintenance and care of marine mammals.⁴⁴ Some in the public display community further assert that the majority of problems concerning the quality of care provided captive marine mammals occurred prior to the 1994 MMPA amendments in privately operated facilities that were not regulated, rather than in regulated public display facilities.

Regardless of who regulates these facilities, some marine mammal scientists and animal welfare advocates believe that regulations need to be brought more closely into accord with the physical, psychological, and social needs of marine mammals. In addition, they suggest that existing regulations need to be enforced with more rigor and with less influence from the facilities being regulated.⁴⁵ They argue that reliance on the public display community to be forthcoming when explaining the application of particular husbandry practices may be open to question, particularly when public display facilities fear that “secrets” related to husbandry techniques (*e.g.*, successful captive breeding techniques) might be revealed to competitors. They suggest that Congress consider ways in which successful husbandry techniques might be made more openly available in the interest of benefitting the care of marine mammals throughout the public display industry. Under such conditions, husbandry practices might be standardized to better protect animals.

Export of Captive Animals. The 1994 MMPA amendments repealed export permit and public notification requirements, replacing them with a 15-day federal agency notification requirement prior to export.⁴⁶ NMFS has interpreted export provisions as requiring a letter of comity⁴⁷ from the foreign government ensuring the

⁴³APHIS has more than 20 years’ experience in monitoring and regulating the humane care and treatment of marine mammals in captivity, employing a professional veterinary staff to inspect facilities. APHIS was given authority under the AWA to regulate warm-blooded animals, including marine mammals, for public display in the early 1970s, and first published regulations on marine mammals in 1979. APHIS resources include a National Animal Health Monitoring System, National Veterinary Services Laboratories, and a Veterinarian-in-Charge in every state. One measure of successful APHIS administration has been the advances in achieving self-sustaining captive populations (reflecting high quality of captive care and breeding success), with a concurrent declining demand for taking animals from the wild.

⁴⁴Critics suggest NMFS and FWS are already overburdened with serious problems concerning declining stocks of wild animals and a deteriorating environment.

⁴⁵Critics cite examples where APHIS appears content to wait for facilities to fix recurring problems rather than taking more aggressive action, and where APHIS is alleged to have accepted a facility’s tank measurements rather than taking independent measurements.

⁴⁶NMFS’s Marine Mammal Inventory Report now catalogs export and facility transfer notifications as required by 16 USC §1374(c)(10)(F).

⁴⁷Comity is the legal doctrine under which countries recognize and enforce each others’ legal (continued...)

standards of the MMPA are upheld in foreign facilities. In addition, NMFS requires any further transfer of a marine mammal to other foreign nations to also require a letter of comity. Animal protection advocates claim that the current status of some of the marine mammals (dolphins, in particular) shipped from the United States to Honduras, China, Portugal, Tahiti, and other countries since the 1994 repeal is not known. The animal protection community is concerned and may seek to amend the MMPA to restore the export requirements to their original condition, *i.e.*, requiring a permit, with a public comment period as part of the process. Some scientists agree that a requirement for export permits should be reinstated,⁴⁸ with some believing that MMC and NMFS/FWS review of export permits might make public comment unnecessary. Some suggest that Congress require a full accounting from NMFS/FWS for all past exported marine mammals before allowing any further U.S. animals to be exported. In addition, they suggest the MMPA be amended to require a \$25,000 surety bond or insurance policy per exported marine mammal to cover emergency medical and transfer costs in the event of financial or natural disaster at a foreign facility. Elements of the public display community, however, believe the current process includes extensive safeguards,⁴⁹ and that the prior law requirements were outmoded and cumbersome. Some in the public display community may suggest further amending the MMPA to eliminate the 15-day prior agency notification requirement for exports.⁵⁰

Import of Captive Animals. Some in the public display community may seek to amend the MMPA to treat the import of marine mammals the same way exports are treated, *i.e.*, agency notification required but no permit required and no public comment solicited. They argue that the current process is cumbersome and unnecessary. The animal protection community would likely oppose such an amendment, desiring to retain and possibly strengthen federal agency review of imports and the option for public comment. They believe that a public process with agency review would better protect marine mammals, discouraging the import of certain marine mammals such as those captured specifically for the importing facility.

Scientific Research on Captive Marine Mammals. Research on captive marine mammals has provided critical information and a substantial body of literature on many aspects of marine mammal biology.⁵¹ Some scientists assert that research on

⁴⁷(...continued)
decrees.

⁴⁸The scientific issue is one of detailed and open record keeping, so that scientists know where animals have gone and are able to compare wild to captive mortality rates, birth rates, *etc.*

⁴⁹The primary safeguard is the requirement, certified by the recipient nation's agency responsible for marine mammals, that the receiving facility meets the same criteria for holding such animals as were required of the originating U.S. facility (16 USC §1374(c)(9)). While some critics suggest that stronger regulatory criteria might be imposed by NMFS/FWS in implementing this provision, such action may require congressional direction.

⁵⁰16 USC §1374(c)(8)(B)(i)(II).

⁵¹For example, see [http://www.cerf.bc.ca/pubs/biblio/marmam_biblio.html]. Prior to the establishment of marine mammal facilities, most of what was learned about marine mammals
(continued...)

captive marine mammals may be more useful for certain disciplines (*e.g.*, physiology, immunology, nutrition, hearing sensitivity, and cognitive and acoustic abilities) than others (*e.g.*, acoustic behavior and intra- and inter-species interactions).⁵² Some scientists have proposed that more research be conducted on how human activities might affect marine animals.⁵³ They further contend that research on and observation of marine mammals in captivity affords scientists the opportunity to conduct studies with live animals that are not always possible or practical to do in the wild, and contributes valuable data used to determine management criteria for wild populations. Many of these scientists believe the MMPA placed an unreasonable burden on scientific research (*e.g.*, invasive research is seriously impeded).

Other scientists as well as parts of the animal protection community question how much of the research conducted on captive marine mammals actually benefits marine mammals in the wild. These critics may suggest that the MMPA be amended to require that more attention to benefits be given by federal agencies that review permits for scientific research on captive marine mammals. Other scientists are likely to oppose any amendment that might increase their regulatory burden or curtail access to potential research animals. As an alternative to greater restrictions, some scientists suggest amending the MMPA to impose a research requirement on all regulated facilities holding marine mammals, with mandatory peer review of these research programs to ensure that the capture and holding of marine mammals for research is justified.⁵⁴

More Extensive Medical Exams for Transferred Animals. Although both APHIS and FWS require a health certificate from a licensed veterinarian prior to transporting a marine mammal, the United States does not require any blood tests be made on marine mammals destined for export. In addition, neither NMFS nor FWS requires an exporter to prove that an animal harbors no infections,⁵⁵ even if the animal may have been exposed to *Morbillivirus* — a highly contagious, distemper-like disease harmful to some marine mammal species.⁵⁶ Therefore, critics assert that some disease-carrying marine mammals could be exported to countries where they might infect marine mammals in that region. Animal protection advocates suggest that the MMPA or the AWA may need to be amended to require more safeguards against

⁵¹(...continued)

resulted from whaling and sealing activities, rather than field research.

⁵²Some scientists suggest that a workshop of experts be convened to provide guidance on better defining what might be considered valid research on captive marine mammals, and increasing legitimate research access to captive marine mammals. Authority for similar efforts has been provided in 16 USC §1380.

⁵³Some scientists report that research on captive animals is also constrained by economics. For example, current estimates of the cost of obtaining a young healthy dolphin range from \$100,000 to \$150,000.

⁵⁴However, captive marine mammals used for research often are orphaned, stranded, or disabled animals that are not physically able to be returned to the wild.

⁵⁵Again, it may be an extreme standard to be required to prove a negative.

⁵⁶This disease is prevalent in wild animals, but has never been reported in a non-stranded captive animal.

transferring pathogens (including antibiotic-resistant pathogens): (a) among captive populations when animals are moved; and (b) to wild populations when captive animals are moved to sea-pens⁵⁷ or when a public display facility discharges untreated effluents into the marine environment.⁵⁸ More extreme scientific critics suggest that transferred animals should be prohibited from ever being placed in a sea pen or other open enclosure, and that imported and exported marine mammals should be treated like parrots and other exotic birds, with quarantines and thorough medical examinations required at each end of the transfer.

Individuals at some public display facilities believe that these matters have been addressed sufficiently in the recent regulations proposed by APHIS.⁵⁹ In addition, an individual associated with the public display community relates that medical examinations prior to transporting marine mammals, regardless of their destination, have been a long-standing practice for many zoos and aquaria. Under such practice and before an animal is transferred, a veterinarian conducts an examination and certifies the animal's healthy condition.⁶⁰ They further state that, since humans are not required to be proven disease-free before traveling, it would be ridiculous to impose a higher standard for marine mammals. Managers of public display facilities are exceedingly hesitant to accept any animal that could pose a potential pathogenic threat because of their interest in their investment and the difficulty in replacing animals that die. Furthermore, they assert that there is no documented case where release of a captive marine mammal to the wild or to an open ocean pen, or where discharge of facility effluent has contributed to an epidemiological episode in the wild.⁶¹

Necropsies. Currently necropsies on dead marine mammals are performed in-house by public display facility veterinarians.⁶² Prior to the 1994 MMPA amendments, necropsy reports were required to be submitted to NMFS and FWS.

⁵⁷This is a concern with private organizations, often affiliated with animal protection groups, that promote the release of captive animals, as well as with some foreign public display facilities.

⁵⁸For individual public display facilities discharging waste to a publicly owned treatment works, local municipalities enforce wastewater treatment standards and effluent discharge permits under the authority of the federal Clean Water Act. If the facility discharges directly to the environment, the state enforces standards and permits under this same Act.

⁵⁹64 Federal Register 8735-8755 (Feb. 23, 1999).

⁶⁰In rare instances, such as hazardous situations or removal of an animal from imminent danger, it may be in the sick or threatened animal's best interests to be transported to a quarantined location where it can be treated. At such times, cumbersome paperwork and bureaucracy could jeopardize an animal's life.

⁶¹In the reverse situation, cases have been reported where receipt of a stranded wild animal or inadequate treatment of influent water has allowed pathogens from the wild to infect captive marine mammals.

⁶²Necropsies are routinely performed as soon as possible, normally within hours of death. Histopathological samples are collected and a full spectrum of tests are conducted by independent laboratories outside the facility. A full report of test results is normally received within 2 to 3 weeks, with preliminary results usually available within a week.

Current APHIS standards require such reports to be completed and kept on file at the public display facility for 3 years.⁶³ Such medical records are available to APHIS inspectors on site when requested, but are not submitted to, nor kept on file at, APHIS or any centralized point. The only requirement under the MMPA is to report to NMFS and FWS the “date of death of the marine mammal and the cause of death when determined.”⁶⁴ Thus, necropsies, which formerly were available to the public under the Freedom of Information Act, are no longer public records.⁶⁵

Animal protection advocates believe that public access to necropsy information is important to protecting the well-being of marine mammals in captivity, and they object to the 1994 changes in necropsy policy. They also fear that captive holding facilities minimize the impact of animal deaths by under-reporting findings of a necropsy, not performing an adequate necropsy, or failing to report actual findings.⁶⁶ These critics would like to see the MMPA amended to again require that necropsy reports, in standardized format, be submitted to a federal agency, thus guaranteeing public access to them. In addition, animal protection interests may propose a requirement that necropsies be performed by independent/impartial veterinarians (federally employed, appointed, or contracted veterinarians) and that institutions experiencing a marine mammal death report to APHIS within 48 hours, upon which an official examiner would be dispatched to perform the necropsy or review the tissue samples and examine the carcass. Scientists, however, point out that the more time that passes between death and necropsy, the less there is to learn from the necropsy. Thus, this suggests that, in addition to raising costs, the logistics of implementing an external review also may frustrate the ability to gain worthwhile information. Some scientists suggest an alternative approach that would direct veterinarians employed by the public display facilities to conduct necropsies, but allow veterinarians representing animal protection groups to have access to replicate tissue samples from necropsies, if requested. Critics of current policy may also propose that the MMPA be amended to require submission of necropsies on all animals transferred or exported under MMPA authority. In addition, some critics suggest that APHIS be required to conduct more intensive inspections of facilities holding captive marine mammals whenever mortalities at such facilities exceed a certain annual minimum, such as the deaths of either 2 adult animals or 1 juvenile.

Managers of captive holding facilities state that they ensure good healthcare for their animals by providing licensed veterinary care, thus also protecting themselves

⁶³9 CFR 3.110(d).

⁶⁴16 USC §1374(c)(10)(H). NMFS requires, by policy, that deaths be reported within 30 days, and has announced its intent to put this policy into regulation in the near future.

⁶⁵With few exceptions, zoos and aquaria claim to be open regarding the disposition of marine mammals within their care, with records available for public review.

⁶⁶Animal protection advocates believe that considerable incentive exists for public display facilities to provide false or incomplete information on the cause of death of marine mammals, asserting that these institutions are unlikely to provide evidence that would lead to accusations of wrongdoing, with subsequent scrutiny and possible fine.

from liability and claims of negligence.⁶⁷ They assert that there is no evidence that such care is suspect. Furthermore, they point out that necropsies are the subject of current APHIS rulemaking,⁶⁸ and thus need not be considered in legislation at this time. If more expensive necropsies were required, the issue of who would pay for them might be controversial. Animal protection interests believe the captive holding facilities should pay for supervised necropsies as part of the costs of captive care; managers of captive animals contend that the federal government should bear the costs if additional outside veterinary services were required.

Genetic Mixing. Some federal managers have criticized release programs for captive animals on genetic-mixing grounds. Similar concerns have not been stated about husbandry practices related to the movement of animals between captive facilities. The U.S. Navy's use of Atlantic bottlenose dolphins in open-ocean training exercises in the Pacific where they occasionally integrate with local populations of wild Pacific bottlenose dolphins also has been criticized. Scientists, conservationists, and animal protection advocates question whether it is responsible management to mix animals originating from different oceans, especially if there is the possibility that they or their offspring might be inadvertently or intentionally released into a wild breeding population. These interests suggest that the MMPA should be amended to address the genetic mixing that invariably occurs when captive animals are moved from one facility to another. MMPA provisions requiring attention to this concern might engender greater confidence if such captive animals later become candidates for release programs.⁶⁹ An opposing view encourages genetic mixing within captive populations, especially for species with small populations, as an appropriate husbandry practice to maintain genetic diversity, counter inbreeding within the captive population, and reduce the demand for acquiring new animals from the wild.⁷⁰ Some scientists believe that the incidental mixing of captive animals with wild stocks is rare and likely insignificant from an evolutionary perspective. However, they suggest that additional research may be required on these issues before appropriate policy can be determined, recommending a government workshop be convened on the topic.⁷¹

Wild Versus Captive Survivorship. Claims differ on whether captive marine mammals live longer, similar, or shorter lifespans in captivity compared to the same

⁶⁷Supporters of supervised or independent necropsies contend that requirements for such might further protect facilities from liability and claims of negligence, whereas the current unsupervised necropsies may leave them unprotected.

⁶⁸64 *Federal Register* 8735-8755 (Feb. 23, 1999).

⁶⁹Alternatively, it could be required that genetically mixed offspring be neutered before release.

⁷⁰Some scientists contend that, while encouraging breeding among groups of animals taken from the same general population may be appropriate, encouraging mixing between populations makes little sense given what is known about the movements and social isolation of many species of marine mammals.

⁷¹Authority for similar efforts has been provided in 16 USC §1380.

species in the wild.⁷² Animal protection advocates suggest that the MMPA be amended to direct and fund a government workshop to review the status of knowledge on survivorship in captive and wild marine mammal populations.⁷³ Such a workshop might determine what, if any, concerns are relevant to the performance of facilities holding such animals and influence the development of appropriate captive care and maintenance standards. Since only a few wild populations are reported to have been studied well enough to provide confident data on survivorship, such a workshop likely would identify additional areas for research on wild populations to obtain data necessary for comparison.

Air Quality and Noise at Facilities. Marine mammals typically inhabit environments far from human civilization. Based on speculation from human studies as well as limited reactivity research on wild cetaceans, local environmental conditions may cause stress in individual animals. Some animal protection advocates suggest that the MMPA be amended to mandate a study of the effect of the local environment (*e.g.*, urban noise, vibrations, air pollution) on animals at captive holding facilities, to identify and substantiate any effect on their life expectancy and general health. Such a study might define abusive levels and help determine appropriate captive care and maintenance standards. Some in the public display community, however, suggest that this concern be addressed administratively, and observe that some aspects already are the subject of current APHIS rulemaking.⁷⁴ Procedures for monitoring environmental effects on marine mammals also have been incorporated in American Zoo and Aquarium Association guidelines and facility operations manuals.

Rehabilitation and Release. Closures of at least 21 North American marine parks since 1990, a diminishing emphasis on marine mammal exhibits in remaining parks, reductions in the military use of marine mammals, and increasingly successful captive breeding programs have led to an increasing surplus of marine mammals in captivity. Because of this surplus, interest has increased concerning the rehabilitation and release to the wild of marine mammals that have spent significant time in captivity,⁷⁵ recognizing the need to prevent the spread of disease and release of unfit animals. Some animal protection advocates may propose MMPA amendments requiring federal agency definition of rehabilitation/release protocols⁷⁶ and a scientific

⁷²Some public display interests and managers suggest that captive care and maintenance practices are constantly evolving and improving such that historic survivorship data might have limited relevance to the current situation. In addition, others suggest that survivorship is so highly variable that it would be difficult to compare populations, captive and/or wild, and come to any statistically significant conclusions.

⁷³Authority for similar efforts has been provided in 16 USC §1380.

⁷⁴64 *Federal Register* 8735-8755 (Feb. 23, 1999).

⁷⁵Animal protection advocates cite several instances where dolphins and pilot whales are alleged to have been successfully released, with subsequent observation of apparently successful social integration with wild animals over a period of time. A parallel concern relates to preventing unregulated releases of marine mammals by more proactive animal protection advocates.

⁷⁶A scientific workshop might be convened to develop the protocols for conducting
(continued...)

research permit for rehabilitation and release activities and for establishing rehabilitation/release facilities for long-captive marine mammals, as well as authorizing oversight of these activities.⁷⁷ Such facilities might also engage in captive rotation programs, where animals are brought into captivity for predetermined amounts of time or are maintained in enclosures where they have access to the open ocean for recreation and “sabbaticals.” Proponents contend that the existence and operation of such facilities under strict guidelines would promote the welfare of captive and free-living marine mammals, including threatened and endangered species. Some public display interests and a few scientists, however, assert that rehabilitation and release does not work.⁷⁸ These critics cite research indicating that animals held in captivity for any length of time and those born in captivity die because they do not make the necessary adjustments to life in the wild. They would oppose efforts that encourage release of long-captive animals. Other sources of opposition would include those worried about the federal cost of financing such a program.

Quality of Captive Environments. Under present MMPA regulations, captive marine mammals can be relocated anywhere that complies with APHIS regulations on captivity enclosure characteristics, *e.g.*, bare concrete tanks are acceptable. Some scientists and animal protection interests assert that the captive environment of some U.S. marine parks is almost devoid of the features, richness, or dimensions of the natural world⁷⁹ of marine mammals — social animals that have evolved to exploit the complex and expansive natural marine environment.⁸⁰ Furthermore, they claim that our increased understanding of the complex social, psychological, and behavioral requirements of marine mammals reveals how lacking most captive environments are in providing sufficient space for animals to make normal postural and social adjustments or in allowing adequate freedom of movement.

⁷⁶(...continued)

rehabilitation/release projects.

⁷⁷How such programs might interact with existing marine mammal stranding networks would need to be defined. These networks along the Atlantic, Gulf, and Pacific Coasts involve dozens of facilities that provide short-term assistance to beached or stranded marine mammals when necessary to improve their condition sufficiently to be able to return a healthy animal to the wild.

⁷⁸These critics suggest that veterinary examinations are unlikely to be able to pronounce captive animals disease-free, and that released animals are unlikely to be accepted easily or smoothly into the social structure of wild populations.

⁷⁹While some coastal species may inhabit a topographically diverse physical environment, the open ocean is almost featureless. Some scientists suggest that emphasis should be placed on cleanliness, space, and behavioral responses, rather than what humans might assume constitutes a “quality” environment, since most marine mammals get their stimulation from social interactions, feeding, *etc.*

⁸⁰Generally, captive holding facilities and marine mammal trainers assume responsibility for providing environmental enrichment in the form of playtime, toys, and other stimulating objects or activities. In addition, facility design criteria have changed substantially to where habitats currently under construction incorporate innovative shapes and varying rockwork for alternating surfaces, providing swim-through areas (arches and tunnels) as well as areas for rubbing and scratching.

These critics would like the MMPA to require APHIS to define minimum acceptable levels of environmental and social stimuli for marine mammals. The physical and social environment of any animal regulated by the MMPA, it is argued, should conform to some standard for what is minimally acceptable and strive for enrichment to fulfill animals' needs. However, establishing standards to respond to the differing requirements of various species may be complex. For example, while some contend that overall size of the captive environment is much more important than its features for cetaceans, others believe that pinnipeds require more emphasis on geotopical elements in their artificial habitat rather than a large enclosure. In addition, it may be difficult or impossible to provide situations in captivity that permit the complex social systems, groupings, and bonding normal among marine mammals.

Programs Promoting Human Interaction with Captive Dolphins. Various facilities holding captive dolphins are promoting interactive petting and feeding pools as well as programs for swimming with or wading with these animals. Animal protection advocates as well as some scientists and managers claim these programs place both dolphins and humans at risk, and believe that APHIS regulation of such activities is inappropriately minimal. Early in 1999, APHIS suspended enforcement of all AWA regulations dealing with "swim-with-the-dolphin" programs to solicit further public comment on expanding regulations to encompass activities involving shallow water interactive programs with dolphins.⁸¹ Some animal protection interests would like the law to either prohibit all interactive programs, including petting and feeding pools which they claim have never been regulated, or require more stringent regulation of them by APHIS. These critics also suggest an inconsistency in policy and confusion of the public wherein swimming with and feeding of wild dolphins is prohibited to protect them from harassment while swimming with and feeding of captive dolphins, which are likely less able to escape interaction, is promoted by marine parks. Those conducting interactive programs, however, argue that their activities are safe and well managed, with adequate measures enforced to protect both dolphins and humans.

Insurance Requirement. Since 1990, at least 21 North American marine parks are reported to have closed. Animal protection advocates suggest that measures need be taken to assure that the welfare of captive marine mammals is protected should parks close or fail or research programs terminate. These interests may propose amending the MMPA to require that a minimum of \$25,000 per marine mammal be placed in escrow or be covered by insurance as an additional permit requirement for each marine mammal transfer, import, and export. In addition, such a requirement might be imposed on each marine mammal born in captivity. Such financial resources would be used if the federal government were required to assume temporary responsibility for animals from closed parks or pay transfer expenses for moving animals to new facilities.

Native Americans and Marine Mammals

Co-Management with Native American Tribes. Some federal managers believe that co-management agreements, when accompanied by dedicated funding,

⁸¹64 *Federal Register* 15918-15920 (Apr. 2, 1999).

have dramatically improved communication among Native subsistence users, Alaska Native organizations, and the FWS. However, Native Alaskan interests assert that NMFS has been very slow to enter into co-management agreements to implement marine mammal cooperative agreements in Alaska (authorized under 16 USC §1388), and that federal appropriations to provide grants to Native organizations under this section have not been forthcoming.⁸² Some Native American interests are likely to propose amending the MMPA to provide additional opportunities for Native Americans to participate in co-managing marine mammal populations, especially those that may be of subsistence value. Particular need is seen for coordinating federal and Alaska Native priorities in the Bering Sea region, due to ongoing concerns to better understand this marine ecosystem's apparent decline. Countering the view in support of additional co-management opportunities are some in the animal protection, scientific, and conservation communities who fear the potential for overhunting by Natives for economic gain, and believe that current MMPA co-management provisions are more than adequate (if not excessively lenient). These critics believe co-management works well only when the federal government supports a multi-year national program to assess population abundance, habitat conditions, and ecological relationships to provide a sound basis for such co-management, such as has been done since the 1970s for bowhead whales. Similar national programs have not been conducted on most other species.

Reporting Subsistence Takes. Knowledge of the number of animals killed is necessary for managing any harvested resource. Nevertheless, many marine mammal stock assessment reports lack sufficient information on subsistence takes. In 16 USC §1379(i), the MMPA states that “the Secretary may prescribe regulations requiring the marking, tagging, and reporting of animals taken pursuant to section 101(b).” The FWS has promulgated regulations and instituted a marking, tagging, and reporting program (MTRP) for polar bears, walrus, and sea otters taken by Alaska Natives.⁸³ NMFS does not have a similar program, even though comparable information could be useful for managing species of special concern such as Steller sea lions and harbor seals.⁸⁴ Instead, NMFS has awarded contracts for harvest estimates whose accuracy has been questioned by some scientists.⁸⁵ Some Alaska Native organizations conduct biosampling programs for research on marine mammals taken for subsistence through cooperative agreements developed under the authority of 16 USC §1388. Despite this, some in the Alaska Native and conservation

⁸²Some managers suggest this is due, in part, to limited funds appropriated by Congress to the various agencies, especially NMFS.

⁸³These MTRPs do not collect data useful for accurately assessing the age/sex composition of the harvest, nor for establishing annual productivity. With additional funding, the MTRPs could be restructured to obtain these data.

⁸⁴On May 24, 1999, NMFS published an interim final rule requiring the marking and reporting of beluga whales harvested from Cook Inlet (64 *Federal Register* 27925-27928).

⁸⁵The nature of human relationships in small rural Alaskan communities makes obtaining consistently accurate data extremely difficult. Thus, the precision and accuracy of retrospective household surveys for marine mammal harvest is questioned by some critics, especially where such work has not been independently peer reviewed. Retrospective surveys for marine mammal harvest might be considered minimum estimates.

communities continue to call for NMFS to develop an MTRP similar to that conducted by FWS, desiring more research on marine mammals taken for subsistence use.

The Alaska Native community generally accepts the FWS program, considering it to be well run and providing useful data. However, some federal managers and conservation interests are not satisfied with the level of detail available on subsistence takes for many Alaska species. In particular, some animal protection interests, scientists, and managers do not consider the FWS program “well run” and would like to see this program improved. Some scientists believe that a well-designed harvest survey, using structured hunter samples from different communities that intensively exploit the targeted species, backed by good statistical methods, would fulfill management needs. Other scientific and conservation interests suggest that the MMPA be amended to require reporting, marking, tagging, and sampling of all marine mammals taken by Alaska Natives for subsistence.⁸⁶ Others in the conservation and animal protection communities believe such reporting should also be required for any subsistence takes of marine mammals by Native Americans in the contiguous states (*e.g.*, Washington, Oregon, and California). Some scientists, however, contend that tagging of subsistence kills may not be practical for species taken in large numbers, such as some seals, and that the sheer volume of individuals’ subsistence activities may lead to under reporting. In addition, some scientists and managers believe that better subsistence estimates need to be factored into the PBR process (see pages 9-10), especially in situations where subsistence harvest may account for the great majority of the total animal removal and where that number may approach or exceed the PBR.⁸⁷

Limitation on the Sale of Edible Subsistence Takes. In 16 USC §1371(b)(2), the MMPA states that “any edible portion of marine mammals may be sold in native villages and towns in Alaska or for native consumption.” There are legitimate reasons why Alaska Natives purchase legally taken parts of marine mammals for their consumption.⁸⁸ However, the current interpretation of the MMPA’s §101(b)(2) is that all Alaska locales, including Anchorage, qualify as native villages and towns. Certain markets in Anchorage sell large quantities of marine mammal meat and muktuk,⁸⁹ with a few Alaska Natives allegedly hunting primarily to supply this commercial market.⁹⁰ This is seen as a particular problem for the Cook

⁸⁶Exemptions from reporting might be granted when or where stocks are not in decline, not listed under the ESA, and not harvested at levels exceeding 10% of PBR.

⁸⁷Some federal managers have felt considerable pressure to ensure that PBR levels are set higher than the subsistence harvest levels for some Alaskan species, *e.g.*, Pacific walrus.

⁸⁸Many Native Alaskans, regardless of where they reside, are employed full-time with limited opportunity to continue hunting and gathering to support their traditional subsistence lifestyle and diet. Thus, the commercial marketplace may provide their only access to traditional foods, which is part of maintaining a cultural identity.

⁸⁹Whale skin and adhering blubber.

⁹⁰Associated Press. *Regulators to Consider Protections for Cook Inlet Belugas*. Sept. 27, 1998; Associated Press. *Biologists Say Beluga Population Shrinking Fast in Cook Inlet*.

Inlet beluga whale stock, which is small and is being over harvested,⁹¹ largely because of market hunting.

Scientists, animal protection advocates, and conservationists suggest amending the MMPA to limit or restrict the sale of edible parts from marine mammals taken for subsistence. The situation in Cook Inlet may elicit proposals to authorize federal agencies to either limit the demand (*e.g.*, prohibit sales in cities or in communities where Native residents are in the minority) or restrict the number or type of animals that can be taken for sale (*e.g.*, prohibit sales of Cook Inlet beluga whale parts or set a strict quota on animals killed). In the latter case, if NMFS made a regulatory determination that Cook Inlet beluga whales were depleted under the MMPA or threatened/endangered under the Endangered Species Act,⁹² they could take regulatory action to limit subsistence take without legislation. Others suggest amending the MMPA to prohibit the commercial sale of marine mammal products from any stock that is declining in abundance.

Alaskan Natives, however, believe the Native community itself, through the Alaska Beluga Whale Committee and the Cook Inlet Marine Mammal Council, should take the initiative to deal with this problem, using existing models that have proven workable in similar Alaska Native situations.⁹³ They suggest approaches similar to those used in the allocation of strikes⁹⁴ among various whaling crews in the North Slope Borough or the Sitka Tribe's management of sea otter take in traditional territory. Others are concerned about the potential cultural costs of limiting access to subsistence foods for individuals living in urban areas and the possibility that this could outweigh benefits to marine mammal stocks.

Definition of Subsistence Whaling. With the support of the U.S. government, the Makah Tribe of Washington State petitioned the International Whaling Commission (IWC) in 1996 for an allocation to harvest eastern Pacific gray whales, to exercise whaling rights as part of their cultural heritage negotiated in the 1855 Treaty of Neah Bay between the Makah and the United States. In October 1997, a bilateral agreement between Russia and the United States on aboriginal quota

⁹⁰(...continued)
Nov. 19, 1998.

⁹¹A significant percentage of the Cook Inlet beluga stock is killed each year — between 98 and 147 animals were reportedly taken in 1996, with another 49 to 98 animals struck and lost. This stock has declined almost 50% in abundance from an estimated 653 individuals in 1994 to 347 individuals in 1998, and its summer range has contracted in recent years. Marine Mammal Commission. *Annual Report to Congress, 1998*. Washington, DC: Jan. 31, 1999. p. 33-34.

⁹²NMFS announced at 63 *Federal Register* 64228-64229 (Nov. 19, 1998) that it was initiating a status review of Cook Inlet beluga whales. On Mar. 3, 1999, a coalition of conservation groups and a former whale hunter petitioned NMFS to list the Cook Inlet beluga whale as endangered.

⁹³Some critics fault NMFS for reliance upon the Cook Inlet Marine Mammal Council to develop some mechanism for self-regulation, which it has not.

⁹⁴Strike means hitting a whale with a harpoon, lance, or explosive device.

sharing resulted in the Makah gaining access to IWC aboriginal quota sufficient to kill an average of 4 gray whales from the North Pacific stock annually from 1998 through 2002.⁹⁵ Disagreement continues, both domestically and internationally, concerning the appropriateness and legitimacy of the action taken on this issue.⁹⁶

While bowhead whaling by Native Alaskan Arctic villagers is seen as truly for the subsistence of the Natives, animal protection advocates are concerned that the Makah seek to kill whales without demonstrable proof of nutritional need, but with an eye to the possibility of commercial trade in whale products. To animal protection interests, this has the potential for reversing the whale's recovery and for inviting a return to whaling by all northern cultures which claim whaling as part of their cultural tradition. In fact, after the Makah situation, Native peoples in Canada demanded their "cultural right" to return to whaling. Although Norwegians, Icelandics, Faroese, Irish, Japanese, Russian, and others assert cultural traditions in whaling, their situations and that of Canadian aboriginal groups differ from the Makah in that no "right to whale" has been acknowledged by treaty.⁹⁷ Animal protection and some scientific interests suggest amending the MMPA to make a clear distinction between non-subsistence and subsistence whaling and to establish more stringent criteria for non-subsistence whaling, allowing only minimal token quotas/takes of those stocks determined to be fully recovered. Others suggest the MMPA be amended to require that the United States take no action that might "diminish the effectiveness" of the IWC, similar to language in the Pelly Amendment to the Fishermen's Protective Act (22 USC §1978) that is applicable to foreign nations with whom the United States trades. However, it is not certain that Congress has the authority to take any action that might alter or limit the terms of the 1855 Treaty of Neah Bay.

Definition of Subsistence. Several parties suggest that policy relating to "subsistence" is confused and needs clarification, requiring attention to both ethics/tradition and biology/ecology for resolution. Some of the confusion was created when the MMPA waived the moratorium on taking of marine mammals by Alaska Natives, placing federal and Alaskan law and regulations in conflict.⁹⁸ This confusion was exacerbated by the interaction of western technologies and economies on traditional beliefs and practices. For example, the last reported annual walrus kill for the St. Lawrence Island communities of Gambell (1,300 animals) and Savoonga (700 animals) was mostly females and appears excessive and questionable as "subsistence" to some managers and scientists. FWS regulations on the use of meat, skin, *etc.* are minimal and result in significant waste in a harvest that focuses on

⁹⁵Makah whaling was suspended on June 9, 2000, by 9th Circuit Court of Appeals (*Metcalf v. Daley*, No. 98-36135), with NMFS ordered to begin the National Environmental Protection Act process afresh and prepare a new environmental assessment.

⁹⁶Marine Mammal Commission. *Annual Report to Congress, 1998*. Washington, DC: Jan. 31, 1999. p. 29-32.

⁹⁷Some of these cultures might not elect to kill whales for strictly cultural benefits if commercial trade in whale products, domestically and/or internationally, was not also permitted.

⁹⁸Background on the federal/state conflict in Alaska over subsistence use can be found at [<http://www2.polarnet.com/users/outdoor/images/subak.html>].

obtaining ivory. Some scientists and managers suggest that the MMPA be amended to base subsistence policy more firmly within the context of a species' biological and ecological requirements, with social/cultural values taken into secondary account within that framework.

Cultural Exchange. While the 1994 MMPA amendments appeared to have improved cultural exchange among Inuit peoples as far as imports of marine mammal products by Alaskan Natives are concerned, problems remain with the export of marine mammal products by Alaska Natives for these purposes. In addition, problems arose in July 1999 when handicraft whalebone and sealskin marionettes used in portraying traditional Inuit legends were intercepted and seized by the U.S. Customs Service as violating the MMPA when some of these marionettes were shipped by Canadian Inuit to a U.S. craftsman for finishing detail adjustments and returned. Native and some scientific interests suggest that the MMPA might be amended to be less restrictive of cultural exchanges involving marine mammal products.

Permits and Authorizations

Polar Bear Sport Hunting in Alaska. After the 1994 amendment of the MMPA to permit the import of polar bear trophies from Canada,⁹⁹ the sport hunting community may seek further amendment to allow polar bear sport hunting in Alaska under a strict, conservative quota. Proponents of such an amendment suggest that this action might promote better polar bear management and could result in additional funding for polar bear research and management. The animal protection community almost certainly would oppose such a proposal, and some may even seek repeal of the 1994 amendments allowing the import of polar bear trophies from Canada.

Large Incidental Takes. MMPA provisions (16 USC §1371(a)(5)(A)) authorize federal managers to issue permits for U.S. citizens to incidentally take small numbers of marine mammals.¹⁰⁰ However, the MMPA lacks a comparable program to deal with large incidental takes, other than by the commercial fishing industry. (See earlier section "Commercial Fishing Interactions with Marine Mammals.") Related to this, the regulatory burden for protecting marine mammals appears to fall inequitably on different industries. For example, while small incidental take authorizations are regularly required by NMFS for offshore oil and gas exploration and development activities, NMFS does not regulate large commercial vessel traffic under the small incidental take program,¹⁰¹ despite concerns that serious injury and

⁹⁹A subsequent amendment in §5004 of P.L. 105-18 relaxed criteria that needed to be met before polar bear trophies taken in Canada prior to the 1994 MMPA amendments could be imported to the United States.

¹⁰⁰Provided that these takings do not cause unmitigable damage to marine mammal populations and have no more than a negligible effect on subsistence needs.

¹⁰¹NMFS justification for not regulating this activity includes the large numbers of vessels, the lack of identified cost-effective mitigation measures, the lack of authority over international vessels to implement effective mitigation measures to decrease noise effects on marine mammals, and the economic disadvantage potentially falling on those U.S. vessels that might be required to implement costly mitigation.

mortality of cetaceans due to vessel strikes may be significant. Other activities that may “take” large numbers of marine mammals by harassment include whale watching, high-speed ferries, recreational jet skis, and other sources of anthropogenic noise. By statute, small take authorizations may be issued for periods of as long as 5 years under regulations, or 1 year under incidental harassment authorizations, with congressional report language indicating an intent that such authorizations be renewable. NMFS claims that most authorizations limit taking to small numbers of animals¹⁰² by harassment because mitigation measures imposed by NMFS on the activity prevent serious injury or mortality to marine mammals. Conservationists and animal protection advocates agree that use of the small incidental take provisions for activities such as ocean vessel traffic would be contrary to these provisions’ original intent, and suggest that the MMPA be amended to specifically authorize and establish criteria for a management program, including incorporating some concept promoting a reduction of serious injury and mortality to insignificant levels, to deal with requests for more extensive and longer term taking of marine mammals. If the MMPA were amended in the proposed manner, individuals who might be required to comply with these modified permitting procedures (*e.g.*, jet skis, whale-watching vessels, ocean transport vessels) might oppose such a change if the new requirements were seen as burdensome or as imposing additional restrictions on their activities.

Noise and Its Effects. Noise as a category of potential harm to marine mammals is unique in that sound propagates both horizontally (near/at the surface) and vertically (down to substantial depths). Anthropogenic acoustics permeate the water column and have the potential to affect numerous unseen marine mammals, fish, diving birds, and other marine life. Although it is difficult to measure the potential that noise has to harm or harass unseen animals, the U.S. Navy, the Minerals Management Service, and other agencies have invested considerable time and funds on research to develop monitoring capabilities and to document and quantify the impact from specific noise sources on certain species under known conditions.¹⁰³ However, significant information remains lacking on sound impacts on cetaceans, on behavioral and physiological reactions of marine mammals, and on which species are exposed at what depths and distances from sound sources. For this reason, the effect of noise on marine mammals is subject to much speculation, presumption, and misinformation. Thus, FWS and NMFS have reacted to issue- or site-specific concerns, but have appeared reluctant to issue guidance or regulations concerning anthropogenic noise and hesitant to implement any systematic monitoring or enforcement program.

¹⁰²NMFS interprets this to mean a portion of a marine mammal stock whose taking would have a negligible effect on that stock.

¹⁰³Measurements are obtained by attaching time-depth recorders to animals which are then exposed to the sounds. For details, consult [<http://is.dal.ca/~whitelab/rwb/robin.htm>]. Others have used autonomous seafloor acoustic recorders that record all sounds for as long as 22 days or until batteries fail. Using such methods, whale vocalization rates have been observed to be influenced by airgun pulses from seismic surveys. See also an Office of Naval Research report at [http://www.onr.navy.mil/sci_tech/engineering/onrpgank.htm].

Some scientists,¹⁰⁴ believing that the benefits of acoustic research may outweigh any potential effect on marine mammals,¹⁰⁵ may propose amending the MMPA to provide for simplified procedures for federal authorization of incidental taking from acoustic noise. As one approach, these scientists suggest that the MMPA might be amended to authorize the regulation of impacts collectively as broad categories or classes of sound-producing activity rather than separate individual actions.¹⁰⁶ Other proposals might include revising the definition of level B harassment (16 USC §1362(18)(A)(ii)) to be applicable to actions that can reasonably be expected to constitute a significant threat only to marine mammal stocks rather than also to small numbers of individual animals. Reasons offered by some in the scientific community for changes include: (1) the loudest anthropogenic noisemakers are unregulated, including personal watercraft (*e.g.*, jet skis), large high-speed oceangoing ships, and whale watching vessels;¹⁰⁷ (2) a disproportionate “harassment” burden is placed on scientists using acoustics for research (*i.e.*, direct research into the potential effects of sound on marine life is subject to a higher regulation and compliance burden than any other man-made ocean acoustic activity); and (3) human-made sound in almost all cases is neither as loud nor as constant as naturally-occurring ocean activity (*e.g.*, subsea earthquakes, rain on sea surfaces, volcanic eruptions, and whale calls themselves).

Animal protection advocates, conservationists, and some scientists, however, characterize many sources of anthropogenic noise in the ocean as increasingly persistent and regular. Thus believing that too little is known about the effects of noise on marine mammals, these critics oppose any action that could be interpreted as liberalizing regulation of anthropogenic sources.¹⁰⁸ In addition, these critics are especially concerned with low frequency sound used in acoustic research that is produced at very high pressure levels and is designed to travel thousands of miles

¹⁰⁴This includes scientists using noise in their research and scientists consulting for industries and agencies (*e.g.*, the U.S. Navy) that release large amounts of noise into the ocean.

¹⁰⁵This might be tempered somewhat by the unexplained mass stranding and death of Cuvier’s beaked whales in May 1996 in the eastern Mediterranean Sea (Ionian Sea) coincidental to low-frequency active sonar tests conducted by a NATO research vessel in the vicinity. Reported in “Scientific Correspondence,” *Nature*, Mar. 5, 1998. However, no mass strandings or other whale deaths have been reported or observed coincidental to oceanic tests of the U.S. Navy’s low-frequency active sonar.

¹⁰⁶These advocates also assert that various activities with the potential to kill, injure, and harass marine mammals are regulated inconsistently and inequitably, with commercial fishing given much more liberal treatment (*e.g.*, liberal PBRs and use of deterrents) than anthropogenic noise (*e.g.*, concern over course deviations and other short-term behavioral changes).

¹⁰⁷See the previous section “Large Incidental Takes,” which considers whether the MMPA should be amended to regulate these activities.

¹⁰⁸Some scientists assert that little has been published on this topic because insufficient resources to address the problem have been provided by funding agencies. They further question, if funding were provided, whether permits from NMFS and various Institutional Animal Care and Utilization Committees mandated by the Animal Welfare Act would allow necessary research to be conducted.

through the ocean, as opposed to other anthropogenic noise that dissipates relatively quickly in the ocean. Furthermore, these critics suggest that, rather than exempting acoustic scientists from regulation and permitting additional sources of ocean noise, other sources of non-research-related noise should be more aggressively regulated to reduce this harassment. Most constituencies¹⁰⁹ might support a proposal to authorize and fund a major research effort directed at increasing understanding of the potential effects of anthropogenic noise sources on marine mammals.

Research Permits for NMFS and FWS Scientists. The MMPA (16 USC §1374(c)(3)(A)) provides a lengthy process for issuing scientific research permits. NMFS and FWS are funded by Congress to study marine mammals as necessary for their conservation and management. Some federal agency personnel would like to see the MMPA amended to facilitate federal research on marine mammals without going through the cumbersome process of obtaining scientific research permits. These federal researchers question the necessity of requiring federal agency personnel to request permits from another part of their own agency before they can do their work. These critics suggest that the MMPA be amended to provide scientists within the federal management agencies with a blanket authorization for research. Others suggest that relief from the bureaucratic permitting process be extended to all those involved in conducting federally funded research. This could include an exemption from permits, multi-year permits, or an expedited review procedure offering a simpler renewal of permits for studies unchallenged by public comment. It might also be applicable to state wildlife agencies when working in direct cooperation with one of the federal agencies. Non-federal scientists, animal protection advocates, and some conservationists argue that regular reporting as well as outside peer and/or public review are especially necessary for government scientists who could be influenced by political considerations. They also would object to preferential treatment of federal researchers as discriminatory, arguing that federal research should be required to meet the same standards, requirements, and scrutiny as non-federal research.¹¹⁰

Scientific Research Permits. Several issues concern the administration of scientific research permits by federal management agencies. Some scientists criticize the FWS and NMFS permit offices for delays in processing requests for scientific research permits, even though the MMPA mandates a 30-day deadline for agency action.¹¹¹ While some permits are processed quickly, others may take many months longer, they charge, with no explanation or obvious differences between them. Critics report that the delay between submission of a permit application and its publication in the *Federal Register* for public comment can be six weeks or more.¹¹² To assist the

¹⁰⁹Other than, perhaps, taxpayer groups.

¹¹⁰Some critics allege the existence of bias and/or conflict of interest in current federal agency permitting procedures, wherein applications for highly controversial research passes quickly and quietly through the review process when forwarded by field staff within the permitting agency, while comparable proposals by non-agency researchers can take months or longer to receive action.

¹¹¹16 USC 1374 (c)(3)(C).

¹¹²Some agency managers suggest 3 days between receipt of a permit application and
(continued...)

agencies in expediting the permit review process, they suggest that the MMPA be amended to establish a commission of scientists to review scientific research permit applications in the same fashion that science commissions review proposed research on human and animal subjects. Such a commission might also be helpful in addressing concerns about alleged misuse of scientific research permits by whale watching operators, dolphin encounter tour brokers, and others wherein “paying volunteers” are recruited to help conduct “research” of questionable value. Although this latter issue could be addressed administratively, congressional direction might be seen as helpful or even necessary if administrative action was not forthcoming. Scientists are also concerned with permit restrictions that they interpret as constraining their ability to conduct manipulative and invasive research on marine mammals, albeit with adequate safeguards.

Some scientists suggest that the entire scientific research permit process needs to be streamlined, especially what are seen as: 1) restrictive, burdensome, and unreasonable procedural requirements (*i.e.*, level of specificity and amount of paperwork) related to justify level B harassment (see also the discussion of “Harassment” on pages 37-38) for *bona fide* research; and 2) unduly tedious and specific requirements of the annual reporting process. Scientists feel they are subjected to a much more stringent regulatory regime (*e.g.*, see also the discussion of “Noise and Its Effects” beginning on page 30) than is imposed on activities that appear to be potentially more harmful to marine mammals (*e.g.*, commercial fishing).

State Approval of Federal MMPA Permits. Under the authority of the federal Coastal Zone Management Act, three states (Hawaii, Washington, and Alabama)¹¹³ include in their state coastal plans the requirement that the state approve federal permits granted under the authority of the MMPA. Some scientists are concerned that state review of federal marine mammal permits is duplicative and burdensome for marine mammal researchers and circumvents the procedures in the MMPA for granting state management authority over marine mammals. These critics suggest that Congress may wish to review whether this action improves protection for marine mammals.

Program Management and Administration

Definition of “Take.” Some scientists suggest it might be worthwhile to re-evaluate the MMPA definition of “take” in their belief that the current definition may be overly broad and encompassing, as well as unenforceable in many situations. These critics suggest that the MMPA be amended to incorporate a new definition of “take” that establishes an enforceable, biologically significant standard for interactions with individual marine mammals (for ESA-listed and depleted species) or marine mammal populations (for all other species). With such a standard, they argue, management will focus specifically on interactions which are likely to have adverse biological significance for these animals. However, animal protection advocates might

¹¹²(...continued)
publication in the *Federal Register* is reasonable and attainable.

¹¹³Also, Guam and the Northern Mariana Islands exercise similar authority.

be anticipated to oppose any effort to redefine take that might be perceived as reducing the scope of activities prohibited or regulated under the MMPA.

Trade in Marine Mammal Parts and Products. The U.S. government has experienced pressure from the World Trade Organization (WTO) regarding the trade barriers inherent in many U.S. environmental statutes. Importing marine mammals and their products into the United States is prohibited by 16 USC §1371(a), except under special permits for scientific research, public display, photography for education or commercial purposes, or enhancing the survival or recovery of a species or stock. Permits also may be granted to import polar bear parts, other than internal organs, taken in legal Canadian sport hunts. In addition, the Endangered Species Act (ESA) and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES, the international agreement implemented *via* the ESA) impose additional restrictions on trade of certain listed marine mammals. Given the desire of several nations to commercially trade in marine mammal products (particularly whalemeat and pinniped products), the Administration may attempt to forestall a WTO challenge to U.S. prohibition of such trade by proposing MMPA amendments to allow limited trade¹¹⁴ or address this issue in some other limited manner to make the MMPA more compatible with WTO rules.¹¹⁵ Such a proposed change would likely be vigorously opposed by some in the environmental, scientific, and animal protection communities who fear that opening U.S. markets could promote increased kills in nations less protective of marine mammals.¹¹⁶ They further assert that, if such a proposal were enacted, U.S. policy would be inconsistent, prohibiting domestic commercial exploitation of marine mammals while encouraging or allowing foreign commerce in these same protected animals' products in the United States. They also argue that the availability of foreign marine mammal products on the U.S. market could encourage the illegal harvest of domestic marine mammals for these same markets. An alternative, although likely more difficult, approach seeks to broaden WTO rules during the next round of WTO negotiations in 2000 such that the MMPA could be found compatible.

Management of Robust Stocks. Populations of California sea lions and Pacific harbor seals have been increasing along the Washington, Oregon, and California coasts, leading to more frequent interactions between these animals and fishermen and the general public (particularly the marina/boating public). On February 10, 1999, in response to the requirements of 16 USC §1389(f), NMFS

¹¹⁴Some suggest a limited MMPA amendment to permit importing of "byproducts of aboriginal subsistence activities," allowing, for example, ringed seal skins from Canadian and Greenland Inuit subsistence hunters to enter U.S. markets.

¹¹⁵The main concern with the WTO appears to be that the MMPA prohibits trade in marine mammal products regardless of a species' conservation status. Thus, the United States finds it difficult to justify the expansive MMPA import ban as necessary for responding to legitimate conservation concerns. For those species for which conservation is a concern, listing under the ESA provides trade restrictions under CITES.

¹¹⁶Elements of acceptable harvest management might include a sustainable kill based on sound science with adequate animal welfare standards. However, some U.S. scientists and managers might argue that, for the United States to be able to certify that our own science meets these standards, substantial expansion of U.S. research programs might be required.

delivered an 18-page report to Congress and released a supporting 84-page scientific document on management conflicts related to rapidly increasing populations of West Coast harbor seals and California sea lions.¹¹⁷ How to manage these stocks is expected to be an issue during MMPA reauthorization. The issue is seen by some as whether an increasing human population on the West Coast can co-exist with a truly robust pinniped population or whether these pinnipeds will be adversely affected by coastal development and marine resource exploitation or will themselves have an adverse effect on coastal resources.¹¹⁸

Some local residents and fishermen fear that these pinniped stocks may be “over-populating.” Scientists, conservationists, and animal protection advocates counter that populations may be merely returning to their historic carrying capacities after over-exploitation earlier in this century. Fishing industry or local government officials may propose that the MMPA be amended to permit selective culling or additional lethal nuisance animal control. NMFS has recommended that Congress consider amending the MMPA to create a new framework that would allow state and federal resource managers to immediately address site-specific conflicts involving California sea lions and Pacific harbor seals.¹¹⁹ NMFS suggests that a streamlined approach provide procedures for lethal removal of these species where they are harming severely depleted salmonids (including some populations listed as threatened or endangered under the ESA), where they are harming salmonid populations identified as being of special concern by states, and where they are in conflict with human activities. While the MMPA in 16 USC §1389 already provides for the lethal removal of pinnipeds to protect human safety and fish stocks, managers view the existing provisions as lengthy and overly cumbersome. Conservation, animal protection, and scientific critics of this approach, however, condemn the idea of culls and lethal nuisance animal control as excessive. They believe that it deflects resources from addressing other expensive and contentious human activities that contribute to fish stock declines (*e.g.*, habitat degradation, siltation, water diversions, fish passage at dams, overfishing)¹²⁰ and that non-lethal deterrents have not been adequately explored. Furthermore, they express concern that authorizing the killing of marine mammals interacting with wild fish stocks appears counter to the MMPA’s mandate to manage on an ecosystem basis.¹²¹ In addition, these critics are adamant that nuisance animal control not be authorized for human activities (*e.g.*, aquaculture) that can and should be sited so as to avoid areas of potential conflict with marine mammals.

¹¹⁷NMFS. *Impacts of California Sea Lions and Pacific Harbor Seals on Salmonids and West Coast Ecosystems*. Report to Congress, Feb. 10, 1999.

¹¹⁸Such adverse effects include consumption of fish stocks and fecal contamination of shellfish areas near seal and sea lion haulout areas.

¹¹⁹NMFS. *Impacts of California Sea Lions and Pacific Harbor Seals on Salmonids and West Coast Ecosystems*. Report to Congress, Feb. 10, 1999. p. 13-15.

¹²⁰In addition, some of these changes may also alter conditions determining where pinnipeds congregate and feed, possibly increasing predation on juvenile salmon.

¹²¹16 USC §1361.

Fostering International Cooperation. Although the MMPA established an international program (16 USC §1378), little framework exists to foster international cooperation between the United States and foreign countries on marine mammal issues. Under the MMPA, international cooperation — funding, exchange programs, and cooperative research — has been limited largely to the industry-centered dolphin/tuna issue.¹²² This is in sharp contrast with endangered species policy, under which millions of dollars in federal U.S. funds are used to foster international cooperation to protect African elephants, tigers, rhinoceros, and other species. Proponents of increased international cooperation argue that no similar program for marine mammals is provided in the MMPA or elsewhere in U.S. law. For example, although the U.S.-managed northern right whale is endangered and its population is not rebounding, the southern right whale population is flourishing. A Brazilian right whale project focuses on reducing human/whale interactions where ship strikes have been a major cause of death. Cooperative activities that might be promoted include sharing whale monitoring and collision avoidance procedures as well as whale reproduction, health, and population information with Latin American authorities. Marine mammal scientists suggest that Congress may want to consider the benefits of encouraging international cooperative relationships on marine mammals by U.S. agencies. Most marine mammal constituencies appear supportive of efforts to encourage more international cooperation, as long as such action does not promote invasive research or commercial ventures.

The need for expanding international cooperative programs for Arctic species is especially critical because of the virtual total demise of Russian research and management programs, and the increasing pressure to take these species for subsistence purposes by protein-impooverished Native peoples. Many of these species are “shared” because their ranges include the waters of both the United States and the Russian Federation. The lack of Russian support has resulted in an almost total paralysis of population assessment programs for these shared species.

Critics, however, warn that, if Congress acts in this area, specific language might need to be incorporated to prevent potential abuse (*i.e.*, expenditure of funds intended to recover and protect U.S. marine mammal stocks on “boondoggles” to study exotic marine mammals in interesting places) and to require appropriate guidance and accountability to ensure that international efforts are reciprocal and relevant.

Harassment. The 1994 MMPA amendments revised the definition of “harassment” to distinguish between two levels of interaction — those with the potential to injure (level A harassment) and those with the potential to disturb (level B harassment).¹²³ Some federal managers have found the new definition of level B harassment to be particularly difficult to enforce,¹²⁴ and potentially harmful human

¹²²In addition, international dialogue on whale conservation has occurred under the auspices of the International Whaling Commission.

¹²³16 USC §1362(18).

¹²⁴In addition, some scientists believe the current definition is meaningless and possibly (continued...)

interaction with marine mammals continues. For example, a pod of perhaps 50-75 spinner dolphins in Kealahou Bay, Hawaii, can be surrounded on some days by as many as 50 swimmers, 35 kayaks, and several motor-propelled boats. On other days, animal protection advocates report that no more than about 20 dolphins come into the Bay where they are pursued nonstop from early in the morning until late in the afternoon when they leave the bay. NMFS does not have an enforcement agent on the Big Island (where the violation occurred), and an agent from the Hawaii Department of Land and Natural Resources is responsible for responding to possible violations. Other critics suggest whale watching vessels are insufficiently monitored for compliance with MMPA regulations.¹²⁵ Animal protection advocates suggest that the MMPA should be amended to require specific and more strictly enforced regulations concerning swimmer,¹²⁶ kayaker, and boater harassment of dolphins and whales, including provisions to significantly increase the possible fines against commercial operators who introduce large groups of swimmers into protected bays where dolphins rest. Others suggest authorizing more funding specifically targeted to better educate private watercraft operators concerning MMPA regulations and to increase MMPA enforcement efforts,¹²⁷ including additional observers aboard whale watching vessels to assess compliance. Some scientists, on the other hand, would like to see the definition of level B harassment revised to where it would be applicable only to situations where actions would reasonably be expected to constitute a significant threat to an entire marine mammal stock, rather than to just a few individual animals.

Management Consistency Between FWS and NMFS. The division of responsibility for various marine mammal species between NMFS and FWS is provided for in 16 USC §1362(12) within the definition of “Secretary.” When the MMPA was enacted in 1972, this division of species was seen as artificial and temporary awaiting the creation of a contemplated “Department of Environment and Natural Resources.” In addition, the differing management approaches taken by NMFS and FWS have often confused the commercial fishing industry and Alaska

¹²⁴(...continued)

counterproductive. These critics suggest that an expert panel be convened to redefine this term.

¹²⁵Others suggest the problem is regulatory, wondering why U.S. agencies do not adopt an approach similar to that of Mexico where the number of vessels that can be in the proximity of any whale or group of whales is strictly limited and enforced. Some suggest that the revised operational guidelines for whale-watching vessels in the northeastern United States (64 *Federal Register* 29270-29271, June 1, 1999) are a positive step, and that additional region- or area-specific guidelines or regulations of a similar nature should be developed.

¹²⁶Others, however, find MMPA management inconsistent in making it illegal to swim with wild dolphins who willingly approach humans while allowing commercial ventures to hold dolphins captive and charge humans for the chance to swim with them.

¹²⁷Current requirements for prosecuting harassment violations are stringent, requiring a time-/date-stamped video of the incident and a court appearance by the complainant to testify against the offender.

Natives.¹²⁸ Some Native American and scientific interests suggest it may be time for Congress to revisit this division of management responsibility and amend the MMPA to promote greater consistency in marine mammal management. Several approaches are suggested, including the current movement toward an ecosystem approach to managing living resources and minimizing possible conflicts of interest where marine mammals and fisheries interact, that may have a bearing on which agency should manage which species or groups thereof. Others suggest that NMFS and FWS might be directed to develop joint regulations for all their marine mammal programs to achieve greater consistency in management policy.¹²⁹

Directed Research Program. Although the MMPA emphasizes research, it does not create a national integrated marine mammal research program. Emphasizing this need, a recommendation in the Secretary of Commerce's February 1999 report to Congress involved a list of information needs, with no suggestion as to how or by whom this research was to be pursued.¹³⁰ Specific information needs identified for this relatively narrowly focused issue include: 1) site-specific investigations on the impacts of pinniped predation on salmonid populations; 2) state-by-state and river-by-river investigations of salmonid populations vulnerable to pinniped predation; 3) studies of comparative skeletal anatomies of different salmonid species so that prey may be identified in food habit studies using pinniped scat and gastrointestinal tract analyses; 4) site-specific seasonal abundance and distribution of pinnipeds north of Point Conception; 5) assessment and evaluation of potential impacts of pinnipeds on specific fisheries and fishing areas; 6) socioeconomic studies on impacts of pinnipeds on various commercial and recreational fisheries; 7) ecosystem research where the impacts of pinniped predation on non-salmonid resources can be addressed beginning with smaller systems such as Puget Sound; and 8) collection of unbiased samples for food habit studies. Congress might wish to consider whether these information needs should become the focus of an MMPA amendment creating a national integrated research program, possibly under the direction of the independent Marine Mammal Commission, with specific funding authorized.¹³¹

Stranded Marine Mammals. Sick or injured marine mammals occasionally come ashore (*i.e.*, strand) and are rehabilitated and released by a network of marine stranding facilities along all coasts. Several concerns relate to dealing with stranded marine mammals. The 106th Congress is considering legislation (H.R. 1934/S. 1216) that would authorize a grant program to support marine mammal stranding programs. During the first session of the 106th Congress, H.R. 1934 was passed by the House, but no action was taken by the Senate on either of these measures. (For updated information on actions taken on this legislation, see CRS Report IB10010, Fishery,

¹²⁸For example, FWS uses MTRPs (see page 26) while NMFS doesn't, and NMFS uses "incidental harassment authorization" to permit incidental taking while FWS doesn't.

¹²⁹Joint regulations relating to marine mammals have only been developed for the transfer of management authority to states (50 CFR Part 403).

¹³⁰NMFS. *Impacts of California Sea Lions and Pacific Harbor Seals on Salmonids and West Coast Ecosystems*. Report to Congress, Feb. 10, 1999. p. 16-17.

¹³¹Such a program might be authorized as an extension of the Pacific Coast Task Force provisions in 16 USC 1389.

Aquaculture, and Marine Mammal Legislation in the 106th Congress.) While some in the animal protection community express concern that APHIS regulations addressing standards for care and maintenance are not directly applicable to stranding facilities, APHIS is working with NMFS to determine when stranding facilities are subject to the AWA, while NMFS is modifying letters of oversight it issues to stranding facilities to ensure these letters are consistent with the spirit of AWA licensing standards. More specifically, some animal protection advocates express concern that federal agencies have not developed a standardized protocol for use by stranding facilities in deciding whether and when to euthanize stranded animals. They suggest that congressional oversight during reauthorization might encourage federal agencies to address this concern. Alternatively, language could be incorporated into the MMPA to direct that such a protocol be developed.

Federal Agency Roles. Some scientists suggest that conflicting federal agency interests may hamper marine mammal protection and recovery. These critics suggest that the MMPA be amended to direct an external panel (*e.g.*, the Marine Mammal Commission or the National Academy of Sciences) to carefully review the programs and procedures of federal management agencies for potential conflicting interests among their management, regulation, permit administration, scientific research, and funding roles with respect to marine mammals, and recommend actions that should be taken to address any problems identified.

Agency Delays in Compliance with MMPA Deadlines. There is frustration over federal agency delays of several months to more than two years in implementing provisions of the 1994 MMPA amendments (see “1994 MMPA Reauthorization” on page 5 for more detail). This has led to critics within the conservation and animal protection communities as well as the fishing industry to seek additional means to get the NMFS and FWS to comply with MMPA deadlines. These agencies contend, in reply, that the problem can be traced to limited funds provided to help them carry out these activities.¹³² For more on funding concerns, see the following section “Appropriation of Agency Funding.” Others suggest that the pattern of repeated failure to complete assigned tasks on time should first be addressed through an Office of Management and Budget or similar study on overall agency administration.

Appropriation of Agency Funding. An issue that NMFS, FWS, and the MMC might raise during reauthorization discussions is that, in an era of stable or slightly increasing federal appropriations, their responsibilities and duties have expanded much faster than their budgets. For example, requirements for stock assessments for all marine mammal populations, observer monitoring aboard the U.S. commercial fishing fleet, and administration of an expanding MMPA permit program place significant demands on federal agency resources. Specifically, implementing the provisions of the MMPA is a significant undertaking, requiring the coordination among headquarters and regional offices of NMFS and FWS as well as with the MMC. NMFS and FWS may claim that they are underfunded and that delays in

¹³²On June 29, 1999, Marshall Jones, Acting Deputy Director, U.S. Fish and Wildlife Service, testified before the House Resources Subcommittee on Fisheries Conservation, Wildlife, and Oceans that “[D]ue to competing budget needs and limited funding, the Service has been unable to fully implement provisions of certain amendments.”

implementing the 1994 MMPA amendments are directly tied to budgetary constraints. In addition, some scientists and environmental interests assert that Congress' will to implement the MMPA through the appropriations process has not kept pace with the desire expressed in the authorization process, providing insufficient funding for federal management programs and thereby exposing federal agencies to harsh criticism when they fail to meet public expectations. Congress might consider amending the MMPA to increase the authorization of appropriations for marine mammal programs of NMFS, FWS, and the MMC, increasing the actual funds appropriated under these authorizations, or including specific instructions about how funds are to be used.

Congressional Outlook

Congress generally has been supportive of measures to protect marine mammals, including specifically the Marine Mammal Protection Act. While the history of this Act's implementation includes numerous court challenges to agency interpretation of congressional intent, Congress generally has been understanding of the difficulties in providing protection for this specific group of living resources. The issues discussed in this report set before Congress a varied array of concerns. It is not yet clear which will gain prominence in any reauthorization debate. Recent public sentiment, always a strong factor in marine mammal issues, has focused on concerns for noise in the marine environment, enhanced protection for whales, the appropriateness of Makah whaling, and humane care for captive animals. Specific interests of Native Alaskans, fishermen, sport hunters, and animal protection groups may call attention to additional issues. Congressional oversight in the early stages of the reauthorization process might identify additional issues. At present, no issues demand action and the requirements of the Act itself did not expire when the Act's authorization of appropriations expired at the end of FY1999, suggesting that the reauthorization process will likely be delayed until sufficient congressional will is mustered to deal with the multitude of issues. Additional delay in reauthorization could be involved if inclusion of AWA and APHIS issues necessitates a joint referral to the House and Senate Committees on Agriculture.

The House Resources Subcommittee on Fisheries Conservation, Wildlife, and Oceans held a general oversight hearing on the Marine Mammal Protection Act on June 29, 1999. Testimony presented by officials from NMFS, FWS, APHIS, and the MMC described progress in implementing the 1994 MMPA amendments and outlined possible areas for Committee attention during reauthorization. The same Subcommittee held a second oversight hearing on April 6, 2000, specifically on the implementation of the 1994 amendments related to the take reduction process, cooperative agreements with Alaska Native organizations, and co-management of subsistence use of marine mammals by Alaska Native communities. No other action was taken on MMPA reauthorization in the 106th Congress. Independent of MMPA reauthorization, Congress enacted legislation (Title II of P.L. 106-555) that would authorize grant programs to benefit marine mammal stranding programs. Meanwhile, congressional appropriations for federal marine mammal programs in FY2000 and FY2001 appear stable, with increases for selected species of particular concern (*e.g.*, northern right whales). (For further information on legislative activities in the 106th

Congress concerning marine mammals, see CRS Report IB10010, *Fishery, Aquaculture, and Marine Mammal Legislation in the 106th Congress.*)