



The Marine Mammal Protection Act: Reauthorization Issues

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Specialist in Natural Resources Policy

June 11, 2007

Congressional Research Service

7-....

www.crs.gov

RL30120

Summary

The Marine Mammal Protection Act (MMPA) was last reauthorized in 1994. The MMPA's authorization of appropriations expired at the end of FY1999. At issue for Congress are the terms and conditions of provisions designed to reauthorize and amend the MMPA to address a variety of concerns relating to marine mammal management. In the 109th Congress, the House passed a bill to reauthorize and amend the MMPA, but no further action was taken on this measure. The 110th Congress may again consider measures to amend and reauthorize the MMPA as well as bills to address specific marine mammal regulatory and management issues.

Several issues that may arise in reauthorization 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, and appropriating adequate funding for federal 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 USDA Animal and Plant Health Inspection Service, others likely would require statutory changes.

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 MMPA itself did not expire. Eventually, however, an extension of funding authority may need to be considered to continue federal program operations. Most of the issues associated with this law are not time-sensitive, and a number of oversight hearings have been held to increase understanding of various issues, positions, and possibilities.

This report lays out the range of issues likely to be raised during any reauthorization debate, the reasons behind them, and possible proposals that could be offered to address these concerns. This report will be updated as warranted to reflect the evolution of these issues.

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Introduction

The Marine Mammal Protection Act (MMPA) of 1972 (P.L. 92-522, as amended; 16 U.S.C. §§1361, et seq.) was last reauthorized in 1994 by P.L. 103-238. The authorization of appropriations under the MMPA expired at the end of FY1999. The 104th, 105th, 106th, 108th, and 109th Congresses enacted additional amendments addressing single or limited issues (see “Miscellaneous MMPA Amendments”); no MMPA amendments were enacted by the 107th Congress.¹ At issue for Congress are the terms and conditions of provisions to reauthorize and amend the MMPA to address a variety of concerns related to marine mammal management. Legislation introduced, but not enacted, in the 105th, 106th, 107th, 108th, and 109th Congresses suggests a number of issues that may be discussed during a reauthorization debate. To identify a larger universe of potentially relevant concerns, the Congressional Research Service queried commercial fishing, scientific research, public display,² animal protection, Native American, and environmental interests to identify 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, may be considered as Congress determines whether and how to address 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 Clinton Administration did not release any comprehensive proposals related to MMPA reauthorization. In the 109th Congress, H.R. 4075 incorporated some of the MMPA amendments proposed by the Bush Administration.⁴ Congress has been active on marine mammal protection issues in recent years, responding primarily to balancing concerns of the commercial fishing industry and environmental interests. Congress generally views the MMPA as working well, but possibly needing changes to address an increasing number of concerns that have arisen since the 1994 amendments. In the House, the Committee on Natural 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.

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

¹ MMPA 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, P.L. 106-555 (Title II, Marine Mammal Rescue Assistance Act of 2000), P.L. 108-108 (§149), P.L. 108-136 (§319), and P.L. 109-479 (Title IX). For additional information, see CRS Report RL33459, *Fishery, Aquaculture, and Marine Mammal Legislation in the 109th Congress*, by (name redacted). Archived issue briefs covering legislation in previous Congresses are also available from this author.

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

³ To 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.

⁴ The Administration’s draft language of June 16, 2005, is available at http://www.nmfs.noaa.gov/pr/pdfs/laws/mmpa_bill.pdf.

mammal populations and maintaining healthy marine ecosystems. These groups, however, sometimes disagree about how best to achieve these goals and use these 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.⁵

Commercial Fishing Industry

There were more than 65,000 commercial fishing vessels estimated to be operating in U.S. marine fisheries in 2001,⁶ and 3,242 processor and wholesale plants employing 65,690 individuals in 2004.⁷ In 2005, the total catch of marine fish was more than 9.6 billion pounds, with an estimated ex-vessel value⁸ of more than \$3.9 billion.⁹ For 2005, the overall economic contribution of commercial fishing to gross national product (in value added) was estimated to exceed \$32.9 billion.¹⁰

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. An additional concern is how best to manage conflicts between increasingly abundant marine mammals and commercial fishing. 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 and conservation 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 about 200 U.S. marine life parks, aquariums, and zoos dedicated to the conservation of marine mammals and their environments through public display, education, and

⁵ These 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 both as objective independent analysts and serve as advocates for a specific sector.

⁶ National Marine Fisheries Service, *Fisheries of the United States, 2002*, Current Fishery Statistics No. 2002 (Sept. 2003), p. 94. No revised estimate has been published more recently.

⁷ National Marine Fisheries Service, *Fisheries of the United States, 2005*, Current Fishery Statistics No. 2005 (February 2007), p. 82. 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.

⁸ Ex-vessel value is the money paid to the harvester for fish, shellfish, and other aquatic plants and animals, i.e., the dollar value of the harvest when it is offloaded from the boat.

⁹ *Supra* note 7, p. 4.

¹⁰ *Id.*, p. 79.

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 Alaska Native groups are represented by commissions (e.g., Eskimo Walrus Commission, Alaska Eskimo Whaling Commission, Harbor Seal Commission, Aleut Marine Mammal Commission, Alaska Nanuuq Commission, Alaska Sea Otter and Steller Sea Lion Commission) 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 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 federal appropriations to fund data collection and research.

Marine Mammal Protection Act

Congress enacted the Marine Mammal Protection Act (MMPA) in 1972, due in part to the high level of dolphin mortality in the eastern tropical Pacific tuna fishery (estimated at more than 400,000 animals per year in the late 1960s). The MMPA established a moratorium¹¹ on the “taking” of marine mammals in U.S. waters and by U.S. nationals on the high seas.¹² The MMPA also established a moratorium on importing marine mammals and marine mammal products into the United States. The MMPA protects 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 MMPA, the Secretary of Commerce, acting through the National Marine Fisheries Service (NMFS, in the National Oceanic and Atmospheric Administration, also popularly referred to as “NOAA Fisheries”), 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 MMPA 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 MMPA. Title III authorized the International Dolphin Conservation Program. Title IV authorized the Marine Mammal Health and Stranding Response Program. Title V implemented the Agreement Between the United States and the Russian Federation on the Conservation and Management of the Alaska-Chukotka Polar Bear Population.

Prior to passage of the MMPA, states were responsible for managing 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 MMPA.¹³ It also provides that the moratorium on taking can be waived by the federal government or states with management authority for specific purposes, if 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 MMPA 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 if monitoring requirements and other conditions are met.

¹¹ Some consider this action a ban or prohibition, rather than a moratorium, because it was (and is) permanent.

¹² Under the MMPA, in 16 U.S.C. §1362(13), take means “to harass, hunt, capture, or kill, or attempt to harass, hunt, capture, or kill.”

¹³ Although the State of Alaska began the process to request management authority for some marine mammal species, no state has been granted such management authority.

The MMPA's moratorium on taking does not apply to any resident Alaskan Indian, Aleut, or Eskimo who dwells on the coast of the North Pacific (including the Bering Sea) or Arctic Oceans (including the Chukchi and Beaufort Seas), 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 MMPA also provides for co-management of marine mammal subsistence use by Alaska Native groups, under which authority Native commissions have been established.

The MMPA 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 five years, pending development of an improved system to govern the incidental taking of marine mammals in the course of commercial fishing operations.¹⁵ The taking of marine mammals incidental to the eastern tropical Pacific tuna fishery is governed by specific and separate provisions in Title III of the MMPA.

The Endangered Species Act of 1973 (ESA; P.L. 93-205, as amended; 16 U.S.C. §§1531, et seq.) provides additional protection for some marine mammal species that have been 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 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, the 1994 amendments substantially changed provisions relating to public display of marine mammals, authorized imports of polar bear trophies from Canada, authorized the limited lethal removal of pinnipeds, and enacted a general authorization for research involving only low levels of harassment.

¹⁴ Section 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.

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

¹⁷ Pinnipeds include seals, sea lions, and walrus.

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 took more than the full five years of the authorization to complete. One of the most difficult and controversial amendments to implement was the convening of Take Reduction Teams (TRTs)¹⁸ 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.

NMFS has convened nine TRTs to reduce bycatch of strategic stocks of marine mammals in selected commercial fisheries. One of these, the Atlantic Offshore Cetacean TRT, was disbanded in August 2001 due to changes in the affected fisheries. Another, the Mid-Atlantic TRT, became the Mid-Atlantic Harbor Porpoise TRT, because of priority given to particularly vulnerable harbor porpoise. Six of the remaining TRTs address bycatch issues on the Atlantic Coast, while the remaining TRT addresses marine mammal bycatch in the Pacific driftnet fishery for swordfish and sharks.¹⁹

Several TRTs have yet to be convened and plans developed. Although NMFS recognizes that fishery-related mortality exceeds the PBR level in some marine mammal stocks, no new TRTs are to be convened until additional funds are appropriated or redirected from existing Take Reduction Plans that have been declared successful. Congress recognized that funds would be limited and established criteria for prioritization of this effort in 16 U.S.C. §1387(f)(3).

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 MMPA, due primarily to the complexity and difficulty of implementing regulations that minimize impacts to the industry as required by the MMPA, 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 to others in that serious bycatch/fishery issues have been addressed.

In response to the 1994 MMPA amendments at 16 U.S.C. §1386, NMFS and FWS have completed reports assessing more than 170 different marine mammal stocks as required by the MMPA,²⁰ and have developed a list of fisheries that monitor their annual takes of marine mammals by stock. 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 FWS have been criticized for using outdated (e.g., decades old) data. In addition, Alaska Native interests continue to be concerned that 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

¹⁸ Members of TRTs “include representatives of federal agencies, each coastal state which has fisheries which interact with the species or stock, appropriate Regional Fishery Management Councils, interstate fisheries commissions, academic and scientific organizations, environmental groups, all commercial and recreational fisheries groups and gear types which incidentally take the species or stock, Alaska Native organizations or Indian tribal organizations, and others as the Secretary deems appropriate” (16 U.S.C. §1387(f)(6)(C)).

¹⁹ For additional background on TRTs, see <http://www.nmfs.noaa.gov/pr/interactions/trt/>.

²⁰ For individual stock assessment reports, see <http://www.nmfs.noaa.gov/pr/sars/species.htm>.

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 becoming better able to 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.

Miscellaneous MMPA Amendments

Subsequent to the 1994 reauthorization, several additional MMPA amendments were enacted separately:

- Section 405(b)(3) of P.L. 104-297 amended the MMPA's definition of the term "waters under the jurisdiction of the United States."
- In P.L. 105-18, §2003 provided a "good samaritan" exemption allowing individuals to free marine mammals entangled in fishing gear or debris, while §5004 modified the requirements for the importation of polar bear parts from polar bears legally harvested in Canada before the MMPA Amendments of 1994 were enacted.
- P.L. 105-42 modified dolphin conservation provisions of the MMPA applicable to the eastern tropical Pacific tuna seine fishery and specified under what conditions tuna products can be labeled "dolphin-safe."
- Administrative provisions for the U.S. Fish and Wildlife Service in P.L. 105-277 clarified that polar bear trophy permit fees remain available until expended for cooperative research and management programs.
- Title II of P.L. 106-555 authorized grants to benefit marine mammal stranding programs.
- Section 149 of P.L. 108-108 permitted the importation of polar bears from Canada harvested prior to the enactment of final regulations.
- Section 319 of P.L. 108-136 modified the MMPA's definition of harassment and provisions relating to taking marine mammals as they relate to military readiness activities and federal scientific research.²¹
- Title IX of P.L. 109-479 implemented the Agreement Between the United States and the Russian Federation on the Conservation and Management of the Alaska-Chukotka Polar Bear Population.

²¹ For additional information, see CRS Report RS22149, *Exemptions from Environmental Law for the Department of Defense (DOD)*, by (name redacted).

In compliance with the International Dolphin Conservation Program Act (P.L. 105-42), the Secretary of Commerce, on April 29, 1999, made an initial finding that there was insufficient evidence of significant adverse impact from chase and encirclement of dolphins during tuna fishing.²² Subsequently, NMFS promulgated a new standard for dolphin-safe tuna in January 2000.²³ However, this standard was challenged by environmental groups and overturned by the U.S. District Court for the Northern District of California on April 11, 2000.²⁴ Although the Department of Commerce appealed this ruling, the 9th Circuit Court of Appeals affirmed the lower court decision in July 2001.²⁵

Issues for Congress

The remainder of this report reviews issues that may be raised during discussions on reauthorizing the MMPA. The major issue categories include commercial fishing interactions with marine mammals, marine mammals in captivity, Native Americans and marine mammals, permits and authorizations, and program management and administration. Some of these issues could be addressed administratively, in regulations implemented by NMFS, 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 U.S.C. §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.²⁶

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 too low for some marine mammal stocks.²⁷ Some in the commercial fishing industry, however, argue that OSP, as currently defined, is complex and vague in concept.

²² 64 *Fed. Reg.* 24590-24592 (May 7, 1999).

²³ 65 *Fed. Reg.* 30-59 (Jan. 3, 2000).

²⁴ *Brower v. Evans*, 93 F. Supp 2d 1071, 2000 U.S. Dist. LEXIS 4624 (N.D. Cal. 2000).

²⁵ *Brower v. Evans*, 257 F. 3d 1058, 2001 U.S. App. LEXIS 16504 (9th Cir. 2001).

²⁶ Some 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-caused and natural.

²⁷ These 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.

They contend that “maximum productivity” is difficult to determine and imprecise,²⁸ and complicates work on developing Take Reduction Plans for marine mammal stocks. The difficulties in declaring that a species is at OSP (1) frustrate fishing industry interests by impeding the ability of the federal government to transfer management authority to states and (2) prevent or delay 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. Environmental 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, 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 U.S.C. §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.²⁹ 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 total human-caused mortality is kept below the PBR level. However, some scientists believe that 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) is 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, if the method for calculating them is changed, PBRs could be set too

²⁸ Maximum 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.

²⁹ The recovery factor accounts for uncertainty in population estimates and reproductive rates.

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).

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, animal protection, and environmental interests believe that PBR is an extremely important concept and an excellent management tool that should be maintained.³⁰ 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 that 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.

Zero Mortality Rate Goal

In 16 U.S.C. §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 within 7 years after April 30, 1994.” In July 2004, NMFS defined insignificant levels approaching the ZMRG as 10% or less of the PBR for any stock.³¹

The animal protection and environmental communities believe the objective of approaching the ZMRG must be maintained. However, while marine mammal mortality in many fisheries has been reduced (in some cases, substantially), animal protection and environmental 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. Similar to their reasoning on PBRs, they believe ZMRG must be maintained as a means of encouraging the development and use of more risk-averse fishing methods.

The fishing industry is concerned that ZMRG be implemented in a manner that recognizes a reasonable balance between marine mammal protection and economically viable fisheries, and that can be seen as having been already achieved in many instances. Animal protection and

³⁰ These 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 completely clear. For additional information on the precautionary principle, see <http://www.sehn.org/pdf/putvaluesfirst.pdf>.

³¹ 69 *Fed. Reg.* 43338-43345 (July 20, 2004).

environmental communities generally are supportive of the NMFS 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 U.S.C. §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 as well as various advocacy groups believe that federal funding is insufficient to improve species-specific methods for assessing marine mammal stocks,³² and that Congress should authorize specific and substantial multi-year funding to improve our basic knowledge of marine mammal populations, especially for Arctic species.³³ Alaskan Native interests suggest that the MMPA (16 U.S.C. §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 U.S.C. §1386(c) to alter the timing of stock assessment reviews, feeling that healthy stocks may not need review every three years—every five years would be more reasonable. They believe that 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 information is gathered to necessitate an annual review, they believe an assessment every two years might be sufficient.

Deterrence

In 16 U.S.C. §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.³⁴ 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. NMFS proposed³⁵ but never finalized deterrence regulations because of the difficulty in identifying measures for safely deterring endangered and threatened marine mammals,³⁶ and the use of AHDs has increased substantially in recent years. Similarly, some

³² New methodology might include both population numbers and ecological relationships as well as review by independent scientists.

³³ “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.

³⁴ Marine 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, the loss of hearing due to loud noise 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 (e.g., Retreat Passage, British Columbia).

³⁵ Guidelines and regulations for use of deterrents were proposed at 60 *Fed. Reg.* 22345-22348 (May 5, 1995), but NMFS never promulgated final regulations.

³⁶ See congressional testimony by Dr. William T. Hogarth, Assistant Administrator for Fisheries, NMFS, NOAA, at <http://www.ogc.doc.gov/ogc/legreg/testimon/107f/hogarth1011.htm>.

scientists are concerned that there has been insufficient research³⁷ to determine at what threshold a deterrent device might become harmful to marine mammals.³⁸

With huge gaps of knowledge in marine mammal science,³⁹ some animal protection advocates argue that it would be prudent to allow only proven harmless deterrents for use 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.⁴⁰ In 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.⁴¹ 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 U.S.C. §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, allowing NMFS to better monitor the amount of ocean noise generated by these devices.⁴² NMFS has recommended that Congress consider (1) removing impediments to testing non-lethal deterrent technologies and (2) funding additional research, development, and evaluation of innovative non-lethal pinniped deterrence techniques.⁴³ Some managers and scientists as well as certain interest groups 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 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.

³⁷ Some of this research has been conducted on captive marine mammals, which may have limited applicability to the behavior of wild, free-ranging animals.

³⁸ Even low-sound-output devices (e.g., “pingers”) may displace animals from critical feeding habitat.

³⁹ For example, the physiology of different species interacting in 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); (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.

⁴⁰ Others assert that it is an extreme standard to be required to prove a negative—that an 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.

⁴¹ Some fishery practices (e.g., discarding bycatch and fish waste) invite 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 the 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.

⁴² A simplified permit process might address the impacts on non-target species, and a research program could be established to assess the long-term impacts on target and non-target species from the use of AHDs.

⁴³ National Marine Fisheries Service. *Impacts of California Sea Lions and Pacific Harbor Seals on Salmonids and West Coast Ecosystems*, Report to Congress (Feb. 10, 1999), p. 15.

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 and 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 has recommended that Congress consider authorizing the intentional lethal taking of California sea lions and Pacific harbor seals in specific areas and fisheries to protect gear and catch until effective non-lethal methods are developed.⁴⁴ 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 lion.⁴⁵ 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 protected areas that encompass key marine mammal habitats.⁴⁶ In particular, animal protection advocates strongly oppose any reinstatement of intentional lethal taking, fearing the increased risks of merely injuring animals and causing significant suffering as shown by the number of live-stranded sea lions that are sent to rehabilitation centers after having been illegally shot.

With regard 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 ESA. 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 made from their fur. Others, however, are concerned about reported recent declines in Alaska sea otter abundance. Animal protection groups rigorously oppose proposals to lethally take sea otters.

Integration with Fishery Management

On several issues, observers suggest that better integration between the management programs under the MMPA and the Magnuson-Stevens Fishery Conservation and Management Act might be helpful.⁴⁷ Currently, no formal mechanism exists for interaction between Take Reduction Teams (TRTs) and the regional fishery management council committees, established under the Magnuson-Stevens Act, which assess fish stocks, determine total allowable catch (TAC), and

⁴⁴ Ibid., p. 15-16.

⁴⁵ The federal courts have 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).

⁴⁶ For more information on marine protected areas, see CRS Report RS10810, *Marine Protected Areas: An Overview*, by (name redacted) and (name redacted).

⁴⁷ It has been suggested that some actions could be administrative (e.g., NMFS consultation on designating "essential fish habitat") such that protection of sensitive fish habitat might also acknowledge the importance of critical foraging areas for sub-adult and reproductively active female marine mammals.

make other fishery management decisions. However, marine mammal take reduction is clearly an essential part of reducing fishery bycatch and other incidental mortalities 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 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 the southern sea otter's range. When FWS was authorized to establish an experimental population of southern sea otters at San Nicolas Island, one of Southern California's Channel Islands, in 1986, the agency was required to limit the potential impacts of translocated southern sea otters on existing commercial fisheries and remove sea otters from a management zone south of Point Conception.⁴⁸ In late 2005, FWS proposed that this translocation program be terminated.⁴⁹ Commercial fishermen suggest that the MMPA and the ESA might be amended to impose more stringent requirements on managing populations to limit their potential to 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.

Marine Mammals in Captivity

While some issues involving marine mammals in captivity discussed in this section may require amendment of the MMPA, many of these issues could also be addressed under the authority of the Animal Welfare Act (AWA) or be addressed administratively in regulations implemented by APHIS (Department of Agriculture). 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. Congressional oversight of agency implementation of the MMPA and the AWA in some of these issue areas may identify regulatory

⁴⁸ Section 1 of P.L. 99-625. However, FWS decided in January 2001 to halt the removal of southern sea otters from the management zone. For more information on this decision, see <http://pacific.fws.gov/news/2001/2001-23.htm>.

⁴⁹ See <http://www.fws.gov/pacific/news/2005/seaotterNR.pdf>.

concerns where further direction from Congress may be helpful in refocusing federal agency implementation of existing law.⁵⁰

Many of the issues in this section reflect the contentious relationship between animal protection interests and holders of captive marine mammals. These constituencies often disagree on whether, and if so under what conditions, marine mammals should be held in captivity.⁵¹

Authority for Captive Marine Mammals

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 for regulation under provisions of the Animal Welfare Act.⁵² APHIS conducted a negotiated rulemaking process to revise requirements for the humane handling, care, treatment, and transport of marine mammals in captivity.⁵³ 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, which they feel are better qualified to monitor marine mammal care and maintenance.⁵⁴ On the other hand, some in the public display community see no basis for stripping APHIS of primary authority for captive marine mammals, since they contend that APHIS has a long history of developing and enforcing standards of animal health and care and has vigorously exercised its jurisdiction.⁵⁵ This has included conducting broad rulemaking proceedings on revised requirements for marine mammals in captivity. In contrast, the public display community views NMFS and FWS as not typically dealing with or being involved in the animal husbandry sector and having limited expertise in the

⁵⁰ Coordinated oversight on this issue can be complicated by committee jurisdiction, since APHIS and the AWA fall under the jurisdiction of the House Committee on Agriculture and Senate Committee on Agriculture, Nutrition, and Forestry while NMFS and the MMPA are under the jurisdiction of the House Committee on Resources and Senate Committee on Commerce, Science, and Transportation.

⁵¹ Various aspects of this issue were recently highlighted in a five-part series, "Below the Surface," published in the *South Florida Sun-Sentinel*, May 16-19, 2004, available at <http://www.sun-sentinel.com/news/sfl-marinestorygallery,0,2119297.storygallery?coll=sfla-home-dots-utility>.

⁵² In 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.

⁵³ APHIS began the process of amending marine mammal regulations under the AWA in 1990. Subsequently, APHIS published an advanced notice of proposed rulemaking at 58 *Fed. Reg.* 39458 (July 23, 1993). Proposed regulations were published at 64 *Fed. Reg.* 8735-8755 (Feb. 23, 1999), and final regulations at 66 *Fed. Reg.* 239-257 (Jan. 3, 2001).

⁵⁴ Animal protection advocates report that APHIS employs only one veterinarian with marine mammal expertise among a staff of approximately 106 inspectors. These 106 inspectors are responsible for 8,800 licensed zoos, circuses, and trucks/airlines that transport animals. Although the AWA requires one unannounced inspection per year, animal protection groups contend that overworked inspectors visit some marine parks and aquaria only once every three years, or only after the filing of public complaints.

⁵⁵ APHIS 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.

captive maintenance and care of marine mammals.⁵⁶ Critics further assert that giving NMFS and FWS jurisdiction in this area would necessitate an expensive program duplicating what APHIS already administers. 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 and 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 protection 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.⁵⁷ 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 proprietary interest 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.⁵⁸ NMFS has interpreted export provisions as requiring a letter of comity⁵⁹ from the foreign government certifying that the standards of the MMPA are upheld in foreign facilities. In addition, NMFS requires a letter of comity for any further transfer of a marine mammal of U.S. origin by one foreign nation to another foreign nation. 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).⁶⁰ Some scientists agree that a requirement for export permits should be reinstated,⁶¹ but believe that MMC and NMFS/FWS review of export permits might make

⁵⁶ Critics suggest NMFS and FWS are already overburdened with serious problems concerning declining stocks of wild animals and a deteriorating environment.

⁵⁷ Critics 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.

⁵⁸ NMFS's Marine Mammal Inventory Report now catalogs export and facility transfer notifications as required by 16 U.S.C. §1374(c)(10)(F).

⁵⁹ Comity is the legal doctrine under which countries recognize and enforce each others' legal decrees.

⁶⁰ Animal protection advocates have serious concerns regarding the ability of NMFS/FWS under the short notification regime and without public input to ensure the well-being of marine mammals leaving this country for foreign, and often substandard, facilities. They are concerned that the brief window of notification eliminates any and all opportunity for public notification and comment and also limits the time available for the agencies to review the documentation that must accompany an export.

⁶¹ The 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.

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. Animal protection advocates recommend mandatory on-site inspections of foreign facilities before any U.S. marine mammal can be exported. Elements of the public display community, however, believe the current process includes extensive safeguards,⁶² 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.⁶³

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 as well as 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.⁶⁴ Some scientists assert that research on 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).⁶⁵ Some scientists have proposed that more research be conducted on how human activities might affect marine animals.⁶⁶ 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 useful in determining management criteria for wild

⁶² The 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 U.S.C. §1374(c)(9)). While some critics suggest that stronger regulatory criteria might be imposed by NMFS/FWS in implementing this provision, they believe such action may require congressional direction, either through a statement in committee report language or as a specific MMPA amendment.

⁶³ 16 U.S.C. §1374(c)(8)(B)(i)(II).

⁶⁴ For example, see http://cerf.bc.ca/pubs/biblio/marmam_biblio.html. Prior to the establishment of marine mammal facilities, most of what was learned about marine mammals resulted from whaling and sealing activities, rather than from field research.

⁶⁵ Some 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 on increasing opportunities for legitimate research access to captive marine mammals. Similar efforts have been conducted under the authority provided in 16 U.S.C. §1380.

⁶⁶ Some scientists report that research on captive animals is also constrained by economics. For example, estimates of the cost of obtaining a young healthy dolphin range from \$100,000 to \$150,000.

populations. Many of these scientists believe the MMPA has 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.⁶⁷

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,⁶⁸ even if the animal may have been exposed to *Morbillivirus*—a highly contagious, distemper-like disease harmful to some marine mammal species.⁶⁹ 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 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-pens⁷⁰ or when a public display facility discharges untreated effluents into the marine environment.⁷¹ 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 regulations finalized by APHIS.⁷² 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

⁶⁷ However, captive marine mammals used for research often are orphaned, stranded, or disabled animals that are not physically able to be returned to the wild.

⁶⁸ Again, some believe it may be an extreme standard to be required to prove a negative.

⁶⁹ This disease is prevalent in wild animals, but has never been reported in a non-stranded captive animal.

⁷⁰ This concern may arise when private organizations, often affiliated with animal protection groups, promote the release of captive animals, as well as with some foreign public display facilities.

⁷¹ For 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, standards and permits under this same act are administered by the Environmental Protection Agency (EPA) or qualified states to which EPA has delegated responsibility.

⁷² 66 *Fed. Reg.* 239-257 (Jan. 3, 2001).

examination and certifies the animal's healthy condition.⁷³ 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 discharge of facility effluent has contributed to an epidemiological episode in the wild.⁷⁴

Necropsies

Currently necropsies on dead marine mammals are performed in-house by public display facility veterinarians.⁷⁵ Prior to the 1994 MMPA amendments, necropsy reports were required to be submitted to NMFS and FWS. Current APHIS standards require such reports to be completed and kept on file at the public display facility for three years.⁷⁶ 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."⁷⁷ Thus, necropsies, which formerly were available to the public under the Freedom of Information Act, are no longer public records.⁷⁸

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, performing an inadequate necropsy, or failing to report actual findings.⁷⁹ 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

⁷³ In 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. Animal protection interests are concerned to ensure that cumbersome paperwork and bureaucracy do not jeopardize an animal's life in these situations.

⁷⁴ In 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.

⁷⁵ Necropsies 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 two to three weeks, with preliminary results usually available within a week.

⁷⁶ 9 C.F.R. 3.110(d).

⁷⁷ 16 U.S.C. §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.

⁷⁸ With few exceptions, zoos and aquaria claim to be open regarding the disposition of marine mammals within their care, with records available for public review. Animal protection advocates dispute this claim, suggesting that a majority of facilities refuse to share such information, considering it proprietary.

⁷⁹ Animal 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.

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 from liability and claims of negligence.⁸⁰ They assert that there is no evidence that such care is suspect. Furthermore, they point out that necropsies were the subject of a 2001 APHIS rulemaking,⁸¹ because these rules are still being implemented, the need for legislation is unclear for now. If more expensive necropsies were required, the issue of who would pay for them is likely to be controversial. Animal protection interests believe that 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, animal protection advocates, and environmentalists 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 became candidates for release programs.⁸² 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.⁸³ Some scientists believe that the incidental mixing of captive animals with wild stocks is rare and likely

⁸⁰ Supporters 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.

⁸¹ 66 *Fed. Reg.* 239-257 (Jan. 3, 2001).

⁸² Alternatively, it could be required that genetically mixed offspring be neutered before release.

⁸³ Some 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.

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.⁸⁴

Wild Versus Captive Survivorship

Claims differ on whether marine mammals live longer, similar, or shorter lifespans in captivity compared to the same species in the wild.⁸⁵ 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.⁸⁶ 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

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 were the subject of APHIS rulemaking.⁸⁷ 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 a 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,⁸⁸ recognizing

⁸⁴ Similar efforts have been conducted under the authority provided in 16 U.S.C. §1380.

⁸⁵ Some 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.

⁸⁶ Similar efforts have been conducted under the authority provided in 16 U.S.C. §1380.

⁸⁷ 66 *Fed. Reg.* 239-257 (Jan. 3, 2001).

⁸⁸ Animal 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.

the need to prevent the spread of disease and release of unfit animals. Some animal protection advocates may propose MMPA amendments authorizing oversight of rehabilitation and release activities, requiring federal agency definition of rehabilitation/release protocols,⁸⁹ and establishing a scientific research permit for rehabilitation and release activities as well as for establishing rehabilitation/release facilities for long-captive marine mammals.⁹⁰ 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 periodic access to the open ocean. 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.⁹¹ These critics cite research indicating that animals held in captivity for any length of time and those born in captivity are more likely to die upon release because they do not or are not able to make the necessary adjustments to life in the wild. They would oppose efforts that encourage the release of long-captive animals. Other opponents include those worried about the federal cost of financing such a program. A parallel concern relates to discouraging and preventing unregulated releases of captive marine mammals by the more proactive animal protection advocates.

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 world⁹² of marine mammals—social animals that have evolved to exploit the complex and expansive natural marine environment.⁹³ 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. These critics would like the MMPA to be amended 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

⁸⁹ A scientific workshop might be convened to develop the protocols for conducting rehabilitation/release projects.

⁹⁰ How such facilities and programs might interact with existing marine mammal stranding networks would need to be defined. These networks along the Atlantic, Gulf of Mexico, and Pacific Coasts involve dozens of facilities that provide short-term assistance to beached and stranded marine mammals when necessary to improve their condition sufficiently to be able to return a healthy animal to the wild.

⁹¹ These 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.

⁹² While 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 interaction, feeding, etc.

⁹³ Generally, 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.

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 promote 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 that 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.⁹⁴ Some animal protection interests would like the MMPA and/or AWA to either prohibit all interactive programs, including petting and feeding pools which they claim have never been regulated, or require more stringent regulation of these programs 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 could be 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 research programs terminate or parks close. 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 in permits covering 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.

Prohibition of Traveling Exhibits

Animal protection advocates believe that circuses and traveling shows cannot maintain the highly specialized conditions necessary to ensure the health and well-being of marine mammals. They cite the recent experience with the Mexican-based Suarez Brothers Circus in Puerto Rico, where performing polar bears were confiscated by FWS. Dolphin traveling circuses exist and move

⁹⁴ 64 *Fed. Reg.* 15918-15920 (Apr. 2, 1999). On May 30, 2002, APHIS sought comments on standards for interactive swim-with-the-dolphin programs (67 *Fed. Reg.* 37731-37732). No final rule has yet been published. For additional background on these programs, see *Quantitative Behavioral Study of Bottlenose Dolphins in Swim-With-The-Dolphin Programs in the United States* at <http://www.nmfs.noaa.gov/pr/pdfs/health/swimwithdolphins.pdf>.

throughout Latin America and the Caribbean, and could potentially enter U.S. territories or use marine mammals from U.S. facilities. Animal protection groups seek to amend the MMPA to prohibit these traveling exhibits.

Prohibition of Wild Captures for Public Display

The International Union for Conservation of Nature and Natural Resources' *Dolphins, Whales, and Porpoises: Conservation Action Plan for the World's Cetaceans, 2002-2010*⁹⁵ notes that the removal of live cetaceans from the wild for captive display is equivalent to incidental or deliberate killing, as the animals brought into captivity (or killed during capture) are no longer available to contribute to maintaining their populations. Concerned that, when unmanaged and undertaken without a rigorous program of research and monitoring, live capture can be fatally stressful to animals and pose a serious threat to cetacean populations, animal protection interests support an amendment to the MMPA to prohibit wild captures of marine mammals for public display.

Native Americans and Marine Mammals

Co-Management with Native American Tribes

Some federal managers believe that co-management agreements, when accompanied by dedicated funding, have dramatically improved communication among Native subsistence users, Alaska Native organizations, and FWS. However, Native Alaskan interests assert that NMFS has been slower to enter into cooperative agreements to implement co-management for marine mammals in Alaska (authorized under 16 U.S.C. §1388), and that federal appropriations to provide grants to Native organizations under this section have not been forthcoming.⁹⁶ 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 have 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 scientific and environmental communities who fear the potential for overhunting by Natives seeking economic gain, and who 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, as has been done since the 1970s for bowhead whales. Similar national programs have not been conducted on most other species. Some animal protection advocates are concerned that reporting of subsistence kill levels often lags by five years or more and is based on self-reporting, making it difficult to determine the impact of the subsistence on a particular stock until well after the fact. Animal protection interests also believe current cooperative agreements lack some transparency and provide little opportunity for public comment before the agreement is negotiated.

⁹⁵ This document was available at <http://iucn.org/dbtw-wpd/edocs/2003-009.pdf>.

⁹⁶ Some managers suggest this is due, in part, to limited funds appropriated by Congress to the various agencies, especially NMFS.

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 substantial information on subsistence takes. In 16 U.S.C. §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).” FWS has promulgated regulations and instituted a marking, tagging, and reporting program (MTRP) for polar bears, walrus, and sea otters taken by Alaska Natives.⁹⁷ 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.⁹⁸ Although NMFS has awarded contracts for the development of harvest estimates, their accuracy has been questioned by some scientists.⁹⁹ Some Alaska Native organizations conduct biosampling programs on marine mammals taken for subsistence through cooperative agreements developed under the authority of 16 U.S.C. §1388. Despite this, some in the Alaska Native and environmental 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 to provide useful data. However, some managers and environmental interests believe the level of detail available on subsistence takes for many Alaska species could be improved. 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 program for each species should include a well-designed harvest survey based on structured hunter samples from different communities that intensively exploit the targeted species, with data analysis by good statistical methods to adequately fulfill management needs. Other scientific and environmental interests suggest that the MMPA be amended to require reporting, marking, tagging, and sampling of all marine mammals taken by Alaska Natives for subsistence.¹⁰⁰ Others in the environmental and animal protection communities believe such reporting should be required for seal hunting and 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 “Calculating Potential Biological Removal”), especially in situations where (1) subsistence harvest may account for the majority of the total number of animals removed and (2) subsistence harvest may approach or exceed the PBR level.¹⁰¹

⁹⁷ These MTRPs do not collect data useful for accurately assessing the age/sex composition of the harvest, nor for establishing annual productivity. Although it might require additional agency funding, MTRPs could be restructured to obtain these data.

⁹⁸ On May 24, 1999, NMFS published an interim final rule requiring the marking and reporting of beluga whales harvested from Cook Inlet (64 *Fed. Reg.* 27925-27928).

⁹⁹ The 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. Such retrospective surveys for marine mammal harvest might be considered minimum estimates.

¹⁰⁰ Exemptions 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 the PBR level.

¹⁰¹ Some critics fear that federal managers may be pressured to set PBR levels higher than the subsistence harvest (continued...)

Limitation on the Sale of Edible Subsistence Takes

In 16 U.S.C. §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.¹⁰² The current interpretation of the MMPA language is that all Alaska locales, including the city of Anchorage, qualify as Native villages and towns. Certain markets in Anchorage sell large quantities of marine mammal meat and muktuk,¹⁰³ with a few Alaska Natives allegedly hunting primarily to supply this commercial market.¹⁰⁴

Scientists, animal protection advocates, and environmentalists suggest amending the MMPA to limit or restrict the sale of edible parts from marine mammals taken for subsistence, such as prohibiting commercial sales in cities or in communities where Native residents are in the minority. Others suggest amending the MMPA to prohibit the commercial sale of marine mammal products from any stock that is declining in abundance. Alternatively, NMFS and/or FWS already have the authority to make administrative determinations that species are depleted under the MMPA or are threatened/endorsed under the ESA, allowing them to take regulatory action to limit subsistence take without legislation.¹⁰⁵

Alaskan Natives, however, believe that the Native community itself should take the initiative to deal with these problems, using existing models that have proven workable in similar Alaska Native situations. They suggest approaches similar to those used in the allocation of strikes¹⁰⁶ among various whaling crews in the North Slope Borough or the Sitka Tribe’s management of sea otter take in traditional territory.¹⁰⁷ Others are concerned about the potential cultural costs of limiting access to subsistence foods for individuals living in urban areas and the possibility that these costs could outweigh the benefits to marine mammal stocks.

(...continued)

levels for some Alaskan species (e.g., Pacific walrus).

¹⁰² Many 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.

¹⁰³ Whale skin and adhering blubber.

¹⁰⁴ In the late 1990s, this was seen as a particular problem for the Cook Inlet beluga whale stock, which was small and had been overharvested, largely because of market hunting. A significant percentage of the Cook Inlet beluga whale stock was killed each year—between 98 and 147 animals were reportedly taken in 1996, with another 49 to 98 animals struck and lost. This stock declined almost 50% in abundance from an estimated 653 animals in 1994 to 347 animals in 1998, and its summer range contracted.

¹⁰⁵ In the Cook Inlet beluga whale example, Congress acted in section 3022 of P.L. 106-31 to prohibit subsistence hunting of Cook Inlet beluga whales during FY2000 to give NMFS time to take administrative action. Subsequently, NMFS conducted a status review of this stock and designated it as depleted under the MMPA (65 *Fed. Reg.* 34590-34597, May 31, 2000), but determined that listing the stock as endangered under the ESA was not warranted (65 *Fed. Reg.* 38778-38790, June 22, 2000).

¹⁰⁶ A “strike” means hitting a whale with a harpoon, lance, or explosive device.

¹⁰⁷ However, in the example of the Cook Inlet beluga whales, critics fault NMFS for relying upon the Cook Inlet Marine Mammal Council to develop some mechanism for self-regulation, which it was slow to do.

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 sharing resulted in the Makah gaining access to IWC aboriginal quota sufficient to kill an average of four gray whales from the North Pacific stock annually from 1998 through 2002.¹⁰⁸ Disagreement continues, both domestically and internationally, concerning the appropriateness and legitimacy of the action taken on this issue.¹⁰⁹

While bowhead whaling by Native villagers along Alaska's Beaufort and Chukchi Sea coasts is seen as truly for the subsistence, 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.¹¹⁰ 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 U.S.C. §1978) that is applicable to foreign nations with whom the United States trades. However, it is uncertain whether 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.¹¹¹ This confusion

¹⁰⁸ Makah whaling was suspended on June 9, 2000, by the Ninth Circuit Court of Appeals (*Metcalf v. Daley*, No. 98-36135), with NMFS ordered to begin the National Environmental Policy Act (NEPA) process afresh and prepare a new environmental assessment. Subsequently, NMFS set the Makah gray whale quota at zero (65 *Fed. Reg.* 75186, Dec. 1, 2000), pending completion of the NEPA analysis. On December 20, 2002, the Ninth Circuit Court of Appeals reversed a district court ruling that upheld NMFS's issuance of a quota to the Makah in 2001 and 2002 (*Anderson v. Evans*, 314 F.3d 1006 (9th Cir. 2002)). The federal government is considering whether to request rehearing of *Anderson v. Evans*. Subject to the outcome of a possible rehearing, NMFS is preparing an environmental impact statement on the issuance of annual quotas to the Makah for the years 2003 through 2007 (68 *Fed. Reg.* 10703-10704, Mar. 6, 2003).

¹⁰⁹ Marine Mammal Commission, *Annual Report to Congress, 1998* (Washington, DC: Jan. 31, 1999), p. 29-32.

¹¹⁰ Some 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.

¹¹¹ Background on the federal/state conflict in Alaska over subsistence use can be found at (continued...)

was exacerbated by the interaction of western technologies and economies on traditional beliefs and practices. For example, reported annual walrus kills for the St. Lawrence Island communities of Gambell (1,300 animals) and Savoonga (700 animals), composed mostly of females, appears excessive and questionable as “subsistence” to some managers, scientists, and animal protection groups. FWS regulations on the use of meat, skin, etc., are minimal and result in significant waste in a harvest that focuses on 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. The marionettes had been shipped by Canadian Inuit to a U.S. craftsperson for finishing-detail adjustments. 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,¹¹² 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. Animal protection advocates substantively disagree with the theory that sport hunting promotes sound or sustainable management and that quotas in Canada’s hunts are strict or conservative.¹¹³ In early 2007, FWS proposed that polar bears be listed as threatened species under the Endangered Species Act.¹¹⁴

(...continued)

<http://www.subsistence.adfg.state.ak.us/download/subupd00.pdf>.

¹¹² A 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.

¹¹³ Canada is the only nation inhabited by polar bears that allows sport hunting. In January 2001, an emergency interim rule halted imports of polar bears taken from Canada’s M’Clintock Channel population after the previously approved harvest was found to be unsustainable (66 *Fed. Reg.* 1901-1907, Jan. 10, 2001). A final rule was adopted in October 2001 (66 *Fed. Reg.* 50843-50851, Oct. 5, 2001).

¹¹⁴ For additional background on this proposal, see CRS Report RL33941, *Polar Bears: Listing Under the Endangered Species Act*, by (name redacted), (name redacted), and (name redacted).

Large Incidental Takes

MMPA provisions (16 U.S.C. §1371(a)(5)(A)) authorize federal managers to issue permits for U.S. citizens to incidentally take small numbers of marine mammals.¹¹⁵ However, the MMPA lacks a comparable program to deal with large incidental takes, other than those by the commercial fishing industry (for more information, see “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 permits 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,¹¹⁶ despite concerns that serious injury and 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 vessels, high-speed ferries, recreational jet skis, and other sources of anthropogenic noise. By statute, small take permits may be issued for periods of as long as five years under regulations, or one year under incidental harassment permits, with congressional report language indicating an intent that such permits be renewable. NMFS claims that most permits limit taking to small numbers of animals¹¹⁷ by harassment because mitigation measures imposed by NMFS on the activity prevent serious injury or mortality to marine mammals. If it were proposed that the MMPA be amended to address this issue, individuals who might be required to comply with these modified permitting procedures (e.g., jet skis, whale-watching vessels, ocean transport vessels) would likely oppose such a change if the new requirements were viewed as imposing additional or burdensome restrictions on their activities. Some environmentalists and animal protection advocates recognize that the permitting process is a relatively inefficient way to mitigate impacts from vessel traffic and suggest that a separate management scheme, protective of marine mammals, would be more appropriate to address both vessel-strike and anthropogenic noise concerns.

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 (e.g., ship traffic, military active sonar, seismic exploration, explosives trials, acoustic harassment devices used by fishermen) 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.¹¹⁸ However, significant

¹¹⁵ Provided that these takings do not cause unmitigable damage to marine mammal populations and have no more than a negligible effect on subsistence needs.

¹¹⁶ NMFS 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.

¹¹⁷ NMFS had interpreted this to mean a portion of a marine mammal stock whose taking would have a negligible effect on that stock. However, the ruling in *NRDC v. Evans* (279 F. Supp. 1129 (N.D. Cal. 2003)) concluded that NMFS improperly collapsed two standards and eliminated the possibility that the two standards could serve as separate safeguards restricting the extent of takes. NMFS was directed to redefine “small numbers” as a separate standard.

¹¹⁸ Measurements are obtained by attaching time-depth recorders to animals which are then exposed to the sounds. For (continued...)

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. FWS and NMFS have reacted to issue- or site-specific concerns, generally through the permit process, but they have not issued any guidance or regulations concerning anthropogenic noise, nor have they implemented any systematic monitoring or enforcement programs.

Some scientists,¹¹⁹ believing that the benefits of acoustic research may outweigh any potential effect on marine mammals, may propose amending the MMPA to simplify 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.¹²⁰ Other proposals might include revising the definition of level B harassment (16 U.S.C. §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 change include (1) some of the most prevalent anthropogenic noisemakers, including personal watercraft (e.g., jet skis), large high-speed oceangoing ships, and whale-watching vessels, are unregulated;¹²¹ (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 human-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 the sea surface, volcanic eruptions, and whale calls themselves).

The effects on marine mammals by active sonar development and deployment by the military has been of intense concern. Coincident with low-frequency active (LFA) sonar tests conducted by a NATO research vessel in the vicinity, a mass stranding and death of 12 Cuvieri’s beaked whales was observed in May 1996 in the eastern Mediterranean Sea (Ionia Sea).¹²² The mass stranding of at least 15 whales of four species (at least 7 of these animals died) in the Bahama Islands on March 15, 2000, occurred coincidental to U.S. Navy transit and activities in the area.¹²³ Additional strandings of beaked whales have been observed in conjunction with mid-frequency active sonar exercises in Madeira (2000) and the Canary Islands (2002). A September 2002 beaked whale stranding in the Gulf of California occurred concurrently when a vessel operated by

(...continued)

details, consult <http://is.dal.ca/~whitelab/rwb/suction.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.

¹¹⁹ This includes scientists using noise in their research as well as scientists consulting for industries and agencies (e.g., the U.S. Navy) that release large amounts of noise into the ocean.

¹²⁰ These 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).

¹²¹ See the previous section, “Large Incidental Takes” which considers whether the MMPA should be amended to regulate these activities.

¹²² Reported in “Scientific Correspondence,” *Nature*, Mar. 5, 1998.

¹²³ For more details, see http://www.nmfs.noaa.gov/pr/pdfs/health/stranding_bahamas2000.pdf.

Columbia University's Lamont-Doherty Earth Observatory pulsed the ocean with high-powered sound waves to map the lithosphere beneath the ocean floor.¹²⁴ More than five years of regulatory attention to deployment of low frequency active sonar by the U.S. Navy, with accompanying legal challenges, culminated in publication of a final rule in July 2002,¹²⁵ with letters of authorization required for subsequent deployment.¹²⁶ In addition and in recognition of concerns raised in federal court¹²⁷ over use of the LFA system and to further its commitment to responsible stewardship of the marine environment, the Navy is preparing a supplemental environmental impact statement on this technology.¹²⁸

Some animal protection advocates, environmentalists, and scientists characterize many sources of anthropogenic noise in the ocean as increasingly persistent and regular. These critics point to a growing body of evidence, particularly the mass mortalities of beaked whales associated with military active sonar use, as indicative that current mitigation practices are insufficiently protective of marine mammals. Believing that too little is known about the long-term effects of noise on marine mammals,¹²⁹ these critics believe a precautionary approach is necessary and oppose any action that could be interpreted as liberalizing the regulation of anthropogenic sources. In addition, these critics are especially concerned with low-frequency sound that is produced at very high pressure levels and is designed to travel thousands of miles 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. A variety of constituencies¹³⁰ 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 U.S.C. §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 to provide a sound basis for their conservation and management. Some federal scientists would like to see the MMPA amended to facilitate federal research on marine mammals by eliminating 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 lengthy permitting process be extended to all those involved in conducting federally funded research. This could include an exemption from permits or an expedited permit review procedure offering a simpler issuance or renewal of permits for

¹²⁴ See http://www.geotimes.org/jan03/NN_whales.html.

¹²⁵ See 67 *Fed. Reg.* 467121-46789 (July 16, 2002).

¹²⁶ For example, see 68 *Fed. Reg.* 50123-50124 (Aug. 20, 2003).

¹²⁷ See *Natural Resources Defense Council v. Evans*, 279 F. Supp. 2d 1129 (N.D. Cal. 2003).

¹²⁸ See 68 *Fed. Reg.* 44311 (July 28, 2003).

¹²⁹ Some 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.

¹³⁰ Other than, perhaps, taxpayer groups.

studies unchallenged by public comment. It might also be applicable to state wildlife agencies when their scientists work in direct cooperation with one of the federal agencies. Some nonfederal scientists, animal protection advocates, and environmentalists 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.¹³¹

Scientific Research Permits

Several issues concern the administration of scientific research permits by federal management agencies. Some scientists criticize 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.¹³² 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.¹³³ To assist the agencies in expediting the permit review process, they suggest that the MMPA be amended to authorize committees of scientists that would review scientific research permit applications in the same fashion that committees review proposed research on human and animal subjects.¹³⁴ Such committees 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, some scientists believe congressional direction might be helpful or even necessary if administrative action is 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”) 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”) than is imposed on activities that appear to be potentially more harmful to marine mammals (e.g., commercial fishing).

¹³¹ Some critics allege bias and/or conflict of interest in current federal agency permitting procedures, wherein applications for highly controversial research pass 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.

¹³² 16 U.S.C. §1374 (c)(3)(C).

¹³³ Some agency managers suggest three days between receipt of a permit application and publication in the *Federal Register* is reasonable and attainable.

¹³⁴ Some, but not all, of this research may already be reviewed by institutional animal committees required by 7 U.S.C. §2143 or by animal care committees required by 42 U.S.C. §289d.

On the other hand, animal protection advocates assert that permit processes and requirements are not too restrictive when it comes to invasive research, and both they and environmentalists argue that there is little justification for treating the research community as privileged. While certain amendments might streamline the permitting process for certain research with a low harassment potential or to establish streamlined programmatic permitting for certain kinds of research, the environmental and animal protection communities both disagree that research should be seen as having less of an impact on the marine environmental and marine mammals as a general matter when compared to fishing or other human activities.

State Approval of Federal MMPA Permits

Under the authority of the federal Coastal Zone Management Act, three states (Hawaii, Washington, and Alabama)¹³⁵ 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 (16 U.S.C. §1379) for granting state management authority over marine mammals.¹³⁶ 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) and for 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 and environmental groups might 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 U.S.C. §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 ESA and the Convention on International Trade in Endangered

¹³⁵ Also, Guam and the Northern Mariana Islands exercise similar authority.

¹³⁶ Although the State of Alaska began the process to request management authority for some marine mammal species, no state has been granted such management authority.

Species of Wild Fauna and Flora (CITES, the international agreement implemented through 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), some suggest that Congress could act to possibly forestall a WTO challenge to U.S. prohibition of such trade by amending the MMPA to allow limited trade¹³⁷ or in some other limited manner to make the MMPA more compatible with WTO rules.¹³⁸ 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.¹³⁹ 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 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 U.S.C. §1389(f), NMFS 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.¹⁴⁰ 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.¹⁴¹

While some local residents and fishermen fear that these pinniped stocks may be “over-populating,” scientists, environmentalists, and animal protection advocates counter that populations may be merely returning to their historic carrying capacities after over-exploitation diminished their abundance earlier in the 20th Century. Fishing industry or local government officials may propose that the MMPA be amended to permit selective culling or additional lethal

¹³⁷ Some 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.

¹³⁸ The main concern by the WTO appears to be that the MMPA prohibits trade in marine mammal products regardless of a species' conservation status. Thus, the United States may encounter difficulties in justifying the expansive MMPA ban on imports as necessary for responding to legitimate conservation concerns. For those species where conservation is a concern, listing under the ESA provides trade restrictions under CITES.

¹³⁹ Elements 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.

¹⁴⁰ National Marine Fisheries Service, *Impacts of California Sea Lions and Pacific Harbor Seals on Salmonids and West Coast Ecosystems*, Report to Congress (Feb. 10, 1999).

¹⁴¹ Such adverse effects include competition for fish stocks and fecal contamination of shellfish areas near seal and sea lion haulout areas.

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.¹⁴² In this report, 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 U.S.C. §1389 already provides for the lethal removal of pinnipeds to protect human safety and fish stocks, federal and state managers view the process for implementing the existing provisions as lengthy and overly cumbersome. Environmental, animal protection, and scientific critics, however, condemn the idea of culls and lethal nuisance animal control as excessive. They believe that such an approach 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)¹⁴³ 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.¹⁴⁴ 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.

Fostering International Cooperation

Although the MMPA established an international program (16 U.S.C. §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.¹⁴⁵ MMPA funds for such activities are at least an order of magnitude less than the millions of dollars in federal U.S. endangered species funds that are used to foster international cooperation to protect elephants, tigers, rhinoceros, great apes, and other species.¹⁴⁶ 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 North Atlantic 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

¹⁴² National Marine Fisheries Service, *Impacts of California Sea Lions and Pacific Harbor Seals on Salmonids and West Coast Ecosystems*, Report to Congress (Feb. 10, 1999). p. 13-15.

¹⁴³ In addition, some of these changes may also alter conditions determining where pinnipeds congregate and feed, possibly increasing predation on juvenile salmon.

¹⁴⁴ 16 U.S.C. §1361.

¹⁴⁵ In addition, international dialogue on whale conservation has occurred under the auspices of the International Whaling Commission.

¹⁴⁶ For more information, see CRS Report RS21157, *Multinational Species Conservation Fund*, by (name redacted) and (name redacted).

more international cooperation, as long as such action does not promote invasive research or commercial ventures.

Some also suggest there may be a critical need for expanding international cooperative programs for Arctic species because of the virtual total demise of Russian research and management programs, and the increasing pressure by protein-impoverished Native peoples to take these species for subsistence purposes. Many of these species are “shared” because their ranges include the waters of both the United States and the Russian Federation. A decline of Russian management effort has hampered 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 questionable studies of 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).¹⁴⁷ Some federal managers have found the new definition of level B harassment to be particularly difficult to enforce,¹⁴⁸ and potentially harmful human interaction with marine mammals continues.¹⁴⁹ Other critics suggest whale-watching vessels are insufficiently monitored for compliance with MMPA regulations.¹⁵⁰ Animal protection advocates suggest that the MMPA should be amended to require specific and more strictly enforced regulations concerning swimmer,¹⁵¹ 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,¹⁵² including additional observers aboard whale-watching vessels to assess compliance. Some scientists, on the other

¹⁴⁷ 16 U.S.C. §1362(18).

¹⁴⁸ In addition, some scientists believe the current definition is meaningless and possibly counterproductive. These critics suggest that an expert panel be convened to redefine this term.

¹⁴⁹ For example, animal protection advocates report that a pod of perhaps 50-75 spinner dolphins in Calexico Bay, Hawaii, can be surrounded on some days by as many as 50 swimmers, 35 kayaks, and several motor-propelled boats. On other days, no more than about 20 dolphins come into the Bay, where they are pursued from early morning until late afternoon when they leave the bay. NMFS doesn't have an enforcement agent on the Big Island (where these violations occur), and an agent from the Hawaii Department of Land and Natural Resources is responsible for responding to possible violations.

¹⁵⁰ Others 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 *Fed. Reg.* 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.

¹⁵¹ Others, 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.

¹⁵² Current 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.

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.

Changes to the harassment definition applicable to military readiness operations and to scientific research activities conducted by or on behalf of the federal government were enacted in §319(a) of P.L. 108-136. The new language defines harassment as any action that “injures” or “has the significant potential to injure” marine mammals, rather than any action that has the “potential to injure.” Environmental and animal protection organizations generally oppose the modified definition of harassment, arguing that it raises the burden of proof that a military readiness activity would affect a marine mammal, making it more difficult to protect them.¹⁵³ These interests believe that such changes are premised on an unrealistically high assessment of our ability to differentiate between biologically significant and insignificant responses. By doing so, they believe the modified definition effectively reverses the precautionary burden of proof that has been the hallmark of the MMPA since its inception. Supporters of the modified definition believe that it ensures that activities are restricted only when scientific evidence demonstrates that such protection is necessary. These changes remain highly controversial and could be revisited during MMPA reauthorization.

Management Consistency Between FWS and NMFS

The division of responsibility for various marine mammal species between NMFS and FWS is provided for in 16 U.S.C. §1362(12) within the definition of “Secretary.” When the MMPA was enacted in 1972, this division of species was seen as artificial and temporary by many in Congress and the Administration, 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 Natives.¹⁵⁴ Some Native American and scientific interests suggest that it may be time for Congress to revisit this division of management responsibility and consider amending 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.¹⁵⁵

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 included a list of information needs, with no

¹⁵³ For additional information, see “Military Readiness and Environmental Exemptions” in CRS Report RL32183, *Defense Cleanup and Environmental Programs: Authorization and Appropriations for FY2004*, by (name redacted).

¹⁵⁴ For example, FWS uses MTRP (see “Reporting Subsistence Takes”) while NMFS does not, and NMFS uses “incidental harassment authorization” to permit incidental taking while FWS does not.

¹⁵⁵ Joint regulations relating to marine mammals have only been developed for the transfer of management authority to states (50 C.F.R. Part 403).

suggestion as to how or by whom this research was to be pursued.¹⁵⁶ 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, California; (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, Washington; and (8) collection of unbiased samples for food habit studies. Some have suggested that 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.¹⁵⁷

Federal Agency Roles

Some scientists suggest that conflicting federal agency interests may hamper marine mammal protection and recovery. One example of an interagency issue where conflicting agency authority may be problematic relates to understanding and addressing the potential for endocrine disruption in marine mammals.¹⁵⁸ Some 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

Various constituencies were frustrated over federal agency delays in implementing provisions of the 1994 MMPA amendments (see “1994 MMPA Reauthorization” for more detail). This led to critics within the conservation and animal protection communities as well as the fishing industry to seek additional means to force NMFS and FWS to comply with MMPA deadlines.¹⁵⁹ These agencies contend, in reply, that the problem can be traced to limited funds provided by Congress to finance these activities.¹⁶⁰ For more information on funding concerns, see the following section “Appropriation of Agency Funding.” Others suggest that the pattern of repeated failure to

¹⁵⁶ National Marine Fisheries Service, *Impacts of California Sea Lions and Pacific Harbor Seals on Salmonids and West Coast Ecosystems*, Report to Congress (Feb. 10, 1999), p. 16-17.

¹⁵⁷ Such a program might be authorized as an extension of the Pacific Coast Task Force provisions in 16 U.S.C. §1389.

¹⁵⁸ For background on this issue, see CRS Report RL31267, *Environmental Exposure to Endocrine Disruptors: What Are the Human Health Risks?* by (name redacted) and (name redacted).

¹⁵⁹ For example, the Humane Society of the United States was a plaintiff in at least one lawsuit pertaining to perceived NMFS inaction on take reduction mandates in the 1994 MMPA amendments; the Center for Biological Diversity also has filed suit against NMFS for failure to convene a take reduction team.

¹⁶⁰ On 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 “due to competing budget needs and limited funding, the Service has been unable to fully implement provisions of certain amendments.”

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 declining federal appropriations, federal agency responsibilities and duties have expanded much faster than their budgets. For example, requirements for stock assessments of 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 implementing the 1994 MMPA amendments were directly tied to budgetary constraints. In addition, some scientists, environmental interests, and animal protection advocates 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. Some suggest that 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 has enacted measures to protect marine mammals, including specifically the MMPA. While the history of the MMPA'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 comprehensive reauthorization debate. Recent public sentiment, always a strong factor in marine mammal issues, has focused on concerns about 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 during the reauthorization process is likely to identify additional issues. The requirements of the MMPA itself did not expire when the authorization of appropriations expired at the end of FY1999. With the delay in enacting a comprehensive reauthorization, Congress has separately considered provisions to amend the MMPA on a number of selected issues.

During the 106th Congress, 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.

In the 107th Congress, the House Resources Subcommittee on Fisheries Conservation, Wildlife, and Oceans held a general oversight hearing on October 11, 2001, on reauthorizing the Marine Mammal Protection Act.¹⁶¹ H.R. 4781 was the only reauthorization bill that was introduced; the House Resources Subcommittee on Fisheries Conservation, Wildlife, and Oceans held a hearing on this bill on June 13, 2002,¹⁶² and marked up this measure on July 25, 2002. No further action was taken.

In the 108th Congress, H.R. 2693 and H.R. 3316 would have amended and reauthorized the MMPA through FY2008. The House Resources Subcommittee on Fisheries Conservation, Wildlife, and Oceans held a hearing on H.R. 2693 on July 24, 2003; on April 20, 2004, the House Committee on Resources reported (amended) this bill (H.Rept. 108-464). On July 16, 2003, the Senate Commerce Subcommittee on Oceans, Fisheries, and Coast Guard held a hearing on MMPA reauthorization issues. On August 19, 2003, the House Resources Subcommittee on Fisheries Conservation, Wildlife, and Oceans held an oversight field hearing in San Diego, California, on the increasing frequency of interactions between marine mammals and humans. H.R. 5104 would have amended the MMPA and authorized appropriations for the John H. Prescott Marine Mammal Rescue Assistance Grant Program through FY2009; this measure was reported by the House Committee on Resources on November 19, 2004 (H.Rept. 108-787).

In the 109th Congress, H.R. 2130 and H.R. 4075 would have extensively amended the MMPA and authorized appropriations for several programs; the House Committee on Resources reported H.R. 2130 (amended) on July 21, 2005 (H.Rept. 109-180). The House passed H.R. 4075 (amended) on July 17, 2006. Title IV of S. 1224 would have amended the MMPA to encourage development of fishing gear less likely to take marine mammals, expanded fisheries required to participate in the MMPA incidental take program to include recreational fisheries, and authorized appropriations for stock assessments and observer programs; in addition, Title III (Subtitle C) directed negotiation of international agreements to better protect cetaceans from commercial fishing gear and authorized a grant program to develop less harmful fishing gear. Section 206 of H.R. 2939 would have transferred management of all marine mammals to NOAA. H.R. 3839 would have amended the MMPA to repeal the long-term goal for reducing to zero the incidental mortality and serious injury of marine mammals in commercial fishing operations, and to modify the goal of take reduction plans for reducing such takings. H.R. 6241 would have amended the MMPA to authorize taking of California sea lions to reduce their predation on endangered Columbia River salmon.

For updated information on legislative activities in the 110th Congress concerning marine mammals, see CRS Report RL33813, *Fishery, Aquaculture, and Marine Mammal Legislation in the 110th Congress*, by (name redacted).

¹⁶¹ U.S. Congress, House Committee on Resources, Subcommittee on Fisheries Conservation, Wildlife, and Oceans, *Marine Mammal Protection Act*, 107th Cong., 1st sess. (Oct. 11, 2001), Serial No. 107-65, 330 p.

¹⁶² U.S. Congress, House Committee on Resources, Subcommittee on Fisheries Conservation, Wildlife, and Oceans, *H.R. 4781, Marine Mammal Protection Act Amendments of 2002*, 107th Cong., 2nd sess. (June 13, 2002), Serial No. 107-128, 94 p.

Oceans Commissions Reports

Two ocean commissions recently released reports relating to marine mammals. The Pew Oceans Commission report¹⁶³ was released June 4, 2003, and the U.S. Commission on Ocean Policy’s preliminary report¹⁶⁴ was issued on April 20, 2004. Marine mammal issues are only one aspect of the comprehensive ocean policy issues discussed in these reports; the larger context includes governance, education, coastal development, human health, environmental quality, energy resources, and ocean science, among others. For background on the reports and the larger context of these issues, see CRS Report RL33603, *Ocean Commissions: Ocean Policy Review and Outlook*, by (name redacted) and (name redacted). **Table 1** summarizes these two reports’ recommendations relating to marine mammals. CRS takes no position with respect to either report’s recommendations.

Table 1. Ocean Commissions Recommendations Relating to Marine Mammals

Issue	U.S. Commission on Ocean Policy	Pew Oceans Commission
Marine Mammal Commission	Recommendation 20—1. Congress should amend the Marine Mammal Protection Act to require the Marine Mammal Commission, while remaining independent, to coordinate with all relevant federal agencies through the National Ocean Council (NOC). The NOC should consider whether there is a need for similar oversight bodies for other marine animals whose populations are at risk.	No similar recommendation.
Agency jurisdiction	Recommendation 20—2. Congress should amend the Marine Mammal Protection Act to place the protection of all marine mammals within the jurisdiction of the National Oceanic and Atmospheric Administration.	Congress should establish a National Oceanic and Atmospheric Agency as an independent agency outside the Department of Commerce. This agency should include the marine mammal programs of the Department of the Interior to place all ocean wildlife under the jurisdiction of the oceans agency.
Harassment definition	Recommendation 20—5. Congress should amend the Marine Mammal Protection Act to revise the definition of harassment to cover only activities that meaningfully disrupt behaviors that are significant to the survival and reproduction of marine mammals.	No similar recommendation.
Research on effects of human activities	Recommendation 20—7. The National Oceanic and Atmospheric Administration and the U.S. Department of the Interior should promote an expanded research, technology, and engineering program, coordinated through the National Ocean Council, to examine and mitigate the effects of human activities on marine mammals and endangered species.	No similar recommendation.

¹⁶³ The Pew Oceans Commission’s report, *America’s Living Oceans: Charting a Course for Sea Change*, was available at http://www.pewtrusts.com/pdf/env_pew_oceans_final_report.pdf.

¹⁶⁴ The U.S. Commission on Ocean Policy’s preliminary report, *Preliminary Report of the U.S. Commission on Ocean Policy*, was available at <http://oceancommission.gov/documents/prelimreport/welcome.html>.

Issue	U.S. Commission on Ocean Policy	Pew Oceans Commission
Specifically, acoustics and noise	Recommendation 20—8. Congress should increase support for research into ocean acoustics and the potential impacts of noise on marine mammals. This funding should be distributed across several agencies, including the National Science Foundation, U.S. Geological Survey, and Minerals Management Service, to decrease the reliance on U.S. Navy research in this area. The research programs should be well coordinated across the government and examine a range of issues relating to noise generated by scientific, commercial, and operational activities.	No similar recommendation.
and toxics	No similar recommendation.	Sufficient resources should be devoted to studying the effects of toxic substances in the marine environment. Needed research includes the effects of polychlorinated biphenyls (PCBs) and other toxic substances on marine mammals—particularly in the polar regions.
Conservation decision-making	No similar recommendation.	Core conservation decisions should be made by NMFS, or a revamped fishery service within a new independent oceans agency. These decisions should originate at the regional offices with oversight by the national headquarters office. At a minimum, these decisions include setting specific protected species requirements (threatened and endangered marine mammals, sea turtles, seabirds, and fish).
Regulation of sound	No similar recommendation.	Activities that generate significant amounts of potentially harmful sound should be regulated consistent with the requirements of federal law, including the Marine Mammal Protection Act.
Permits:		
Streamline an interagency process	Recommendation 20—6. The National Marine Fisheries Service and the U.S. Fish and Wildlife Service should implement programmatic permitting for activities that affect marine mammals, wherever possible. More resource intensive case-by-case permitting should be reserved for unique activities or where circumstances indicate a greater likelihood of harm to marine mammals. The National Ocean Council should create an interagency team to recommend activities appropriate for programmatic permitting, those that are inappropriate, and those that are potentially appropriate pending additional scientific information. Enforcement efforts should also be strengthened and the adequacy of penalties reviewed.	No similar recommendation.

Issue	U.S. Commission on Ocean Policy	Pew Oceans Commission
Clarify what activities require permits	Recommendation 20—4. Congress should amend the Marine Mammal Protection Act to require the National Oceanic and Atmospheric Administration to more clearly specify categories of activities that are allowed without a permit, those that require a permit, and those that are prohibited.	No similar recommendation.
Attention to bycatch reduction	Recommendation 19—25. The National Oceanic and Atmospheric Administration, working with the U.S. Fish and Wildlife Service and the U.S. Department of State, should design a National Plan of Action for the United States that implements, and is consistent with, the International Plans of Action adopted by the United Nations Food and Agriculture Organization and its 1995 Code of Conduct for Responsible Fisheries. This National Plan should stress the importance of reducing bycatch of endangered species and marine mammals.	No similar recommendation.

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