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BALANCING MARINE MAMMAL PROTECTION AGAINST COMMERCIAL FISHING: THE ZERO MORTALITY GOAL, QUOTAS, AND THE GULF OF MAINE HARBOR PORPOISE

I. INTRODUCTION

Marine mammals and commercial fishermen come into direct conflict when marine mammals become entangled in commercial fishing nets.¹ Since marine mammals must come up to the water surface in order to breathe, they will die if they cannot break free of an underwater net. This conflict is exemplified by the plight of the harbor porpoise² in the Gulf of Maine. The federal regulatory framework that attempts to balance the competing interests of commercial fishermen and marine mammals is currently in flux, and its final form may determine the fate of species like the harbor porpoise.

Harbor porpoises are accidentally caught in the gillnets used to catch cod, pollock, and other groundfish in the Gulf of Maine.³

1. See, e.g., NATIONAL MARINE FISHERIES SERVICE, U.S. DEP'T OF COMMERCE, PROPOSED REGIME TO GOVERN INTERACTIONS BETWEEN MARINE MAMMALS AND COMMERCIAL FISHING OPERATIONS, FINAL LEGISLATIVE ENVIRONMENTAL IMPACT STATEMENT 1 (1993); NATIONAL MARINE FISHERIES SERVICE, U.S. DEP'T OF COMMERCE, PROPOSED REGIME TO GOVERN INTERACTIONS BETWEEN MARINE MAMMALS AND COMMERCIAL FISHING OPERATIONS 6-7 (1992) [hereinafter NMFS, PROPOSED REGIME]; NATIONAL MARINE FISHERIES SERVICE, U.S. DEP'T OF COMMERCE, DRAFT PROPOSED REGIME TO GOVERN INTERACTIONS BETWEEN MARINE MAMMALS AND COMMERCIAL FISHING OPERATIONS, DRAFT LEGISLATIVE ENVIRONMENTAL IMPACT STATEMENT § 3.1.3, at 3-5 (1991) [hereinafter NMFS, DRAFT LEIS]; Rodman D. Griffin, *Marine Mammals vs. Fish*, 2 CQ RESEARCHER 739, 740 (1992).

While this Comment only addresses the problem of marine mammals becoming entangled in fishing nets, conflicts also arise when marine mammals and fishermen compete for the same fish species. See NMFS, DRAFT LEIS, *supra*, § 3.1.3, at 3-5; Griffin, *supra*, at 740-41.

2. The harbor porpoise (*Phocoena phocoena*) belongs to the Order Cetacea, which includes whales, dolphins, and porpoises. See NMFS, DRAFT LEIS, *supra* note 1, at § 3.1.1, at 3-1, 3-4. The harbor porpoise issue will be used throughout this Comment to illustrate the nature of the conflict and the regulatory attempts to address the competing interests of marine mammals and commercial fishermen.

3. See, e.g., *id.* § 3.5, at 3-101; Clarke Canfield, *Porpoise Caught in Gill-Net Dispute*, ME. SUNDAY TELEGRAM, Jan. 19, 1992, at 1B, 12B. Groundfish is a term for fish like cod and haddock that live near the ocean bottom. See *Conservation Law Found. v. Franklin*, 989 F.2d 54, 58 n.2 (1st Cir. 1993). Gillnets used to catch groundfish are typically 6 to 10 feet high and 150 feet wide; 10 to 20 such nets are strung together and anchored to the ocean floor. Gillnetters usually throw their nets out at a depth of about 150 feet. The nets, which are typically left down for a day at a time, catch fish by snagging their gills when they swim into the nets. See Canfield, *supra*, at 12B. See also NMFS, DRAFT LEIS, *supra* note 1, § 5.1.1, at 5-1 to 5-3, and § 5.6.1, at 5-59 to 5-60, for a description of gillnet fishing.

About 2,000 harbor porpoises per year out of a population of approximately 45,000 are estimated to have been killed in gillnets in the Gulf of Maine in 1990 and 1991.⁴ This incidental taking,⁵ or so-called bycatch, has scientists, environmentalists, and fishermen concerned. Scientists who met to determine the status of the harbor porpoise have recommended that the harbor porpoise bycatch be reduced.⁶ In response to a petition submitted by environmental groups, the National Marine Fisheries Service (NMFS) has recently proposed that the harbor porpoise be designated a threatened species under the Endangered Species Act.⁷ The scientific findings, the

4. See HARBOR PORPOISE IN EASTERN NORTH AMERICA: STATUS AND RESEARCH NEEDS, RESULTS OF A SCIENTIFIC WORKSHOP HELD MAY 5-8, 1992 AT THE NORTHEAST FISHERIES SCIENCE CENTER, WOODS HOLE, MA 1, 20 (Marine Mammals Investigation, National Marine Fisheries Service, ed., 1992) (Northeast Fisheries Science Center Reference Document 92-06) [hereinafter HARBOR PORPOISE WORKSHOP]. Specifically, data for 1990 and 1991 produced estimates of mortality of harbor porpoises incidental to gillnet fishing in the Gulf of Maine of 2,400 and 1,700, respectively. *Id.* at 1. This estimated level of incidental catch—the so-called bycatch—represents about 4-5% of the estimated Gulf of Maine-Bay of Fundy harbor porpoise population. *Id.* Harbor porpoises in the Gulf of Maine and Bay of Fundy are believed to represent a single population. *Id.* at 3. These figures are associated with considerable uncertainty as shown by the large confidence intervals calculated at the workshop. Bycatch was estimated at 2,400 with a 95% confidence interval of 1,600-3,500 for 1990, and 1,700 with a 95% confidence interval of 1,100-2,500 for 1991. *Id.* at 1. The population estimate of 45,000 based on a 1991 survey is associated with a 95% confidence interval of 19,000-80,000. *Id.* (A 95% confidence interval means that there is 95% confidence that the mean (average) of the population sampled falls within that interval, that is, in repeated sampling, the population mean will fall within the calculated confidence interval 95 times out of 100. See ALLEN L. EDWARDS, STATISTICAL ANALYSIS 129 (3d ed. 1969)).

At the time this Comment was going to press, the Northeast Fisheries Science Center was in the process of finalizing the 1992 data for harbor porpoise bycatch and population abundance. Personal Communication with Tim Smith, Chief of Marine Mammals Investigation, Northeast Fisheries Science Center, Woods Hole, Mass. (June 23, 1993). These data indicate that harbor porpoise bycatch in 1992 was significantly lower than in 1991, while population abundance was substantially higher than the 1991 estimate. *Id.* Clearly, this is good news for the harbor porpoise.

5. Under the Marine Mammal Protection Act of 1972 [hereinafter MMPA], "[t]he term 'take' means to harass, hunt, capture, or kill, or attempt to harass, hunt, capture, or kill any marine mammal." 16 U.S.C. § 1362(12) (1988). The word "take" or "taking" in this Comment will refer primarily to the incidental catching of marine mammals in underwater commercial fishing nets.

6. HARBOR PORPOISE WORKSHOP, *supra* note 4, at 1, 21. In reaching its conclusions, the workshop noted that the bycatch mortality rate estimates "are high relative to the recommendations of the Scientific Committee of the International Whaling Commission," even though these estimates do not account for bycatch of harbor porpoises from other U.S. and Canadian fisheries. *Id.* at v. For a discussion of the International Whaling Commission's recommendations regarding incidental take of porpoises in passive fishing nets, and the significance of those recommendations for gillnet fishing, see Ron Smolowitz, *Harbor Porpoise Take at Issue, Whaling Commission Scrutinizes Gillnets*, COM. FISHERIES NEWS, Jan. 1991, at 10B.

7. 58 Fed. Reg. 3108 (1993) (to be codified at 50 C.F.R. pt. 227) (proposed Jan. 7,

recent proposal for a threatened species listing, and proposed changes to the Marine Mammal Protection Act have gillnetters worried that gillnetting could be prohibited for lengthy periods or perhaps even altogether.⁸

Three distinct federal statutes, the Marine Mammal Protection Act (MMPA),⁹ the Endangered Species Act (ESA),¹⁰ and the Magnuson Fishery Conservation and Management Act (MFCMA),¹¹ could eventually limit harbor porpoise bycatch. All three statutes are before Congress for reauthorization in 1993.

Congress enacted the Marine Mammal Protection Act of 1972 in order to protect marine mammal species and population stocks from extinction or depletion resulting from human activities.¹² A central purpose of the MMPA is to maintain marine mammal stocks within

1993). See *infra* note 21 for the definition of "threatened species" under the Endangered Species Act.

8. See Canfield, *supra* note 3, at 12B; Janice M. Plante, *Working Group Plans Harbor Porpoise Technical Workshop*, COM. FISHERIES NEWS, March 1993, at 19A [hereinafter Plante, *Working Group*]. Gillnets have already been banned in waters shallower than 180 feet off the southern California coast by way of voter approval of Proposition 132. See *CA Voters Ban Gillnets*, COM. FISHERIES NEWS, Jan. 1991, at 11B; Canfield, *supra* note 3, at 12B. See generally Pete Thomas, *Proposition 132; Banning of Gill Nets on Ballot*, L.A. TIMES, Nov. 4, 1990, at A3 (discussing background of Proposition 132). The ostensible purpose of the ban was protection of threatened marine species, however, opponents of the initiative claimed that its primary purpose was protection of sport fishing interests. See *CA Voters Ban Gillnets*, *supra*, at 12B.

Concern over the fate of the harbor porpoise comes at a time when gillnetters are already facing the possibility of severe restrictions on fishing effort because of declining numbers of groundfish. See Janice M. Plante, *Double Dilemma Challenges Gillnetters*, COM. FISHERIES NEWS, Dec. 1992, at 11A [hereinafter Plante, *Double Dilemma*]; Janice M. Plante, *Gillnet Fishermen: Harbor Porpoise Listing, Groundfish Cuts Exact Dual Toll*, COM. FISHERIES NEWS, Feb. 1993, at 13A [hereinafter Plante, *Gillnet Fishermen*].

9. MMPA, 16 U.S.C. §§ 1361-1407 (1988 & Supp. III 1991); 16 U.S.C.A. §§ 1378-1421 (West Supp. 1993).

10. Endangered Species Act of 1973 [hereinafter ESA], 16 U.S.C. §§ 1531-1544 (1988 & Supp. III 1991).

11. Magnuson Fishery Conservation and Management Act [hereinafter MFCMA], 16 U.S.C. §§ 1801-1882 (1988 & Supp. III 1991).

12. See MMPA, 16 U.S.C. § 1361 (1988) (setting forth congressional findings and policy). Among its findings, Congress stated that:

(1) certain species and population stocks of marine mammals are, or may be, in danger of extinction or depletion as a result of man's activities;

(2) such species and population stocks should not be permitted to diminish beyond the point at which they cease to be a significant functioning element in the ecosystem of which they are a part, and, consistent with this major objective, they should not be permitted to diminish below their optimum sustainable population.

Id. § 1361(1), (2).

The MMPA defines "population stock" or "stock" as a "group of marine mammals of the same species . . . in a common spatial arrangement, that interbreed when mature." *Id.* § 1362(10).

their optimum sustainable populations.¹³ The MMPA accomplishes its goals primarily by placing a moratorium on the taking of marine mammals; however, from the initial enactment of this statute, the MMPA has also provided for certain exceptions to the moratorium for the commercial fishing industry, as well as for other groups.¹⁴ Currently, commercial fishermen fall under a five-year interim exemption from the MMPA's moratorium on the taking of marine mammals; this exemption expires on October 1, 1993.¹⁵ When Congress enacted the interim exemption, it directed that a new regime be developed to govern the incidental taking of marine mammals during commercial fishing operations.¹⁶ As a result, NMFS developed and submitted a legislative proposal to Congress, which is expected to act on the proposal as part of the 1993 MMPA reauthorization.

Although the legislative proposal contains a new system for allocating quotas for incidental take of marine mammals to certain commercial fisheries,¹⁷ it also retains the long-standing zero mortality goal associated with the commercial fishing exception in the MMPA. The provisions called for in the NMFS proposal may significantly restrict the Gulf of Maine fisheries that incidentally take harbor porpoises.¹⁸ As might be expected, the fishing industry is concerned about the possible effects of the NMFS proposal.¹⁹

The possible listing of the harbor porpoise as a threatened species²⁰ under the Endangered Species Act provides another regulatory option for limiting harbor porpoise bycatch. The ESA seeks to

13. The term "optimum sustainable population" means "with respect to any population stock, 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." *Id.* § 1362(8).

14. MMPA, 16 U.S.C. § 1371 (1988).

15. *Id.* § 1383a(a)(1).

16. *Id.* § 1383a(l).

17. See NMFS, PROPOSED REGIME, *supra* note 1, at 2-4.

18. Based on current information, NMFS noted in its cover letter accompanying its legislative proposal that "the only fisheries that we are aware of that may be restricted significantly due to marine mammal takes exceeding the [potential biological removal] are those that take harbor porpoise in the Gulf of Maine. . . . [W]e are working with the New England Fishery Management Council to alleviate this problem and, at this point, we expect to be fully successful in doing so." See letter from William W. Fox, Jr., Director, National Marine Fisheries Service, to interested constituents (Dec. 4, 1992) (accompanying NMFS, PROPOSED REGIME, *supra* note 1).

19. See, e.g., letter from National Fisheries Institute, Inc., Arlington, Va., to Charles Karnella, National Marine Fisheries Service (Dec. 20, 1991) (discussing "the need to describe the impact the proposal would have on the commercial fishing industry and consumers"). This letter, signed by 85 commercial fishing organizations, commented on the NMFS November 1991 interim revised proposal governing interactions between marine mammals and commercial fishing.

20. 58 Fed. Reg. 3108, *supra* note 7.

prevent extinction of animal and plant species through conservation programs aimed at protecting endangered and threatened species and their habitats.²¹ Not surprisingly, the strong protectionist nature of the ESA has gillnetters worried about the possible inclusion of the harbor porpoise under the reach of this statute.²²

Gulf of Maine fishermen would prefer that harbor porpoise bycatch be regulated under the fishery management structure created under the Magnuson Fishery Conservation and Management Act rather than under the ESA.²³ The MFCMA is primarily directed at conserving and managing fishery resources and promoting domestic fishing.²⁴ Recently, the Department of Commerce, under authority granted by the MMPA, requested that the New England Fishery Management Council²⁵ take action under the MFCMA to reduce harbor porpoise mortality in the Gulf of Maine.²⁶ The Council, which is responsible under the MFCMA for preparing fishery management plans, is currently working on a proposal to reduce harbor porpoise bycatch in an amendment to its management plan for groundfish.²⁷ If the Council adopts measures for harbor porpoise

21. See ESA, 16 U.S.C. § 1531(b) (1988). Under the ESA, an "endangered species" is a "species which is in danger of extinction throughout all or a significant portion of its range." *Id.* § 1532(6). A "threatened species" is "any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range." *Id.* § 1532(20).

22. See Plante, *Double Dilemma*, *supra* note 8, at 11A (discussing need for fishing industry to find effective ways to reduce take of harbor porpoise to avoid ESA listing); Plante, *Gillnet Fishermen*, *supra* note 8, at 13A ("While many gillnet fishermen had braced themselves for a proposed rule to list the Gulf of Maine harbor porpoise population as 'threatened' under the [ESA], the official announcement . . . still sent chills through the industry.").

23. See Janice M. Plante, *Gillnetters Proposal*, COM. FISHERIES NEWS, Dec. 1992, at 11A (discussing gillnet industry's proposal to cut harbor porpoise take and reduce fishing effort on groundfish); Plante, *Gillnet Fishermen*, *supra* note 8, at 13A (discussing goal to lower harbor porpoise bycatch through an amendment to the groundfish plan).

24. See MFCMA, 16 U.S.C. § 1801(b) (1988).

25. The New England Fishery Management Council [hereinafter the Council] is one of eight regional councils established under the MFCMA. Most regional council members are individuals with expertise in fisheries management and conservation, or recreational or commercial harvest, and are appointed by the Secretary of Commerce. Certain state and federal agency employees also serve on the councils. See *id.* § 1852 (1988 & Supp. III 1991).

26. Letter from William W. Fox, Jr., Director, National Marine Fisheries Service, to Joseph Brancaleone, Chairman, New England Fishery Management Council (Oct. 15, 1992).

27. See New England Fishery Management Council, *Modifications and More Options: New Proposals for Groundfish Amendment #5*, COM. FISHERIES NEWS, May 1993, at 14A (setting forth proposed alternatives); New England Fishery Management Council, *Status of Amendment #5 Proposals for New England Groundfish* (March 4, 1993) (Saugus, Mass.) (discussing status of proposed interim measure to reduce harbor porpoise bycatch); New England Fishery Management Council, *Summary of Amendment #5 Proposals* (Jan. 19, 1993) (Saugus, Mass.) (reporting that measures to

protection, NMFS may not list the porpoise as a threatened species under the ESA.²⁸

This Comment will examine the conflict between marine mammals and commercial fishermen and the regulatory attempts to balance these competing interests. The primary focus will be the current MMPA, as well as the recent NMFS legislative proposal on interactions between marine mammals and commercial fishing operations. In light of the MMPA's historical zero mortality goal for commercial fishing, this Comment will examine the quota system, proposed by NMFS, for allowing bycatch of marine mammals. Insight into the meaning of the zero mortality goal and the MMPA's accommodation of commercial fishing will be provided by analyzing the legislative history of the MMPA and relevant litigation. Following this analysis, this Comment will identify the critical role of the zero mortality goal provision. Recommendations will be set forth for clarifying how this goal should be applied to commercial fishing operations. Finally, this Comment will examine the interaction of the Endangered Species Act and the Magnuson Fishery Conservation and Management Act with the MMPA to the extent these statutes have an impact on the balance between marine mammal protection and commercial fishing.

II. THE CURRENT MARINE MAMMAL PROTECTION ACT: THE TENSION BETWEEN MARINE MAMMAL PROTECTION AND COMMERCIAL FISHING INTERESTS

While the MMPA is aimed at protection of marine mammals, its language and history indicate a significant concern for the viability of commercial fishing in the United States. The following discussion examines the balance of marine mammal protection and commercial fishing interests in the MMPA through an analysis of the major relevant provisions of the 1972 MMPA and the 1981 and 1988 amendments, their legislative histories, and judicial interpretation. The commercial fishing exception from the MMPA's moratorium on tak-

reduce harbor porpoise bycatch were not fully developed yet). *See also* Plante, *Gillnet Fishermen*, *supra* note 8, at 13A (reporting that "the [C]ouncil has committed itself to addressing the [harbor porpoise] problem in Amendment 5 of the groundfish plan").

The Council's amendment to the groundfish plan includes a goal of reduction in fishing mortality of 50% over five years. *See* Plante, *Double Dilemma*, *supra* note 8, at 11A. The Council's groundfish and marine mammal committees have adopted a goal of reducing harbor porpoise bycatch to 2% over a four-year period. *See id.*

28. *See* ESA, 16 U.S.C. § 1533(a)(1)(D) (1988) (providing that one of the criteria for determining whether species should be listed as endangered or threatened is the inadequacy of existing regulatory mechanisms). *See also* Plante, *Double Dilemma*, *supra* note 8, at 11A ("If Amendment 5 is in place with 'adequate' harbor porpoise mitigation measures, said Payne [of NMFS Office of Protected Resources], I think that would be good enough for the agency not to list.").

ing marine mammals has developed side by side with the zero mortality goal. Understanding this historical perspective is necessary in order to evaluate the current NMFS legislative proposal, which maintains the commercial fishing exception in the MMPA by recommending a new quota system for authorizing bycatch, and also maintains the zero mortality goal.

A. *Marine Mammal Protection Act of 1972*

Congress enacted the MMPA in 1972²⁹ in response to growing sentiment that existing laws and regulations regarding marine mammals were inadequate to conserve these species.³⁰ The major goals of the MMPA are laid out in the following congressional finding:

[M]arine mammals have proven themselves to be resources of great international significance, esthetic and recreational as well as economic, and it is the sense of the Congress that they should be protected and encouraged to develop to the greatest extent feasible commensurate with sound policies of resource management and that the primary objective of their management should be to maintain the health and stability of the marine ecosystem. Whenever consistent with this primary objective, it should be the goal to obtain an optimum sustainable population keeping in mind the carrying capacity of the habitat.³¹

The MMPA is aimed at protecting marine mammals primarily at the species and population level.³² Under the MMPA, Congress declared that "species and population stocks should not be permitted to diminish beyond the point at which they cease to be a significant functioning element in the ecosystem of which they are a part."³³

29. Pub. L. No. 92-522, 86 Stat. 1027 (1972) (codified at 16 U.S.C. §§ 1361-1407) (1988). For overviews of the MMPA of 1972, see MICHAEL J. BEAN, *THE EVOLUTION OF NATIONAL WILDLIFE LAW* 281-317 (1983); Sanford E. Gaines & Dale R. Schmidt, *Wildlife Population Management Under the Marine Mammal Protection Act of 1972*, 6 ENVTL. L. REP. (Envtl. L. Inst.) 50,096 (Sept. 1976).

30. As an example of this sentiment, see H.R. REP. NO. 707, 92d Cong., 1st Sess. 11-12 (1971), reprinted in 1972 U.S.C.C.A.N. 4144, 4144-45:

Recent history indicates that man's impact upon marine mammals has ranged from what might be termed malign neglect to virtual genocide. These animals, including whales, porpoises, seals, sea otters, polar bears, manatees and others, have only rarely benefitted from our interest: they have been shot, blown up, clubbed to death, run down by boats, poisoned, and exposed to a multitude of other indignities, all in the interests of profit or recreation, with little or no consideration of the potential impact of these activities on the animal populations involved.

See also S. REP. NO. 863, 92d Cong., 2d Sess. 2 (1972) (pointing out that as many as 100,000 to 300,000 porpoises annually may have been killed incidental to the catching of yellowfin tuna by the U.S. tuna industry).

31. See MMPA, 16 U.S.C. § 1361(6) (1988).

32. See *id.* § 1361(1), (2).

33. *Id.* § 1361(2).

Congress intended that species and population stocks be maintained at their optimum sustainable population.³⁴ While the meaning of this term has not always been clear,³⁵ the goal of achieving optimum sustainable population levels is a critical part of the MMPA. A species or population stock that is determined to be below its optimum sustainable population level, or is listed as endangered or threatened under the ESA, is designated as depleted under the MMPA.³⁶

The central provision carrying out the goals of the MMPA imposes a moratorium on the taking and importation of marine mammals and marine mammal products.³⁷ Congress created several exceptions to the moratorium, however, including an exception for marine mammals taken incidentally in the course of commercial fishing operations.³⁸ Under the commercial fishing exception, the Secretary of Commerce or the Secretary of the Interior could issue permits authorizing the taking of marine mammals subject to regulations.³⁹ The MMPA directs the Secretary to prescribe regulations on the taking of marine mammals as "necessary and appropriate to

34. *Id.* § 1361(2), (6).

35. For discussion of the ambiguities in the definition of "optimum sustainable population," see BEAN, *supra* note 29, at 290-94. For definition of the term under the MMPA, see *supra* note 13. The NMFS, in regulations relating to the MMPA, has further defined optimum sustainable population as follows:

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

50 C.F.R. § 216.3 (1992).

36. MMPA, 16 U.S.C. § 1362(1) (1988). A "depleted" designation under the MMPA meant that NMFS could not issue a permit for that species or population stock. *Id.* § 1371(a)(3)(B) (1988).

37. *Id.* § 1371. While limitations on the importation of marine mammals and marine mammal products are an important component of the MMPA along with limitations on the taking of marine mammals, discussion of importation restrictions is beyond the scope of this Comment.

38. *Id.* § 1371(a)(2). Other statutory exceptions included the taking of marine mammals for scientific research and public display, the taking by Alaskan natives for subsistence or creation and sale of native articles of handicrafts and clothing, and takings necessary to avoid undue economic hardship (limited to one year following MMPA's enactment). See *id.* §§ 1371(a)(1), 1371(b), 1371(c).

39. *Id.* §§ 1371(a)(2), 1373, 1374; 50 C.F.R. pt. 220 (1992) (general permit procedures). The MMPA gives the Secretary of the department in which the National Oceanic and Atmospheric Administration (NOAA) is operating the responsibility for members of the Order Cetacea (including whales, dolphins, and porpoises) and members of the Order Pinnipedia, other than walruses (including sea lions and seals). See MMPA, 16 U.S.C. § 1362(11) (1988); NMFS, DRAFT LEIS, *supra* note 1, § 3.1.1, at 3-1. Currently, NOAA is part of the Department of Commerce. Responsibility for all other marine mammals covered by the MMPA is given to the Secretary of the Interior. See MMPA, 16 U.S.C. § 1362(11) (1988).

insure that such taking will not be to the disadvantage of those species and population stocks and will be consistent with the purposes and policies [of the MMPA]."⁴⁰

In an effort to maintain a balance of interests, however, Congress qualified the commercial fishing exception to the moratorium by including a zero mortality goal: "In any event it shall be the *immediate goal* that the 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 . . .*"⁴¹ Congress, however, did not define "immediate goal" or "insignificant levels." The MMPA also provides for research and development on improved fishing methods and gear in order to reduce, to the maximum extent practicable, the incidental taking of marine mammals during commercial fishing operations.⁴²

1. *Legislative History Regarding the Zero Mortality Goal in the Commercial Fishing Exception*

The meaning of the zero mortality goal is unclear from the language of the MMPA and has been a source of considerable disagreement.⁴³ Since this goal is retained in the 1992 NMFS legislative proposal governing interactions between marine mammals and commercial fishing,⁴⁴ it is important to examine the legislative history of the zero goal in order to identify its original purpose and the balancing of marine mammal protection and commercial fishing in the 1972 MMPA.

Among the bills introduced in the House of Representatives, H.R. 10420 became the key bill that was later the basis for the MMPA.⁴⁵

40. MMPA, 16 U.S.C. § 1373(a) (1988). This is the so-called "disadvantage" test that must be met before takings can be permitted under the MMPA. See Eric Erdheim, *The Immediate Goal Test of the Marine Mammal Protection Act and the Tuna/Porpoise Controversy*, 9 ENVTL. L. 283, 284-86 (1979). The Secretary is required to prescribe regulations on the taking of marine mammals "on the basis of the best scientific evidence available and in consultation with the Marine Mammal Commission." MMPA, 16 U.S.C. § 1373(a) (1988). The Marine Mammal Commission is composed of three members who are appointed by the President, and who have expertise in marine ecology and resource management. *Id.* § 1401(b)(1).

41. *Id.* § 1371(a)(2) (emphases added).

42. *Id.* § 1381.

43. See Erdheim, *supra* note 40, at 286. For a thorough review of the legislative history of the zero mortality goal in the 1972 Act, see *id.* at 290-97. In Erdheim's analysis, the zero mortality goal is termed the "immediate goal" test. See *id.* at 286. Erdheim's article was used extensively in preparing the sections on the legislative history of the zero mortality goal, and its judicial and administrative agency interpretations, in this Comment.

44. NMFS, PROPOSED REGIME, *supra* note 1, at 3.

45. For text of H.R. 10420, see *Marine Mammals: Hearings on Legislation for the Preservation and Protection of Marine Mammals Before the Subcomm. on Fisheries*

While this bill sought to establish a permit system for the taking of marine mammals, it did not contain any provisions specifically regarding incidental take during commercial fishing operations, and it did not include the zero mortality goal provision. The report of the House Merchant Marine and Fisheries Committee accompanying this bill, however, does provide evidence of the Committee's accommodation of commercial fishing. For example, the Committee intended that the tuna purse-seine industry not be significantly curtailed as long as "best available technology" was used.⁴⁶ The incidental killing of porpoises by fishermen using purse seines, a kind of fishing net, to catch tuna in the eastern Pacific Ocean was an important reason behind the passage of the MMPA.⁴⁷ In discussing the factors⁴⁸ the Secretary may consider in issuing limitations on takings, the Committee stated that

[t]he Secretary, for example, in regulating the operations of the tuna industry with respect to the catching of porpoises must consider the technical capability of these fishermen to avoid injury to porpoises. *It is not the intention of the Committee to shut down or significantly to curtail the activities of the tuna fleet so long as he is satisfied that the tuna fishermen are using the best available technology to assure minimal hazards to marine mammal populations.*⁴⁹

and *Wildlife Conservation of the House Comm. on Merchant Marine and Fisheries*, 92d Cong., 1st Sess. 13-19 (1971) (reprinting text of H.R. 10420, 92d Cong., 1st Sess. (1971)).

46. See H.R. REP. NO. 707, *supra* note 30, at 24, reprinted in 1972 U.S.C.C.A.N. at 4157.

47. See *id.* at 15, reprinted in 1972 U.S.C.C.A.N. at 4148; S. REP. NO. 863, *supra* note 30, at 2. The practice of fishing for yellowfin tuna by "setting on porpoise" involves the encirclement of schools of porpoise and of tuna, which are often found below schools of porpoise, with large fishing nets called purse seines. When the fishermen haul in the nets, some porpoise are unable to escape. These porpoises become entangled in the net and may drown or be seriously injured as a result. See BEAN, *supra* note 29, at 307.

48. The factors proposed in H.R. 10420 were carried through to the Act passed by Congress.

In prescribing such regulations, the Secretary shall give full consideration to all factors which may affect the extent to which such animals may be taken or imported, including but not limited to the effect of such regulations on-

(1) existing and future levels of marine mammal species and population stocks;

(2) existing international treaty and agreement obligations of the United States;

(3) the marine ecosystem and related environmental considerations;

(4) the conservation, development, and utilization of fishery resources; and

(5) *the economic and technological feasibility of implementation.*

MMPA, 16 U.S.C. § 1373(b) (1988) (emphasis added).

49. H.R. REP. NO. 707, *supra* note 30, at 24, reprinted in 1972 U.S.C.C.A.N. at

A floor amendment to H.R. 10420 offered by Representative Udall put into words the Committee's intention to ensure that the best available technology be used by the U.S. tuna purse-seine fleet.⁵⁰ The amendment added a provision for a five-year moratorium on the taking of marine mammals with an exception for the incidental take of mammals in the course of commercial fishing operations. This exception would be subject to regulations ensuring that the permittee used techniques and equipment that would result in the least practicable hazard to marine mammals. The floor debate regarding several rejected amendments further emphasizes that the House intended to reduce porpoise mortality to as low as was technologically feasible.⁵¹ The House committee report, the Udall amendment, and the House debate taken together show that the House intended for commercial fishing interests to be accommodated, but that protection must be afforded marine mammals to the extent such protection is technologically feasible.

Like the House report, the Senate Commerce Committee report on the passage of S. 2871, which proposed a fifteen-year moratorium with an exception for commercial fishing, demonstrates an intent to reduce porpoise mortality to the lowest level technologically feasible.⁵² In words almost identical to the earlier House report, the Senate report stated that "[i]t is not the intention of the Committee to shut down or significantly to curtail the activities of the tuna fleet so

4157 (emphasis added). Elsewhere in the report, the Committee pointed out that it "took pains in its consideration of this bill to see that the legitimate needs of the tuna industry were not ignored, while accepting the clear requirement that porpoises be given every reasonable protection." *Id.* at 16, reprinted in 1972 U.S.C.C.A.N. at 4148.

50. See 118 CONG. REC. 7700-01 (1972). See also Erdheim, *supra* note 40, at 291-92.

51. See 118 CONG. REC. 7707-09 (1972). See also Erdheim, *supra* note 40, at 292-93. In response to an amendment offered by Rep. Reid, which would have effectively prohibited the practice of encircling porpoises with purse-seines in order to harvest tuna, one year after the Act was enacted, 118 CONG. REC. 7706 (1972), Rep. Pelly, who was a member of the House committee sponsoring the bill, stated that "I and every member of the committee also feel that the Department of Commerce and the commercial fishing industry should do everything which is technologically feasible to reduce the level of incidental taking to the lowest possible." *Id.* at 7707. Rep. Dingell, who was chairman of the House subcommittee that conducted hearings on the bill, stated that the Secretary would be required to "issue permits requiring the most modern technology in terms of providing for the maximum amount in porpoise escapement. . . . It is our purpose to minimize to the greatest degree possible the porpoise kill." *Id.* In addition, both Rep. Pelly and Rep. Dingell reiterated the intent to reduce porpoise mortality to the lowest level technologically feasible in their responses to an amendment offered by Congressman Biaggi. *Id.* at 7708-09.

52. See S. REP. NO. 863, *supra* note 30, at 6, 9, 16. For text of S. 2871, see *Ocean Mammal Protection: Hearings on S. 685, 1315, 2579, 2639, 2871, 3112, 3161, and Amendment 1048, Ocean Mammal Legislation Before the Subcomm. on Oceans and Atmosphere of the Senate Comm. on Commerce*, 92d Cong., 2d Sess. 47-68 (1972) (reprinting text of S. 2871, 92d Cong., 1st Sess. (1971)).

long as the Secretary is satisfied that the tuna fishermen are using economically and technologically practicable measures to assure minimal hazards to marine mammal populations."⁵³

The zero mortality goal was added during the Senate floor debate by Senator Harris, who was concerned over porpoise mortality in commercial fishing of tuna.⁵⁴ In fact, Senator Harris asked that a *New York Times* editorial entitled "Dolphin Slaughter" published that day be printed in the record. The Senator noted that the editorial "brings to the attention of the Senate very strongly the terrible nature of the unnecessary slaughter going on of thousands and thousands of dolphins which are annually entrapped by tuna fishnets and drowned."⁵⁵ Believing the proposed Senate bill to be an unsatisfactory response to the problem, Senator Harris introduced an amendment regarding commercial fishing operations containing the language "[i]n any event the incidental kill or incidental serious injury of marine mammals permitted in the course of commercial fishing operations shall be reduced to insignificant levels approaching a zero mortality and serious injury rate."⁵⁶

Senator Hollings opposed Senator Harris's amendment, noting that he had been advised that the amendment would result in a total ban on the taking of porpoises.⁵⁷ Senator Hollings stated, however, that he would accept Senator Harris's second amendment which added the words "it shall be the immediate goal" to Senator Harris's first amendment, such that the amendment would read: "In any event it shall be the immediate goal that the incidental kill or incidental serious injury of marine mammals permitted in the course of commercial fishing operations . . . shall be reduced to insignificant levels approaching a zero mortality and serious injury rate."⁵⁸ In the ensuing dialogue between the two senators, Senator Harris stated:

It would be the Senator's interpretation, as I take it, that if we said

53. S. REP. NO. 863, *supra* note 30, at 16. While the floor amendment to the House bill proposed a five-year moratorium on takings, the Senate initially provided for a longer moratorium of 15 years. See 118 CONG. REC. 7701 (1972) (the five-year "moratorium would allow us a minimal period during which we could get to really know these strange and fascinating aquatic neighbors and head off the irreparable tragedy of extinction . . ."); S. REP. NO. 863, *supra* note 30, at 6, 15 (the 15-year moratorium would "provide enough time for certain species of animals to reproduce and proceed through a life cycle without the threat of commercial or sport hunting"). The Senate later proposed a permanent moratorium on takings in an amendment to the House bill, and the Conference Committee adopted the Senate's position. See H.R. CONF. REP. NO. 1488, 92d Cong., 2d Sess. 22-23 (1972), reprinted in 1972 U.S.C.C.A.N. 4187, 4187-88.

54. See 118 CONG. REC. 25,271 (1972).

55. *Id.*

56. *Id.*

57. *Id.*

58. *Id.* at 25,271-72.

that it is our immediate goal to do so, that it would be binding upon the Secretary of Commerce to use every effort he could for the development of the technology and also by enforcement power and so forth so as to move us as rapidly as possible toward approaching a zero mortality rate and serious injury rate.⁵⁹

Senator Hollings responded: "[T]hat is exactly the intent. . . . And if we knew how to legislate it so that there would be no taking of porpoises, we would legislate it."⁶⁰ The discussion between the two senators indicates that they agreed that porpoise mortality should be reduced as much as technologically possible.

The zero goal provision appeared to reflect an underlying requirement for best available technology to be used in order to achieve insignificant levels of mortality.⁶¹ The intent behind adoption of the provision also seems to have been to put pressure on the Secretary of Commerce to develop new technology and to take other steps to move toward approaching zero mortality. The addition of the phrase "it shall be the immediate goal" indicates that the Senate was unwilling to prohibit all takings by the fishing industry, and so adopted the zero mortality provision as a goal only. Yet, it is noteworthy that the word "immediate" was retained, indicating a sense of urgency in achieving the goal.

Following the Conference Committee's adoption of the Senate's zero mortality goal,⁶² Representative Goodling, who was the senior House minority conferee, reiterated that the purpose of the goal was not to prevent purse seining on porpoise.⁶³

59. *Id.* at 25,271.

60. *Id.* at 25,271-72.

61. The Senate committee report stated that "[w]hile it should be the goal of Congress and the Executive eventually to eliminate totally the killing of porpoises, present technology is not adequate to the task." S. REP. NO. 863, *supra* note 30, at 6. This indicates that the goal of zero mortality was already contemplated prior to the amendment offered by Congressman Harris. Nonetheless, the amendment explicitly placed the goal into the MMPA and, furthermore, added some sense of urgency to working toward that goal. *See also* Erdheim, *supra* note 40, at 295 (commenting on the addition of the zero mortality goal):

Thus, it seems clear that the intent of the Senate was exactly the same as the intent of the House. In fact, the "immediate goal" test added on the floor of the Senate does not appear to have changed the meaning of the Act at all. It merely codified and emphasized what everyone agreed was one of the overriding purposes of the bill. This is clearly evidenced by the Senate Commerce Committee report and the statements of Senator Hollings on the floor of the Senate.

62. The Conference Committee agreed with the Senate's adoption of the zero mortality goal and the objective of regulation to approach, as closely as feasible, the goal of zero mortality and injury to marine mammals. The Committee report noted that "[i]t may never be possible to achieve this goal, human fallibility being what it is, but the objective remains clear." H.R. CONF. REP. NO. 1488, *supra* note 53, at 23, *reprinted in* 1972 U.S.C.A.N. at 4188.

63. *See* 118 CONG. REC. 34,643 (1972).

The statement of the conferees . . . is an expression of desire that appropriate efforts be taken, under the commercial fishing gear development section and other applicable laws, to develop more advanced gear and fishing method technology to assist in the further reduction of accidental taking.

The phrase "zero mortality and serious injury rate" has no other legislative fiat, directive, impact or binding obligation on the part of the Secretary to reach for, strive for, and/or obtain a zero mortality goal by the potential or actual elimination of this Nation's commercial fishing industry or by the elimination of certain fishing techniques, such as the purse-seine method, simply to satisfy an expression of a general policy objective. We all desire that marine mammal mortalities be reduced significantly—and as fast as possible—but *there must be an appropriate balancing of equities between the two extremes of a zero mortality rate and elimination of a commercial fishing industry.*⁶⁴

Representative Goodling's statement clearly illustrates the balancing act that Congress was attempting in the commercial fishing exception to the moratorium imposed by the MMPA. On the one hand is the intent that marine mammal mortalities due to commercial fishing operations be decreased as rapidly as possible. On the other hand, to achieve this goal, Congress was unwilling to impair significantly the commercial fishing industry. The dilemma that this balancing act created still persists more than twenty years following the initial enactment of the MMPA in 1972.

2. *Judicial Interpretation of the Zero Mortality Goal*

While litigation concerning the MMPA of 1972 has not focused on the zero mortality goal, it does provide some insight into the judicial interpretation of this provision and the relative importance of marine mammal and commercial fishing interests under the MMPA. In *Committee for Humane Legislation, Inc. v. Richardson*,⁶⁵ the plaintiff environmental groups challenged NMFS regulations providing for the incidental taking of marine mammals by commercial tuna fishermen and challenged specific permits issued to the American Tunaboat Association. The District Court for the District of Co-

64. *Id.* (emphasis added).

65. 414 F. Supp. 297 (D.D.C. 1976), *aff'd* 540 F.2d 1141 (D.C. Cir. 1976) (affirming judgment of district court but staying order). For additional discussion of the district court and appeals court decisions, see BEAN, *supra* note 29, at 308-09; Erdheim, *supra* note 40, at 287-88, 297-99; James A. R. Nafziger & James J. Armstrong, *The Porpoise-Tuna Controversy: Management of Marine Resources After Committee for Humane Legislation, Inc. v. Richardson*, 7 ENVTL. L. 223 (1977); *Federal Courts and Congress Review Tuna-Porpoise Controversy*, 6 ENVTL. L. REP. (Envtl. L. Inst.) 10,147-49 (July 1976); Gaines & Schmidt, *supra* note 29, at 50,103; Caroline E. Coulston, Comment, *Flipper Caught in the Net of Commerce: Reauthorization of the Marine Mammal Protection Act and Its Effect on Dolphin*, 11 J. ENERGY NAT. RESOURCES & ENVTL. L. 97, 109-10 (1991).

lumbia held that (1) NMFS must publish reasonable estimates of the existing population levels of each porpoise species affected by proposed regulations, the optimum sustainable population level for each species, and the expected impact of regulations on achieving the optimum sustainable population level; (2) applicants for permits must show that the taking will serve the purposes of the MMPA; and (3) permits issued must specify the number and kind of marine mammals which are authorized to be taken.⁶⁶ The district court ordered that the current NMFS regulations and general permit issued to the American Tunaboat Association be declared void.⁶⁷

In support of its holding, the district court primarily focused on the requirement in the MMPA that NMFS prescribe regulations to ensure that any taking not be to the disadvantage of a species.⁶⁸ In elucidating its holding, however, the court commented on the zero mortality goal provision. The tuna industry, intervenors on the side of defendant Department of Commerce, argued that the legislative history showed that the MMPA mandates a balancing act between the interests of marine mammals and those of the tuna industry, citing the remark by Representative Goodling regarding the "balancing of equities."⁶⁹ The district court pointed out that Representative Goodling's statement was made in the context of a discussion of the zero mortality policy goal expressed in the MMPA.⁷⁰ According to the court, these statements did not suggest that there should be a balancing of equities with regard to NMFS compliance with more specific directives of the MMPA, such as the requirement that permitted takings of marine mammals not be to the disadvantage of the species. Rather, the court interpreted Representative Goodling's statements as his attempt to dispel any fear that the zero mortality

66. *Committee for Humane Legislation, Inc. v. Richardson*, 414 F. Supp. at 312-13.

67. *Id.* at 314-15.

68. *Id.* at 302-03, 309-12. One commentator summarized the basis for the court's decision as follows:

[T]he actual basis for [the] decision was very narrow. That is, the regulations pursuant to which the general permits were issued had been promulgated without the required statement of estimated existing population levels and of expected impact on the optimum sustainable populations of the affected species and stocks. The Secretary contended that the required information had not been provided because it was simply not known and that the [MMPA's] standard of "best scientific evidence available" was met where the only available information was insufficient to provide the required statements. Judge Richey refused to accept that interpretation, holding instead that the best scientific evidence standard required the Secretary to have affirmative scientific evidence that any proposed taking of marine mammals would not be to their disadvantage.

BEAN, *supra* note 29, at 308 (footnotes omitted).

69. *Committee for Humane Legislation, Inc. v. Richardson*, 414 F. Supp. at 308 n.25.

70. *Id.* at 307-08.

policy goal would, by itself, prevent the taking of porpoises, under circumstances where taking would not be to the disadvantage of the species or population.⁷¹

The *Richardson* court also responded to the industry's claim that the various committee reports suggested that the incidental taking of marine mammals may be authorized if the best feasible technology is used to prevent harm to the mammals.⁷² The court found that the entire scheme of the MMPA rejects a means-oriented approach; that is, the MMPA does not primarily direct how marine mammals may be taken.⁷³ Rather, it is result-oriented, directing that the impacts of proposed takings be estimated and that takings not be allowed where the estimated impact is to the disadvantage of the species. The *Richardson* court concluded that the use of the best technology alone cannot justify results that are inconsistent with the purposes of the MMPA.⁷⁴

Finally, the district court in *Richardson* responded to the industry's reference to Representative Dingell's statement made during an oversight hearing two years after enactment of the MMPA that "[i]t was not our intention that commercial fishing be brought to a halt."⁷⁵ According to the court, "[i]t is clear that as long as the primary goal of the Act, to protect marine mammals, is served, commercial fishing can continue."⁷⁶ The court declared that the interests of the marine mammals come first under the MMPA.⁷⁷

Upon an appeal by the tuna industry in *Richardson*, the Court of Appeals for the District of Columbia agreed with the district court that the MMPA was to be administered for the benefit of marine mammals rather than for the benefit of commercial exploitation.⁷⁸

71. *Id.* at 308 n.25.

72. *Id.* at 308.

73. *Id.*

74. *Id.* at 308-09.

75. *Id.* at 309 (quoting *Hearings on Oversight of the Marine Mammal Protection Act of 1972 Before the Subcomm. on Fisheries and Wildlife Conservation*, 93d Cong., 2d Sess. 22 (1974)).

76. *Id.*

77. *Id.*

78. *Committee for Humane Legislation, Inc. v. Richardson*, 540 F.2d 1141, 1148 (D.C. Cir. 1976). Pending the appeal, the court of appeals stayed the district court's order invalidating the American Tunaboat Association's general permit. *Id.* at 1151. While the court of appeals affirmed the district court's decision, the appeals court continued the stay of the district court order until January 1, 1977. *Id.* Soon after the district court's decision, NMFS had amended the American Tunaboat Association's general permit to provide for a maximum incidental mortality of 78,000 porpoises for 1976. BEAN, *supra* note 29, at 309 (citing 41 Fed. Reg. 23,680 (1976)). The tuna industry reached the 1976 quota by late October, and the Secretary declared that the general permit was invalid. *Id.* at 309. Harvesting tuna by encircling schools of porpoises was halted for the remainder of 1976 when the tuna industry was unable to obtain a preliminary injunction to restrain enforcement of the quota. *Id.* When regulations and quotas were not yet enacted in 1977, the tuna industry obtained a preliminary

The appeals court acknowledged that a major concern of Congress at the time of enactment of the MMPA was that it not be read to prohibit forms of commercial fishing simply because those methods cause incidental deaths of marine mammals.⁷⁹ While recognizing that Congress did not intend to force U.S. tuna fishermen to cease purse-seine fishing using porpoise to locate schools of tuna,⁸⁰ the court of appeals found that the MMPA is clear in permitting incidental takings only when it is known that such takings would not be to the disadvantage of the species.⁸¹ The appeals court did not reach the question of whether present levels of porpoise deaths incidental to commercial fishing constituted compliance with the requirement that mortality be reduced to insignificant levels.⁸²

The district court's and appeals court's interpretations of the 1972 MMPA to require statements of population levels and expected impacts in order to show that the taking would not disadvantage marine mammals appear correct. What this means is that NMFS could not issue a general permit to authorize incidental takings where such taking would be to the disadvantage of the species or population stock,⁸³ or where information was unavailable to estimate the effect of the taking. Once this test was met, however, these opinions were consistent with the idea that accommodation of commercial fishing interests could occur.⁸⁴ In addition, the district court's interpretation of Representative Goodling's statements regarding the "balancing of equities" was correct—this statement pertained to the zero mortality goal's impact on taking of porpoise.⁸⁵

injunction, which the Ninth Circuit stayed pending appeal. *Id.* at 309-10. Meanwhile, NMFS extended the 1976 quota to allow the incidental mortality of 10,000 porpoises in the first four months of 1977. *Id.* at 310. Later in 1977, NMFS adopted a quota of 59,000 porpoises, which was approved by the District of Columbia Court of Appeals. *Id.*

During much of this period,

the American tuna fleet remained in port, protesting the regulatory actions and attempting to pressure Congress into amending the Marine Mammal Protection Act. The House of Representatives yielded to the pressure, passing a bill in June that would have legislatively fixed an annual quota of nearly 79,000 for 1977 and 1978. The Senate, however, refused to budge, and the industry's boycott of the fishery ended.

Id. (footnote omitted).

79. Committee for Humane Legislation, Inc. v. Richardson, 540 F.2d at 1149 n.31.

80. For a description of purse-seine fishing on porpoise, see *supra* note 47.

81. Committee for Humane Legislation, Inc. v. Richardson, 540 F.2d at 1150.

82. *Id.* at 1149 n.31.

83. See MMPA, 16 U.S.C. §§ 1371(a)(2), 1373(a) (1988).

84. See Committee for Humane Legislation, Inc. v. Richardson, 540 F.2d at 1149; Committee for Humane Legislation, Inc. v. Richardson, 414 F. Supp. at 309.

85. See Committee for Humane Legislation, Inc. v. Richardson, 414 F. Supp. at 307-08 for a discussion of the district court's interpretation of Rep. Goodling's remarks.

3. Agency Interpretation of the Zero Mortality Goal

An administrative hearing held in 1977 regarding proposed regulations on porpoise mortality incidental to tuna purse-seine fishing also provides interpretation of the zero mortality goal provision. In a recommended decision, an administrative law judge found that the use of the word "immediate" in the goal called for urgency in reducing mortality, but he also found that quotas should be based on reasonably achievable equipment and procedures:

The only rational conclusion to be drawn in [sic] the Congress intended porpoise mortalities to be reduced with alacrity, and by use of the most efficient fishing equipment and procedures. It follows that it is incumbent upon NMFS to establish quotas which current evidence shows are reasonably achievable by use of such equipment and procedures. NMFS also has the duty to continue research with equipment and by instructing fishermen in the use of the equipment and techniques.⁸⁶

The administrative law judge rejected a quota proposed by the tuna industry because the zero mortality goal test required that better results achievable with the present level of technology be reflected in the quota.⁸⁷ The administrative law judge's interpretation of the zero mortality goal provision to require a quota based on technological feasibility is consistent with congressional intent behind enactment of the zero mortality goal.⁸⁸

In its final decision in 1977 regarding the use of quotas for 1978 to 1980 for porpoise mortality in the eastern tropical Pacific, NMFS adopted the administrative law judge's recommendations and rejected the industry's proposed quotas because they failed to satisfy the zero mortality goal test of the MMPA.⁸⁹ NMFS explained that

86. Proposed Amendments to Regulations To Govern the Taking of Marine Mammals Incidental to Commercial Fishing Operations For the Years 1978 Through 1980, Recommended Decision, MMPAH No. 1-1977, at 27-28 (NMFS, U.S. Dep't of Commerce, Nov. 4, 1977) [hereinafter Recommended Decision] (Vanderheyden, F.W., Administrative Law Judge). For additional discussion of this decision, see Erdheim, *supra* note 40, at 302-04; 42 Fed. Reg. 58,419 (1977) (providing notification of receipt by NMFS of the administrative law judge's recommended decision); and 42 Fed. Reg. 64,548 (1977) (summarizing the administrative law judge's recommended decision, in the NMFS final decision establishing regulations for the incidental taking of marine mammals in yellowfin tuna purse-seine fishing operations).

87. Recommended Decision, *supra* note 86, at 44-46.

88. See Erdheim, *supra* note 40, at 304.

Judge Vanderheyden's reasoning that the "immediate goal" test is clear on its face seems strained. . . . The test, on its face, is not clear, because the Act does not define such key words as "immediate goal" and "rate." However, when one examines the legislative history of the Act, it is clear that Judge Vanderheyden's interpretation of the test is quite correct.

Id. (footnotes omitted). See also *supra* notes 43-64 and accompanying text for a discussion of the legislative history of the zero mortality goal.

89. 42 Fed. Reg. 64,547, 64,550 (1977) (codified at 50 C.F.R. § 216.24) (adopting

"to prescribe level annual quotas would not conform to the goal of the [MMPA] if lower annual quotas are economically and technologically achievable."⁹⁰ NMFS also rejected recommendations of some groups for lower quotas because these proposals did not recognize that technological and economic feasibility were to be considered in the quotas.⁹¹ Both the administrative law judge's recommended decision and the NMFS final decision correctly characterized the role of the zero mortality goal in setting quotas for incidental take—to reduce incidental mortality as much as economically and technologically possible. Yet the administrative law judge's conclusion that Congress intended that porpoise mortality "be reduced with alacrity" also correctly interprets congressional intent behind the 1972 MMPA.

B. The 1981 Amendments to the MMPA

1. Adding a Small-Take Exemption Provision for Commercial Fishing

Analysis of the 1981 amendments to the MMPA provides additional insight into the balance struck in the MMPA between marine mammal protection and commercial fishing. In those amendments, Congress provided for another commercial fishing exemption to the moratorium on the taking of marine mammals, the so-called small-take exemption, beyond the general permit exemption already provided for in the 1972 MMPA.⁹² Under this exemption, the incidental, but not intentional, taking of small numbers of non-depleted marine mammals by U.S. citizens, while engaged in commercial fishing operations, would be allowed, but subject to two conditions: (1) that the Secretary find that the total of such taking would have a negligible impact on the species or stock; and (2) that the Secretary provide guidelines for monitoring such taking.⁹³ Congress enacted

porpoise mortality quotas for the eastern tropical Pacific Ocean of 51,945, 41,610, and 31,150 for 1978, 1979, and 1980, respectively).

Following expiration of the permit granted in 1977, NMFS issued a new permit and associated regulations in 1980 for tuna purse-seine fishing in the eastern tropical Pacific Ocean. 45 Fed. Reg. 72,178 (1980) (codified at 50 C.F.R. § 216.24) (publishing the final decision and final regulations). This permit allowed for an annual quota of 20,500 porpoises for 1981-1985. *Id.* at 72,178. Like the quotas authorized in 1977, the quota of 20,500 porpoises was based on economic and technological feasibility, in addition to a finding that the quota would not be to the disadvantage of the stocks. *Id.* at 72,179-80, 72,185.

90. 42 Fed. Reg., *supra* note 89, at 64,550.

91. *Id.* at 64,549-50.

92. Pub. L. No. 97-58, § 2, 95 Stat. 979, 980 (1981) (codified at 16 U.S.C. § 1371(a)(4) (1988)). See also H.R. REP. NO. 228, 97th Cong., 1st Sess. 9, 18 (1981), *reprinted in* 1981 U.S.C.A.N. 1458, 1459, 1468. In addition to the small-take exemption for commercial fishing, Congress also enacted a similar exception for activities other than commercial fishing. See MMPA, 16 U.S.C. § 1371(a)(5) (1988).

93. MMPA, 16 U.S.C. § 1371(a)(4) (1988).

the small-take exemption to cover those fishing operations that result in some incidental take, but at a rate much lower than the level of porpoise mortalities associated with commercial tuna fishing.⁹⁴ Essentially, Congress intended this exemption to be available for fishermen whose taking of marine mammals is "infrequent, unavoidable, or accidental."⁹⁵ Congress believed that only a fraction of non-tuna fishermen were applying for general MMPA permits because of the cumbersome procedures involved, resulting in a loss of data because of unreported takes. Interestingly, it is this type of exemption that the New England gillnetters, fishing for groundfish, obtained in the 1980s for the incidental taking of harbor porpoise.⁹⁶

2. Clarifying the Zero Mortality Goal for Tuna Purse-Seine Fishing

Another significant part of the 1981 amendments related to the zero mortality goal provision. Congress retained the MMPA's zero mortality goal for the commercial fishing exception, but added language clarifying the meaning of the goal in relation to one particular method of fishing—purse-seine fishing for yellowfin tuna:

In any event it shall be the immediate goal that the 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; *provided that this goal shall be satisfied* in the case of the incidental taking of marine mammals in the course of purse seine fishing for yellowfin tuna *by a continuation of the application of the best marine mammal safety techniques and equipment that are economically and technologically practicable.*⁹⁷

With this amendment, Congress responded to concerns expressed by the tuna industry that the zero mortality goal might be interpreted

94. H.R. REP. NO. 228, *supra* note 92, at 14, reprinted in 1981 U.S.C.C.A.N. at 1464.

95. *Id.* at 19, reprinted in 1981 U.S.C.C.A.N. at 1469.

96. See Issuance of a Letter of Exemption, 49 Fed. Reg. 5,645 (1984). NMFS, in 1984, granted a five-year exemption to New England groundfish gillnetters to incidentally take 180 harbor porpoises and 50 harbor seals annually in the Gulf of Maine. *Id.* at 5,646. Current estimates of harbor porpoise bycatch are much higher than the levels permitted under the small-take exemption in 1984. For 1990 and 1991, estimates of harbor porpoise bycatch are approximately 2,400 and 1,700, respectively. See *supra* note 4. What was once considered an infrequent taking having a negligible impact on the species has now become a significant problem for New England gillnetters and NMFS.

97. Pub. L. No. 97-58, § 2, 95 Stat. at 979-80 (codified at 16 U.S.C. § 1371(a)(2) (1988)) (emphases added). Elsewhere in the 1981 amendments, Congress directed the "Secretary [of Commerce] to undertake, and provide assistance for, research into new methods of locating and catching yellowfin tuna without the incidental taking of marine mammals." H.R. REP. NO. 228, *supra* note 92, at 10, reprinted in 1981 U.S.C.C.A.N. at 1461.

at some point in the future to require no incidental taking of marine mammals regardless of technological feasibility.⁹⁸ According to the House report, the tuna industry feared that the industry could be shut down by lawsuits.⁹⁹

As evidenced by the House report on the proposed amendment, Congress intended to make clear that the zero goal provision does not mandate that incidental take of porpoises in the tuna industry be reduced to zero.¹⁰⁰ Congress made it clear, however, that it did

98. See *Marine Mammal Protection Act: Hearings on Marine Mammal Protection Act Authorization—H.R. 2948, Marine Mammal Protection Act Improvement—H.R. 4684 Before the Subcomm. on Fisheries and Wildlife Conservation and the Environment of the House Comm. on Merchant Marine and Fisheries*, 97th Cong., 1st Sess. 67-68, 71, 75, 85, 87 (1981) [hereinafter 1981 Hearings] (testimony of David Burney, counsel for U.S. Tuna Foundation, regarding suit brought by Committee for Humane Legislation). See also H.R. REP. NO. 228, *supra* note 92, at 13-14, reprinted in 1981 U.S.C.C.A.N. at 1463-64. The House report makes it clear that the Merchant Marine and Fisheries Committee agreed with the tuna industry's concerns:

The Committee also received testimony that, despite the dramatic decline in the number of porpoises incidentally taken in tuna fishing operations, the administration of the provisions of the [MMPA] relating to incidental take have been characterized by excessive litigation. The tuna industry is operating in fear of being shut down by law suits, a fear which hampers investment in America's distant-water tuna fleet.

This fear is generated by those provisions of the [MMPA] which establish as the immediate goal of the [MMPA] that the incidental kill or serious injury of marine mammals pursuant to commercial fishing operations be reduced to insignificant levels approaching a zero mortality and serious injury rate. It is the tuna industry's contention that so long as the industry is using the best economically and technologically feasible equipment and methods to reduce incidental porpoise mortality, the fleet can do no more. It has been argued by others, however, that zero mortality means precisely what it says and that the industry should be taking virtually no porpoises. The threat of litigation in this regard is of constant and continuing concern to the U.S. distant-water tuna fleet. The tuna industry, which contributes approximately \$1.2 billion annually to the gross national product, would be faced with severe economic consequences if a court interpreted the zero mortality goal in the strictest sense and failed to take into account the economic and technological practicability of achieving that goal.

Id. See also BEAN, *supra* note 29, at 310 n.164 (noting that "[i]n the administrative proceedings that led to the promulgation of new regulations in 1980, the Committee for Humane Legislation contended that the [MMPA] required the industry to halt setting on porpoise altogether.").

99. H.R. REP. NO. 228, *supra* note 92, at 13, reprinted in 1981 U.S.C.C.A.N. at 1463. See also *supra* note 98.

100. See H.R. REP. NO. 228, *supra* note 92, at 17, reprinted in 1981 U.S.C.C.A.N. at 1467. The Merchant Marine and Fisheries Committee restated "its original view that it is not the intention of the Committee to shut down, or to significantly curtail, the activity of the tuna fleet so long as the Secretary is satisfied that tuna fishermen are using the best economically and technologically practicable marine mammal safety techniques." *Id.* at 17, reprinted in 1981 U.S.C.C.A.N. at 1467. The Committee cited the substantial progress made by the tuna fleet in developing new techniques and equipment to reduce porpoise mortalities as justification for clarification of the zero goal for tuna purse-seine fishing. See *id.* at 17-18, reprinted in 1981

not intend to lessen the Secretary's authority to prescribe quotas.¹⁰¹ Furthermore, the Merchant Marine and Fisheries Committee noted that it intended that the "amendment be understood to require the use of new and improved marine mammal safety techniques and equipment once they have been developed, tested . . . and determined . . . to be economically and technologically practicable."¹⁰²

The 1981 amendment represented a consensus agreed to by various parties including tuna fishermen and environmental groups.¹⁰³ The result was a compromise of interests: The tuna industry achieved some protection from possible litigation premised on the MMPA's zero mortality goal, but the industry also agreed to continue research on methods to reduce the incidental take of porpoises during their fishing operations.¹⁰⁴

While this amendment further defined the zero mortality rate goal in relation to the tuna industry, the amendment did not significantly depart from the original intent behind the zero goal provision.¹⁰⁵ Rather, the clarifying amendment was consistent with the legislative history of the MMPA of 1972, and with judicial and

U.S.C.C.A.N. at 1467-68.

101. See *id.* at 17, reprinted in 1981 U.S.C.C.A.N. at 1467. See also BEAN, *supra* note 29, at 311.

102. H.R. REP. NO. 228, *supra* note 92, at 17, reprinted in 1981 U.S.C.C.A.N. at 1467. See also BEAN, *supra* note 29, at 311 ("The 1981 clarification was not intended to sanction in perpetuity either existing technology or existing incidental mortality levels.").

The Merchant Marine and Fisheries Committee did not elaborate on what it meant by "economically and technologically practicable" in the amendment to the zero goal provision. H.R. REP. NO. 228, *supra* note 92, reprinted in U.S.C.C.A.N. at 1458. The language of the MMPA also provides no specific guidance. MMPA, 16 U.S.C. § 1371 (1988). That there can be varying interpretations of such terms is shown by a statement by a representative of the National Wildlife Federation at the 1981 hearings: "[T]he phrase 'economically and technologically practicable' should be limited to those situations where the fisherman would be forced out of business if required to meet an incidental take level set under the 'zero goal' provision." 1981 *Hearings*, *supra* note 98, at 250.

103. See 127 CONG. REC. 21,444 (1981) (Rep. Breau, then Chairman of the Subcommittee on Fisheries and Wildlife Conservation and the Environment, describing the process in developing a consensus regarding the amendment); 1981 *Hearings*, *supra* note 98, at 207.

104. See 127 CONG. REC. 21,444-45 (1981).

105. During the House consideration of the proposed amendments, Rep. Breau noted that "[t]he solution is not radical, it provides virtually the same level of protection as the current act does, but it removes the potential for lawsuits that could cripple the tuna industry." 127 CONG. REC. 21,444 (1981). See also 1981 *Hearings*, *supra* note 98, at 214 (statement by Michael Bean commenting that the amendments "will make explicit in the legislation what is already well established in the administrative interpretation of this law"). *But cf.* Kokechik Fishermen's Ass'n v. Secretary of Commerce, 839 F.2d 795, 802 (D.C. Cir. 1988) (2-1 decision) (discussed *infra* text accompanying notes 118-19).

agency interpretation subsequent to 1972.¹⁰⁶ In his review of the 1981 amendments, one commentator pointed out that "[c]onceptually, quotas now clearly function as a means of reinforcing the requirement that the [tuna] fleet utilize the best technology and fishing practices available by requiring that incidental kill be reduced to the lowest level achievable with such technology and practices."¹⁰⁷ Based on the legislative history of the 1981 amendment, Congress put into words what it had earlier intended the zero mortality goal provision to mean for the tuna purse-seine industry—that incidental takings should be reduced as much as is technologically and economically practicable. It should be noted that while Congress clarified the zero mortality goal for the tuna industry, Congress declined to modify or elaborate upon the goal with respect to other fishing industries.¹⁰⁸

3. *The Kokechik Decision*

The sole judicial interpretation of the 1981 amendment to the zero goal provision appears as dictum in an important decision by the U.S. Court of Appeals for the District of Columbia Circuit, *Kokechik Fishermen's Association v. Secretary of Commerce*.¹⁰⁹ At the district court level, Alaska fishing groups and environmental organizations mounted a legal challenge against issuance of a general permit by NMFS authorizing the Federation of Japan Salmon Fisheries Cooperative Association to take Dall's porpoises incidental to commercial fishing operations.¹¹⁰ These groups argued that NMFS

106. See BEAN, *supra* note 29, at 311. See also *supra* notes 65-91 and accompanying text.

107. See BEAN, *supra* note 29, at 311.

108. See H.R. REP. No. 228, *supra* note 92, at 17-18, reprinted in 1981 U.S.C.C.A.N. at 1468. The House report noted that

[t]his does not mean that similar action could not be taken in the future when further data is available. The contrast between the substantial progress made by the tuna fleet in developing new techniques and equipment for reducing marine mammal mortality and the failure of the foreign high seas salmon gillnet fishery, for example, to develop new techniques and equipment for reducing incidental mortality justifies limiting the amendment to the yellowfin tuna fishery. The existing goal in the [MMPA] can properly be used to stimulate new technology for reducing the incidental taking of marine mammals.

Id.

109. 839 F.2d 795 (D.C. Cir. 1988).

110. Federation of Japan Salmon Fisheries Coop. Ass'n v. Baldrige, 679 F. Supp. 37, 42-43 (D.D.C. 1987) (The Secretary of Commerce's name was incorrectly spelled "Baldrige" in this opinion; the correct spelling is "Baldrige."). This case was actually a consolidation of three actions. In one action, the Federation of Japan Salmon Fisheries challenged certain aspects of the general permit issued to it by NMFS. In another action, the Kokechik Fishermen's Association and other groups challenged the permit issued and regulations adopted authorizing the Federation to take Dall's porpoises. In a separate action, the Center for Environmental Education and other

could not issue a permit for Dall's porpoises because other marine mammals for which a permit could not be issued, such as the depleted northern fur seal, would inevitably be taken as well.¹¹¹

Although NMFS issued a permit for Dall's porpoises, the Secretary of Commerce determined that, under the MMPA, NMFS could not issue a permit for the taking of northern fur seals because NMFS could not determine whether the fur seal stock was within its optimum sustainable population level; thus the Agency was unable to determine whether this stock would be disadvantaged by the Federation's fishing operations.¹¹² The Secretary believed, however, that only a negligible number of marine mammals not covered by the permit would be incidentally taken, and that the fur seal "stock [did] not require the absolute protection provided by the MMPA."¹¹³

The district court issued a preliminary injunction against the Secretary of Commerce to prevent the granting of the permit.¹¹⁴ In affirming the issuance of the injunction, the court of appeals held that the permit violated MMPA requirements because it allowed incidental taking of various species of marine mammals without first determining whether or not the population of each species was at the optimum sustainable population level.¹¹⁵ In reaching its decision, the appeals court concluded that the MMPA "does not provide for a 'negligible impact' exception to its permitting requirements where incidental takings are not merely a remote possibility but a cer-

groups also challenged the ability of NMFS to grant the permit to the Federation. *Id.* at 38, 42-43.

Dall's porpoises are widely distributed across the North Pacific Ocean. NMFS, DRAFT LEIS, *supra* note 1, § 3.5, at 3-105. Dall's porpoises and other marine mammals became entangled in the gillnets used by Japanese vessels fishing for salmon in the U.S. fishery conservation zone in the North Pacific. *Federation of Japan Salmon Fisheries Coop. Ass'n v. Baldridge*, 679 F. Supp. at 42.

111. *Federation of Japan Salmon Fisheries Coop. Ass'n v. Baldridge*, 679 F. Supp. at 42-45.

112. See Regulations Governing the Taking and Importing of Marine Mammals, 52 Fed. Reg. 19,874, 19,875 (1987). See also *Kokechik Fishermen's Ass'n v. Secretary of Commerce*, 839 F.2d at 799, 801 (describing Secretary's determination "that an incidental take permit could not be issued under the MMPA").

113. See 52 Fed. Reg., *supra* note 112, at 19,878. See also *Kokechik Fishermen's Ass'n v. Secretary of Commerce*, 839 F.2d at 799 n.9.

114. *Federation of Japan Salmon Fisheries Coop. Ass'n v. Baldridge*, 679 F. Supp. at 49. The district court relied heavily upon the interpretation of the MMPA in *Committee for Humane Legislation, Inc. v. Richardson* previously decided by the same court and affirmed by the court of appeals. *Id.* at 46-47. See *supra* notes 65-85 and accompanying text for discussion of the *Richardson* case.

115. *Kokechik Fishermen's Ass'n v. Secretary of Commerce*, 839 F.2d at 797, 802-03. For additional discussion of the *Kokechik* court's holding, see Neil D. Gordon, *Permitting Requirements of the Marine Mammal Protection Act; Reclamation Responsibilities of Surface Coal Mining Operators*, 57 GEO. WASH. L. REV. 1214 (1989).

tainty.”¹¹⁶ The court further noted that “[t]he MMPA does not allow for a Solomonian balancing of the animals’ and fisheries’ interest such as the Secretary attempted.”¹¹⁷

In support of its decision, the court pointed to the 1981 amendment to the MMPA clarifying the zero mortality goal for purse-seine fishing of tuna.¹¹⁸ The court considered this amendment to reflect a statutory relaxation of the MMPA’s exceptions to the strict moratorium on takings of marine mammals. Since no similar language was included in the congressional reauthorization of the Federation permit, the court concluded “that Congress did not intend to loosen MMPA requirements in order to accommodate Federation needs, as it did for the tuna industry.”¹¹⁹

The language and legislative history show the fallacy of the majority’s reasoning in using the 1981 amendment as an example of statutory relaxation of the MMPA. As Judge Starr pointed out in his dissent, the language of the 1981 amendment did nothing to remove purse-seine tuna fishing from the MMPA’s rigorous permit requirements.¹²⁰ The amendment to the zero goal provision was not intended to loosen the requirements imposed by the 1972 MMPA for the tuna industry, but rather served to clarify the requirements for satisfying the zero goal in order to lessen the potential for lawsuits, specifically against the tuna industry.¹²¹

Judge Starr, in his dissent from the majority’s central holding in *Kokechik*, argued that the majority’s “construction of the MMPA effectively requires that *no* permit for *any* species issue until a per-

116. *Kokechik Fishermen’s Ass’n v. Secretary of Commerce*, 839 F.2d at 802. While the MMPA did contain an exception for incidental takings having a negligible impact on a species (that is, the small-take exception), the court noted that this exception applied only to citizens of the United States engaged in commercial fishing operations. Therefore, NMFS could not use this exception for the Japanese salmon gillnet fishery operating in the exclusive economic zone of the United States. *Id.*

117. *Id.*

118. *Id.*

119. *Id.*

120. *Id.* at 809 (Starr, J., dissenting). While Judge Starr’s conclusion is correct based on reading of the legislative history of the 1981 amendment to the zero mortality goal, his reasoning appears strained. Judge Starr argued that, rather than relaxing the dictates of the MMPA, the amendment actually mandated an additional goal—using appropriate techniques to free mammals that had been “taken.” *Id.* Neither the House report nor the congressional debate supports the conclusion that Congress was imposing additional restrictions on the tuna purse-seine industry through the amendment to the zero goal provision. See H.R. REP. NO. 228, *supra* note 92, at 17, reprinted in 1981 U.S.C.A.N. at 1467 (finding that the proposed amendment was “an appropriate clarification” of the MMPA). See also 127 CONG. REC. 21,444-47, 22,393 (1981). Also, the use of the phrase “by a continuation of the application of the best marine mammal safety techniques and equipment” in 16 U.S.C. § 1371(a)(2) suggests that Congress did not expect the amendment to represent an additional burden on the tuna fishing industry.

121. See *supra* notes 97-108 and accompanying text.

mit for *all* mammals likely to be entangled can lawfully issue."¹²² The Author of this Comment agrees with Judge Starr, who found that this "far-reaching construction fail[ed] . . . to account for NOAA's obligation under the [MMPA] to fashion a workable permit system on a species-by-species basis."¹²³ Judge Starr further noted in his dissent that:

At the very least, Congress enacted a statutory scheme that places in tension the goal of total elimination of marine mammal takings and the need for a workable permit system administered in accordance with statutory criteria. *Chevron* and its progeny teach that we should defer to the reasonable resolution of that tension by the agency charged by Congress with the task of resolving it.¹²⁴

C. The 1988 Amendments to the MMPA: Establishing an Interim Exemption from the Moratorium for Commercial Fisheries

Kokechik was read to mean that NMFS "could not issue an incidental take permit for one species of marine mammal in circumstances where unpermitted takings of another species of marine mammal would occur."¹²⁵ Therefore, in the absence of a finding that a marine mammal population subject to incidental take is at its optimum sustainable population level, a permit could not be issued.¹²⁶ Also, a permit could not be issued if a depleted species was taken, even if the taking was very small.¹²⁷ NMFS concluded "that many existing general permits and small take exemptions could not be re-issued and that some new authorizations could not be issued."¹²⁸ It is not surprising, therefore, that *Kokechik* provided impetus for Congress to amend the MMPA.

122. *Kokechik Fishermen's Ass'n v. Secretary of Commerce*, 839 F.2d at 806 (Starr, J., dissenting).

123. *Id.*

124. *Id.* In *Chevron*, the U.S. Supreme Court discussed the standard of review that should be used when a court determines that Congress has not directly addressed the precise question at issue in a particular case:

[T]he court does not simply impose its own construction on the statute, as would be necessary in the absence of an administrative interpretation. Rather, if the statute is silent or ambiguous with respect to the specific issue, the question for the court is whether the agency's answer is based on a permissible construction of the statute.

Chevron U.S.A., Inc. v. Natural Resources Defense Council, 467 U.S. 837, 843 (1984) (footnotes omitted).

125. NMFS, PROPOSED REGIME, *supra* note 1, at 8.

126. H.R. REP. NO. 970, 100th Cong., 1st Sess. 18 (1988), reprinted in 1988 U.S.C.C.A.N. 6154, 6159.

127. *See id.* at 17-18, reprinted in 1988 U.S.C.C.A.N. at 6158-59 (expressing concern about the effect of depleted species designations on the ability of fishermen to fish). *See also* NMFS, PROPOSED REGIME, *supra* note 1, at 36.

128. *See* NMFS, PROPOSED REGIME, *supra* note 1, at 8.

Soon after the *Kokechik* decision, fishing organizations and conservation groups concerned about the possible implications of the decision began a series of joint meetings.¹²⁹ As summarized by the Merchant Marine and Fisheries Committee,

[t]he common goal of these meetings was to arrive at some agreement on amendments to the MMPA which continued the protections accorded marine mammals under the [MMPA] and assured that commercial fishing operations would continue to operate while the necessary information to fulfill the purposes of the [MMPA] was compiled.¹³⁰

As a result of these meetings, twenty-five environmental groups and seventeen commercial fishing organizations presented a joint proposal to Congress. The proposal included a three-year limited exemption to the moratorium, which allowed for the incidental taking of small numbers of marine mammals from depleted populations, or from populations for which an optimum sustainable population level could not be determined, as well as other provisions regarding education, reporting, and research.¹³¹

Following hearings on the joint proposal, Congress enacted a five-year interim exemption governing the incidental taking of marine mammals during the course of commercial fishing operations.¹³² Only commercial yellowfin tuna fishing was excluded from the interim exemption.¹³³ The primary goal behind the exemption was to

129. See H.R. REP. NO. 970, *supra* note 126, at 19, reprinted in 1988 U.S.C.C.A.N. at 6160.

130. *Id.*

131. *Id.*

132. Pub. L. No. 100-711, § 2, 102 Stat. 4755, 4755-4763 (1988) (codified at 16 U.S.C. § 1383a (1988)).

133. MMPA, 16 U.S.C. § 1383a(a)(2) (1988). With regard to the commercial tuna industry, the 1988 amendments imposed additional requirements on both domestic and foreign yellowfin tuna fishing in order to decrease marine mammal mortality. See Pub. L. No. 100-711, § 4, 102 Stat. at 4765-69 (1988). See also H.R. REP. NO. 970, *supra* note 126, at 14, 29-32, reprinted in 1988 U.S.C.C.A.N. at 6154-55, 6170-73.

Since 1988, Congress has amended the MMPA to address specifically the problem of dolphin mortality incidental to tuna purse-seine fishing. While a thorough discussion of these amendments is beyond the scope of this Comment, their major provisions are briefly summarized in this note. In 1990, Congress directed the Secretary of State to "immediately seek, through negotiations and discussions with appropriate foreign governments, to reduce and, as soon as possible, eliminate the practice of harvesting tuna through the use of purse-seine nets intentionally deployed to encircle dolphins." MMPA, 16 U.S.C. § 1385(h) (Supp. III 1991). The 1990 amendments also made it unlawful to use the term "dolphin safe" to label tuna products where the tuna were harvested using purse-seine nets that were intentionally deployed to encircle dolphin. See *id.* § 1385(d).

In 1992, Congress enacted amendments to the MMPA with the stated policy to "eliminate the marine mammal mortality resulting from the intentional encirclement of dolphins and other marine mammals in tuna purse seine fisheries." MMPA, 16 U.S.C.A. 1411(b)(1) (West Supp. 1993). The means by which Congress sought to ef-

allow for the collection of reliable information about marine mammal/commercial fishing interactions while allowing commercial fishing to continue.¹³⁴ Of particular significance is the fact that the 1988 amendments retained the zero mortality goal for takings authorized under the interim exemption: "In any event it shall be the immediate goal that the incidental kill or serious injury of marine mammals permitted in the course of commercial fishing operations be reduced to insignificant levels approaching a zero mortality and serious in-

fect this goal was through the promotion of international agreements to establish a global moratorium of at least five years to prohibit tuna fishermen from using purse-seine nets to encircle dolphins. *Id.* § 1412(a). Any moratorium established is to take effect on March 1, 1994. *Id.* § 1412(b)(1).

The 1992 amendments specifically altered the terms of the general permit issued to the U.S. commercial tuna industry in 1980. *Id.* § 1416(a). That permit had authorized an annual quota of 20,500 porpoises for 1980-1985. *See supra* note 89. Congress, in 1984, had amended the MMPA to extend this quota. MMPA, 16 U.S.C. § 1374(h)(2)(A) (1988). The 1992 amendments limited total dolphin mortalities to 1,000 for 1992 and 800 for 1993 and the first two months of 1994. MMPA, 16 U.S.C.A. § 1416(a)(1) (West Supp. 1993). On March 1, 1994, the permit will expire "unless no major purse-seine tuna fishing country enters into an agreement with the Secretary in accordance with [the section on international agreements to establish a global moratorium] before that date." *Id.* § 1416(a)(3). In the event that no major purse-seine tuna fishing country enters into such an agreement with the United States, then Congress directed that total dolphin mortalities under the permit each year after 1992 "shall continue to be reduced by statistically significant amounts each year to levels approaching zero by December 31, 1999." *Id.* § 1416(a)(4).

It is interesting that this permit requirement (in the absence of a global moratorium) would require dolphin mortality levels to approach zero by the end of 1999. Requiring mortality to approach zero seems a stronger step than a goal that incidental mortality "be reduced to insignificant levels approaching a zero mortality . . . rate," as Congress set forth in the 1972 MMPA. *See supra* note 41 and accompanying text.

The 1992 amendments also made it unlawful after June 1, 1994 to sell, purchase, or transport in the United States any tuna or tuna product that is not "dolphin safe." MMPA, 16 U.S.C.A. § 1417(a)(1) (West Supp. 1993). Under these amendments, it is also unlawful "for any person or vessel that is subject to the jurisdiction of the United States, intentionally to set a purse seine net on or to encircle any marine mammal during any tuna fishing operation after February 28, 1994," subject to certain exceptions. *Id.* § 1417(a)(2).

Recent amendments have also addressed the problem of marine mammal mortality incidental to high seas driftnet fishing. MMPA, 16 U.S.C. § 1385 (Supp. III 1991) (1990 amendments); MMPA, 16 U.S.C.A. §§ 1411(b)(3), 1417 (West Supp. 1993) (1992 amendments). A "driftnet" is a gillnet made of a panel of plastic webbing one and one-half miles or greater in length; "driftnet fishing" is a method to harvest fish "in which a driftnet is placed in water and allowed to drift with the currents and winds for the purpose of entangling fish in the webbing." MFCMA, 16 U.S.C. § 1822 note (1988) (note following § 1822 and reprinting text of Driftnet Impact Monitoring, Assessment, and Control Act of 1987, of which § 4003(1) and (2) provide definitions of cited terms). In the 1990 amendments to the MMPA, Congress declared U.S. policy to be support for "a worldwide ban on high seas driftnet fishing, in part because of the harmful effects that such driftnets have on marine mammals, including dolphins." MMPA, 16 U.S.C. § 1385(b)(2) (Supp. III 1991).

134. NMFS, PROPOSED REGIME, *supra* note 1, at 8.

jury rate."¹³⁵ Congress also authorized the incidental taking of marine mammals from depleted species and population stocks during the five-year exemption period.¹³⁶

III. OVERVIEW OF THE NMFS 1992 PROPOSAL TO GOVERN INTERACTIONS BETWEEN MARINE MAMMALS AND COMMERCIAL FISHING

In the 1988 amendments, Congress also authorized the Secretary of Commerce to develop and submit to Congress a suggested regime governing incidental taking of marine mammals following termination of the interim exemption on October 1, 1993.¹³⁷ The final NMFS proposal, dated November 1992,¹³⁸ was preceded by two earlier NMFS versions in May 1991¹³⁹ and November 1991,¹⁴⁰ as well as the initial recommended guidelines prepared by the Marine Mammal Commission in July 1990.¹⁴¹ NMFS concluded, based on its re-examination of the MMPA, that conservation of marine mammal stocks should continue to be governed by the sound wildlife management principles that are central to the MMPA.¹⁴²

Accordingly, the proposal retained the MMPA goal of maintaining marine mammal stocks within their optimum sustainable population, while also allowing for the incidental taking of marine mammals in fisheries where the taking would not cause the population to fall below the optimum sustainable population level.¹⁴³ The major changes proposed for the MMPA involved allowing the incidental taking of some threatened or endangered species and depleted

135. MMPA, 16 U.S.C. § 1383a(a)(1) (1988). The House report did not elaborate when it stated that the general zero mortality goal of the MMPA would be retained. See H.R. REP. NO. 970, *supra* note 126, at 21, reprinted in 1988 U.S.C.C.A.N. at 6162.

136. MMPA, 16 U.S.C. § 1383a(b)(2)(C) (1988). Congress provided one exception to the authorization of incidental take of depleted species during the five-year interim period—the California sea otter. *Id.*

137. MMPA, 16 U.S.C. § 1383a(l) (1988). Congress specifically excluded commercial purse-seine fishing for yellowfin tuna from the scope of the guidelines to be developed. *Id.* § 1383a(l)(1). The 1988 amendments directed that the Secretary of Commerce transmit its recommendations to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Merchant Marine and Fisheries of the House of Representatives on or before January 1, 1992. *Id.* § 1383a(l)(4).

138. NMFS, PROPOSED REGIME, *supra* note 1. See also 57 Fed. Reg. 59,832 (1992) (providing notice of availability of final proposal and summarizing recommendations).

139. 56 Fed. Reg. 23,958 (1991) (proposed May 24, 1991).

140. NATIONAL MARINE FISHERIES SERVICE, U.S. DEPARTMENT OF COMMERCE, REVISED PROPOSAL TO GOVERN INTERACTIONS BETWEEN MARINE MAMMALS AND COMMERCIAL FISHING OPERATIONS (Nov. 20, 1991) (draft interim proposal) [hereinafter NMFS, DRAFT INTERIM PROPOSAL]. See also 56 Fed. Reg. 61,231 (1991) (providing notice of availability of draft interim proposal).

141. 56 Fed. Reg. 23,959 (1991) (summarizing recommended guidelines of Marine Mammal Commission of July 12, 1990).

142. NMFS, PROPOSED REGIME, *supra* note 1, at 1.

143. *Id.*

stocks, the taking of stocks for which optimum sustainable population levels cannot be determined, and procedural changes for authorization of takings.¹⁴⁴ Like the several amendments to the MMPA since its enactment, the legislative proposal retained the zero mortality goal provision of the MMPA.¹⁴⁵

There are three major provisions of the 1992 NMFS legislative proposal: (1) the quota allocation scheme; (2) allowing removal of endangered, threatened, or depleted species or stocks; and (3) the zero mortality goal. An understanding of each of these provisions is necessary in order to evaluate the legislative proposal as a whole.

A. Allocating Quotas for Incidental Take to Commercial Fisheries

The legislative proposal's allocation scheme is based on the goal of maintaining marine mammal stocks at their optimum sustainable populations while at the same time allowing for some incidental take.¹⁴⁶ The calculation of the allowable take begins with a determination of the potential biological removal, that is, "the maximum number of individuals that could potentially be removed without disadvantaging a stock in biologically numeric terms."¹⁴⁷ For stocks for which no optimum sustainable population level can presently be calculated, the proposal allows for calculation of conservative potential biological removal levels using default growth rates and recovery values.¹⁴⁸

In particular, the proposal focuses on the fisheries responsible for significant takes from marine mammal populations that are classified as depleted, threatened, or endangered, or that have total removals equal to or greater than the calculated potential biologic removal.¹⁴⁹ The total potential biological removal determined for these stocks would be allocated among fisheries, other groups, and a reserve component.¹⁵⁰ Allocations to individual fisheries would be based on socioeconomic factors, biological considerations, historical take rates, past performance to reduce takes, and present ability to reduce takes.¹⁵¹ Incidental takes authorized under this allocation scheme would be monitored annually, and NMFS would act as nec-

144. *See id.*

145. *Id.*

146. *Id.*

147. *Id.* at vi. Potential biological removal would be calculated as the product of the best estimate of minimum stock abundance and the population growth rate. *Id.* at 29.

148. *Id.* at 30-32. In the absence of specific information on the growth rate of a particular species, NMFS would use figures calculated from theoretical average growth rates as default values. *Id.* at 31.

149. *See id.* at 5-6.

150. *Id.* at 6.

151. *Id.* at 6, 65.

essary to ensure that allocations are not exceeded.¹⁵² Under the NMFS proposal, fishing vessel owners would need to obtain individual permits to take marine mammals.¹⁵³

B. Allowing Removal of Depleted, Endangered, and Threatened Species

While prior to 1988 the MMPA prohibited the taking of depleted marine mammal stocks incidental to commercial fishing,¹⁵⁴ the 1992 NMFS legislative proposal would allow some incidental taking of depleted marine mammal stocks, including stocks determined to be below their optimum sustainable population levels, and threatened or endangered species.¹⁵⁵ NMFS believed that in some cases such incidental take could be allowed without further disadvantage to the stock and without significantly delaying recovery time, as long as adequate precautions are taken. The Agency noted in the proposal that "[a]llowing removals from some depleted stocks would not significantly prolong recovery and would avoid unnecessary restrictions or adverse economic impacts on commercial fishing that would result if no taking of depleted stocks were allowed."¹⁵⁶ NMFS would calculate potential biological removal for depleted, endangered, or threatened stocks in a similar way to other stocks, but would make adjustments to ensure population recovery within a reasonable timeframe.¹⁵⁷ NMFS would use more conservative recovery factors and consider the possibility of no removals being allowed.¹⁵⁸

Under the proposal, fishermen taking endangered, or in some cases threatened, marine mammals would be required to obtain authorization both under the MMPA and under the ESA.¹⁵⁹ Rather than recommend changes in the ESA to accommodate the taking of endangered and threatened species incidental to commercial fishing, NMFS proposed a change to the MMPA to allow for the same result.¹⁶⁰

152. *Id.* at 6.

153. *Id.* at xii, 3.

154. See MMPA, 16 U.S.C. § 1371(a)(3)(B) (1988) (specifying that during the moratorium, permits could not be issued for takings of marine mammals designated as depleted, except for scientific research purposes); *id.* § 1371(a)(4)(A) (specifying that the small-take exemption for commercial fishing applied only to non-depleted species). See also NMFS, PROPOSED REGIME, *supra* note 1, at 36 (discussing threatened, endangered, and depleted stocks).

155. NMFS, PROPOSED REGIME, *supra* note 1, at 36, 42-43.

156. *Id.* at 42. NMFS also noted, however, that no incidental take from severely depleted stocks such as the right whale would be authorized. *Id.*

157. *Id.* at 36.

158. *Id.*

159. See *id.* at 54-55. This represented a change from an earlier NMFS proposal, under which fishermen would not have been required to obtain separate authorization under the ESA. See NMFS, DRAFT INTERIM PROPOSAL, *supra* note 140, at 44-45.

160. See NMFS, PROPOSED REGIME, *supra* note 1, at 55. Currently, the incidental

C. Retaining the Zero Mortality Goal

Retention of the MMPA's zero mortality goal is an important part of the 1992 legislative proposal.¹⁶¹ In the proposal, NMFS set forth a program to evaluate interactions between marine mammal stocks and commercial fisheries and to ascertain ways to reduce injury and mortality to marine mammals.¹⁶² NMFS noted "that the *status quo* has not significantly advanced the [zero mortality goal]," and that "lack of guidance on how the goal should be attained has led to inaction."¹⁶³ According to NMFS, the proposed approach would focus on solving problems and developing realistic solutions through coordination of its efforts with the fishing industry.¹⁶⁴

Specifically, NMFS would apply the zero mortality goal "to all fisheries through educational efforts; research to examine alternative gear and fishing practices; research to determine if high rates of interaction are correlated with certain areas, seasons, times of the day; gear research; and research on feasible ways to avoid interactions between marine mammals and commercial fishing operations."¹⁶⁵ NMFS proposed that, eventually, information obtained through the stock assessment process, and experience developed in managing critical stocks, would be used to move toward the zero mortality goal

taking of endangered or threatened marine mammals by fishermen cannot be authorized solely under the ESA because the ESA requires that these takings also be authorized under § 101(a)(5) (codified at 16 U.S.C. § 1371(a)(5)(A) (1988)) of the MMPA. See NMFS, PROPOSED REGIME, *supra* note 1, at 54-55. This section is similar to the small-take exemption for commercial fishing, but is restricted to activities other than commercial fishing. Under this section, NMFS can issue regulations providing for the incidental taking of small numbers of mammals for up to five years if it finds that the total taking would have a negligible impact on the marine mammal species or stock. MMPA, 16 U.S.C. § 1371(a)(5)(A) (1988). Under MMPA regulations, "negligible impact" is defined as "an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival." 50 CFR § 228.3 (1992). In its proposal, NMFS recommended amending 16 U.S.C. § 1371(a)(5)(A) to allow for incidental take by commercial fishermen. NMFS, PROPOSED REGIME, *supra* note 1, at 55.

The 1992 proposal represented a significant change from an earlier NMFS proposal to amend the ESA to allow for the taking of endangered species incidental to commercial fishing operations. NMFS, DRAFT INTERIM PROPOSAL, *supra* note 140, at 44-45; 56 Fed. Reg., *supra* note 139, at 23,962. NMFS changed its proposal in response to "[a] number of commenters [who] expressed opposition to proposing ESA amendments, as doing so could set a precedent of modifying the ESA to accommodate increased take of threatened or endangered species." NMFS, PROPOSED REGIME, *supra* note 1, at 55.

161. NMFS, PROPOSED REGIME, *supra* note 1, at 51.

162. *Id.* at 52.

163. *Id.*

164. *Id.*

165. *Id.* at 52, 54. According to the proposal, NMFS anticipated that this research could be funded under the stock assessment program, and, in addition, NMFS would encourage the commercial fishing industry to cosponsor research efforts. *Id.* at 54.

for all marine mammal stocks.¹⁶⁶

Furthermore, under the legislative proposal, the zero mortality goal could also play a part in the allocation of potential biological removal levels.¹⁶⁷ NMFS would retain a "reserve" out of the potential biological removal calculated for a marine mammal stock. This "reserve could serve as a mechanism to 'ratchet down' allotments so that the [z]ero [m]ortality [r]ate [g]oal could be approached."¹⁶⁸ As NMFS pointed out, potential biological removal levels would increase with growth in marine mammal stocks, and if those additional levels were allocated to fisheries, the zero mortality goal would be meaningless. With use of the reserve, however, NMFS could place additional potential removals into the reserve allotment.¹⁶⁹ NMFS also noted that the reserve allotment could be increased to approach the zero mortality goal as research on fishing techniques was incorporated into management measures.¹⁷⁰

IV. ANALYSIS OF THE NMFS 1992 LEGISLATIVE PROPOSAL: CONFLICT AND COMPROMISE

The 1992 NMFS legislative proposal did not represent a major departure from the balance of interests represented in the MMPA prior to the 1988 amendments setting forth the interim exemption. Rather, the proposal maintained the principal objectives and policies of the MMPA, including accommodation of commercial fishing interests. The 1988 amendments to the MMPA directed that guidelines to govern the taking of marine mammals incidental to commercial fishing operations should "be based on sound principles of wildlife management, and be consistent with and in furtherance of the purposes and policies [of the MMPA]."¹⁷¹ Such congressional guidance meant that NMFS was not starting anew, but rather was working with the tension between marine mammal protection and com-

166. *Id.* at 54.

167. *See id.* at 65-66.

168. *Id.* at 66.

169. *Id.*

170. *Id.*

171. MMPA, 16 U.S.C. § 1383a(l)(1)(B) (1988). Congress also directed that the guidelines provide a scientific rationale and a basis for determining the number of marine mammals that may be incidentally taken, *id.* § 1383a(l)(1)(A), and that they: to the maximum extent practicable, include as factors to be considered and utilized in determining permissible levels of such taking—

(i) the status and trends of the affected marine mammal population stocks;

(ii) the abundance and annual net recruitment of such stocks;

(iii) the level of confidence in the knowledge of the affected stocks; and

(iv) the extent to which incidental taking will likely cause or contribute to their decline or prevent their recovery to optimum sustainable population levels.

Id. § 1383a(l)(1)(C).

mercial fishing that already existed in the MMPA.

The question that must now be answered is whether the NMFS proposal has achieved a reasonable compromise, consistent with the spirit of the MMPA, between the disparate interests represented in the continuing conflict between marine mammals and fishermen.¹⁷² An analysis of this proposal using the perspective gained from the legislative history and judicial interpretation of the MMPA sheds light on this complicated issue.

A. Proposed Quota System Accommodates Commercial Fishing by Allowing Incidental Taking of Marine Mammals

Like the original MMPA and its various amendments, the NMFS legislative proposal takes a resource management approach rather than a strict protectionist approach to the problem of interactions between marine mammals and commercial fishing operations.¹⁷³ While the interests of marine mammals should come first under the MMPA, as appropriately noted by the *Richardson* court in 1976,¹⁷⁴ this does not mean that each individual animal must be provided total protection from commercial fishing. Allowing some incidental take of marine mammals during commercial fishing operations does not conflict with the goal of maintaining sustainable levels of marine mammal populations. Rather, the proposed quota system represents a recognition of the improbability of being able to protect each individual marine mammal and, at the same time, allowing commercial fishermen to utilize fishing nets. By tying incidental take allocations

172. Interestingly, environmental groups and fishing associations recently undertook negotiations regarding the NMFS proposal and reauthorization of the MMPA. See *Reauthorization of the Marine Mammal Protection Act: Hearings Before the Subcomm. on Environment and Natural Resources of the House Comm. on Merchant Marine and Fisheries*, 103d Cong. (1993) [hereinafter 1993 *Hearings*] (statements of Gerald Leape, Legislative Director, Greenpeace; Suzanne Iudicello, Counsel, Center for Marine Conservation). See *infra* note 243 for a summary of the proposal resulting from these negotiations.

173. For arguments that the MMPA should be more protectionist in its approach, see Coulston, *supra* note 65, at 97, 99 (arguing that "it is neither economically nor ethically appropriate to look upon dolphin as a resource to be managed and exploited by man"); Mary A. Winters, Comment, *Cetacean Rights Under Human Laws*, 21 SAN DIEGO L. REV. 911, 939-40 (1984) (arguing for "laws that focus on the animals themselves and their rights rather than on how they can be optimally sustained, ultimately for human utilization").

For an argument advocating greater balance with economics and food needs, see Terrin Child & Jeffrey T. Haley, *The Marine Mammal Protection Act and the Fishery Conservation and Management Act: The Need for Balance*, 56 WASH. L. REV. 397, 435-36 (1981) (arguing that "the worldwide nutritional and economic benefits of gathering food from the oceans should be allowed to offset additional protection for marine mammals when they are not threatened or endangered and the chance for greater food production is high").

174. See *Committee for Humane Legislation, Inc. v. Richardson*, 414 F. Supp. at 309 (D.D.C. 1976).

to the goal of maintaining marine mammal stocks at their optimum sustainable population levels,¹⁷⁵ NMFS effects a reasonable accommodation of fishing interests, yet ensures adequate protection for marine mammal populations.

Allowing some level of marine mortality incidental to commercial fishing is also consistent with the legislative history of the MMPA. In the original MMPA of 1972, Congress provided for the issuance of general permits subject to regulations to ensure that takings would not be to the disadvantage of marine mammal species or stocks.¹⁷⁶ The 1981 amendments further provided for small-take exceptions for commercial fishermen where the impact of such takings would have a negligible effect on the species or stock.¹⁷⁷ The quota provision in the 1992 legislative proposal would replace both of these MMPA provisions.¹⁷⁸

On earlier versions of the NMFS proposal, environmentalists, as well as the commercial fishing industry, repeatedly commented on the need to focus attention and resources on those fisheries with the most significant incidental takes of marine mammals.¹⁷⁹ NMFS's response to these concerns appropriately directed research, monitoring, and management efforts to those fisheries interacting with stocks of marine mammals classified as depleted, threatened, or endangered, or where total removals are equal to or greater than the potential biological removal.¹⁸⁰

The calculation of potential biological removal for each marine mammal stock having significant interactions with commercial fisheries would provide NMFS with a means to limit incidental mortality such that total removals would not result in a stock falling below its optimum sustainable population.¹⁸¹ According to the proposal, NMFS would rely on biologic data regarding a particular species to first estimate its optimum sustainable population, and to then estimate the number of marine mammals that could be removed with-

175. The connection between optimum sustainable population and allowing incidental take is not new in the NMFS 1992 legislative proposal. Optimum sustainable population was a key part of the original MMPA of 1972. *See supra* notes 34-35 and accompanying text. Before general permits could be issued, the Secretary was required to issue "a statement of the expected impact of the proposed regulations on the optimum sustainable population of such species or population stock." MMPA, 16 U.S.C. § 1373(d) (1988).

176. MMPA, 16 U.S.C. §§ 1371(a)(2), 1373(a), 1374 (1988); 50 C.F.R. pt. 220 (1992). *See also supra* text accompanying notes 38-40.

177. MMPA, 16 U.S.C. § 1371(a)(4)(A) (1988) (providing for five-year authorization of incidental taking by U.S. citizens while engaging in commercial fishing operations, of small numbers of marine mammals of a species or stock that is not depleted). *See also supra* notes 92-96 and accompanying text.

178. NMFS, PROPOSED REGIME, *supra* note 1, at 19.

179. *See id.* at 1-2.

180. *Id.* at 2.

181. *Id.* at 5.

out causing the population to fall below the optimum sustainable level. NMFS reported that comments received during the public comment period were generally supportive of the 1992 proposal's optimum sustainable population approach, although some commenters requested clarification of the concept or questioned the proposed approach to determining factors used in estimating optimum sustainable population.¹⁸² There has been some criticism, however, of the use of optimum sustainable population as the goal of marine mammal protection. For example, at least one fishing group commented that optimum sustainable population should not be used as a basis for a rational harbor porpoise management regime.¹⁸³ While

182. *Id.* at 21-22. For example, NMFS noted that "[p]ublic comments were divided over whether historic carrying capacity (before interference by human activities) or current carrying capacity should be used . . . under the proposal. NMFS has determined that re-creating historical carrying capacity is not possible in most cases and would rely on current carrying capacity, absent human exploitation, to determine [optimum sustainable population]." *Id.* at 25. The term "[c]arrying capacity is defined as the maximum population size that can be currently maintained by a particular environment." *Id.* at 22.

In its most recent comments on the November 1992 NMFS proposal, the Center for Marine Conservation argued that NMFS should attempt to calculate historic carrying capacity. The Center also expressed concern over how NMFS will modify current carrying capacity to account for degradation of the marine environment. See Center for Marine Conservation, Side by Side Comparison of the MMPA Prior to the 1988 Amendments, the National Marine Fisheries Service Proposed Regime to Govern the Incidental Taking of Marine Mammals in Commercial Fisheries, and the Center for Marine Conservation's Concerns About the NMFS Proposal, 2 (1993) (1725 DeSales St., Washington, D.C. 20036).

Since optimum sustainable population levels cannot be determined at this time for most marine mammal stocks, NMFS has proposed a conservative approach using default values and stock recovery factors to estimate potential biological removal in the absence of sufficient data. See NMFS, PROPOSED REGIME, *supra* note 1, at 27. While an evaluation of the details of this proposed approach is beyond the scope of this Comment, this Author agrees with the general approach of estimating potential removal levels using default values for growth rates until such time as scientific data are sufficient to allow for more accurate determinations. See NMFS, PROPOSED REGIME, *supra* note 1, at 30-32, 34-36 for a summary of comments received during the public review period on various aspects of the proposed approach to determining potential biological removal where optimum sustainable population cannot be determined, and the response by NMFS. For specific comments on the NMFS approach, see, e.g., letter from National Fisheries Institute, *supra* note 19, at 3-4.

183. See New England Gillnetters Association, Comments on the Draft Legislative Environmental Impact Statement for the Proposed Regime to Govern Interactions Between Marine Mammals and Commercial Fishing Operations, 2, 4 (Sept. 13, 1991) (65 Elm St., Marshfield, Mass. 02050). In its September 1991 comments on the draft legislative impact statement for the NMFS proposal, this group pointed to the probable significant fluctuations in porpoise populations, based on the cyclical nature of its food supply and other ecological factors, as a problem with using optimum sustainable population. See *id.*

It is true that significant changes in the size of a marine mammal population and in its growth rate over time, due to changes in availability of food or other ecological factors, make determination of an accurate optimum sustainable population level and

the proposal for estimating optimum sustainable population and potential biological removal levels is complex and requires considerable assumptions to be made in the absence of solid data, this approach should ensure that permitted takings do not unreasonably affect marine mammal populations.

Under the NMFS proposal, the potential biological removal will be allocated to various user groups, including commercial fishermen, as quotas for incidental take.¹⁸⁴ The use of quotas to provide for marine mammal take, however, raises questions. First is the almost inevitable connection of quotas with maintenance of the status quo. Once numbers are set in regulations, they are frequently interpreted as an entitlement, and it may be very difficult to bring the quotas down at a later point. NMFS appears to have recognized this problem. In the final draft of the proposal, NMFS noted that the term "potential biological removal" had replaced the "allowable biological removal" used in the earlier draft.¹⁸⁵ NMFS renamed this term to indicate that it represented the maximum number of individual mammals that could potentially be taken without disadvantaging a stock, and not the number that will necessarily be allowed to be taken.¹⁸⁶ NMFS was correct to note that the potential biological removal should be just the starting point for determining take levels, and not an automatic allowance.¹⁸⁷ Even with this acknowledgement of the problem, however, it will likely be difficult for NMFS to keep downward pressure on quotas once they are established.

Quotas also may take attention away from efforts to develop new technologies to reduce marine mammal mortality.¹⁸⁸ Under a quota system alone, neither fishermen nor regulators are provided sufficient incentive to work toward methods of minimizing conflicts between marine mammals and commercial fishing. To address these issues, the potential value of quotas under the proposed scheme must be evaluated in light of the zero mortality goal maintained by the NMFS proposal. The next two sections focus on the attempt by NMFS to address the issues involved with setting quotas in its approach to the zero mortality goal.

the associated potential biological removal more difficult. This is because the calculations depend upon estimating the growth rate of the marine mammal and the minimum stock abundance, both of which may be subject to natural fluctuations over time.

184. NMFS, PROPOSED REGIME, *supra* note 1, at 56-67.

185. *Id.* at vi.

186. *Id.*

187. *See id.*

188. *See* Griffin, *supra* note 1, at 741.

B. Is the Zero Mortality Goal Consistent with a Quota-Based System?

Since the MMPA was enacted in 1972, permitted takings incidental to commercial fishing operations have coexisted in the Act with the zero mortality goal; NMFS explicitly retains the zero mortality goal in its 1992 legislative proposal.¹⁸⁹ Examining only the language of the zero mortality goal in the MMPA, this goal at first appears inconsistent with allocating quotas for takings of marine mammals. If the goal to reduce the incidental kill to insignificant levels approaching a zero mortality means anything, then how can it be legitimate for NMFS to set quotas for incidental take, even if such quotas do not interfere with a stock's optimum sustainable population or unduly delay recovery time? To address this question, it is necessary to turn again to the legislative history of the MMPA, as it provides the best source for understanding the zero mortality goal's role and its relationship to the quota system.

Of particular significance to understanding the zero goal are the congressional concerns that originally motivated adoption of the provision in 1972. The zero mortality goal was added to address concerns over the large numbers of porpoises incidentally taken by the commercial tuna industry.¹⁹⁰ Analysis of the MMPA's legislative history demonstrates that the zero goal was consistent with the intent of Congress that porpoise mortality be reduced as low as is technologically feasible, and that NMFS should work toward approaching the zero mortality goal through technological development and other measures.¹⁹¹ It is also clear from the legislative history of the 1972 MMPA that Congress did not intend to shut down the U.S. commercial tuna industry or to require the elimination of certain fishing techniques.¹⁹² Thus, from the beginning, permits for the incidental

189. NMFS, PROPOSED REGIME, *supra* note 1, at 51. See also *supra* text accompanying note 161. In its 1992 proposal, NMFS noted that a number of commenters on earlier versions of the proposal indicated that the zero mortality rate goal should be one of the principal concerns addressed in the proposal, and that it was unclear how the goal was to be factored into the NMFS proposal. NMFS, PROPOSED REGIME, *supra* note 1, at 51-52. NMFS responded to those concerns with a program to implement the zero goal. *Id.* at 53 (showing flowchart).

190. See 118 CONG. REC. 25,271 (1972). See also *supra* text accompanying notes 54-60.

191. See *supra* text accompanying notes 45-64.

192. See, e.g., 118 CONG. REC. 34,643 (1972). See also *supra* text accompanying notes 63-64. In recent amendments to the MMPA, however, Congress has specifically sought to eliminate the practice of harvesting tuna by using purse-seine nets to intentionally encircle dolphins. MMPA, 16 U.S.C. § 1385(h) (Supp. III 1991); MMPA, 16 U.S.C.A. § 1411(b)(1) (West Supp. 1993). See also *supra* note 133. This approach, however, may not necessarily be repeated in other fisheries. For example, the House Merchant Marine and Fisheries Committee specifically pointed out that

[t]he Committee used the term "intentional" to distinguish this practice from other fishing methods in which marine mammals may be accidentally

taking of marine mammals and the zero mortality goal coexisted in the MMPA. Through the permit system, Congress has allowed commercial fishing to continue by excepting it from the moratorium on killing of marine mammals, while through the zero mortality goal, Congress has attempted to push the fishing industry and NMFS toward reducing incidental kill as rapidly as possible.¹⁹³ This statutorily-created tension between the goal of elimination of marine mammal takings and the authorization of takings through a regulated permit system is at the heart of the MMPA's compromise approach to marine mammal protection.

The relationship between quotas and the zero mortality goal in the NMFS proposal is further elucidated by judicial and administrative interpretations of the MMPA. The district and appeals courts in *Richardson* made it clear that takings could be authorized only when such takings would not be to the disadvantage of the species.¹⁹⁴ The district court further noted that the MMPA is primarily result-oriented; therefore the use of best technology alone could not justify results inconsistent with the MMPA.¹⁹⁵ Furthermore, an administrative law judge has interpreted the zero goal provision to require a quota based on technological feasibility.¹⁹⁶

These interpretations show that use of best technology alone was insufficient under the MMPA; rather, permits could be granted only if the takings first were shown not to be to the disadvantage of the stock. In other words, permits served the purpose of limiting incidental takings by the fishing industry to those which would not be to the disadvantage of the stock, while the zero mortality goal was intended to reduce the permitted takings to levels that were technologically and economically feasible.

killed or injured during the course of normal fishing operations. The Committee recognizes that in other fisheries, including other purse seine fisheries, marine mammals are not specifically targeted for encirclement or net deployment as they are in the yellowfin tuna purse seine fishery in the [eastern tropical Pacific Ocean].

H. REP. NO. 746(I), 102d Cong., 2d Sess. 15 (1992), reprinted in 1992 U.S.C.C.A.N. 2919, 2928. Also, near the time of enactment of this legislation, the major canned tuna suppliers to the United States announced they would voluntarily refuse to purchase tuna that had been harvested in association with dolphins. See *id.* at 9-10, reprinted in 1992 U.S.C.C.A.N. at 2922-23.

193. See MMPA, 16 U.S.C. § 1371(a)(2) (1988) (providing an exception to the moratorium for commercial fishing, but requiring permits to be issued and providing a zero mortality goal).

194. *Committee for Humane Legislation, Inc. v. Richardson*, 414 F. Supp. at 308-12; *Committee for Humane Legislation, Inc. v. Richardson*, 540 F.2d at 1149-50. See also *supra* text accompanying notes 66-68, 81.

195. *Committee for Humane Legislation, Inc. v. Richardson*, 414 F. Supp. at 308-09. See also *supra* text accompanying note 74.

196. See Recommended Decision, *supra* note 86, at 27-28, 44-46. See also *supra* notes 86-88 and accompanying text.

In the 1992 proposal, NMFS has continued this basic two-pronged scheme of the MMPA. NMFS will authorize takings when such takings will not interfere with achieving the goal of maintaining marine mammal stocks within their optimum sustainable population. NMFS will also implement the zero mortality goal through education, research, and ratcheting down the allocations as stocks increase in population, or as research indicates methods for reducing takings.¹⁹⁷

Thus, in light of the history of the MMPA, the value of combining a quota system with the zero mortality goal becomes evident. On the one hand, a quota system alone can be used in theory to ensure that a marine mammal stock not be disadvantaged by incidental takings, but the problems associated with quotas, including maintenance of the status quo and lack of incentive for developing better methods for minimizing interactions, mean that large numbers of marine mammals may still be taken. On the other hand, in the absence of quotas, a requirement for use of certain technology and techniques to strive toward zero mortality may not be enough to protect a marine mammal stock from becoming depleted. For example, this could be true for a marine mammal population like the Gulf of Maine harbor porpoise, for which estimated take exceeds preliminary estimates of potential biological removal,¹⁹⁸ and adequate research on gear modifications or other methods to reduce take is currently unavailable.¹⁹⁹ Establishment and enforcement of quotas would allow NMFS to limit takings to permissible levels by prohibiting or limiting fishing in certain areas or during certain times once it becomes apparent that quotas will be exceeded.²⁰⁰

The combination of the quota system with an effective zero mor-

197. NMFS, PROPOSED REGIME, *supra* note 1, at 21, 52-54, 64. See also *supra* text accompanying notes 161-70 for a summary of the NMFS proposal to implement the zero mortality goal provision.

198. See NMFS, PROPOSED REGIME, *supra* note 1, at 40, 58.

199. See generally Plante, *Working Group*, *supra* note 8, at 19A (discussing need for technical workshop to focus on interactions between harbor porpoises and gill-nets); Clarke Canfield, *Net Alarms Seem to Help Prevent Porpoise Deaths*, PORTLAND PRESS HERALD, Jan. 25, 1993, at 1B (reporting on recent tests of net alarms) [hereinafter Canfield, *Net Alarms*]; Canfield, *supra* note 3, at 12B (discussing possible options for reducing porpoise mortality).

200. Enforcement of quotas, under the NMFS proposal, consists principally of a monitoring program "to estimate takes in a timely manner so that actions could be taken to prevent quotas from being exceeded during the year." See NMFS, PROPOSED REGIME, *supra* note 1, at 80. Possible management measures to prevent quotas from being exceeded include requiring NMFS observers on all fishing vessels and prohibiting additional fishing. See *id.* But cf. Center for Marine Conservation, *supra* note 182, at 8 ("Given current lag times in acquiring observer data from NMFS Regions it is unlikely that the agency would be able to enforce quotas if they were exceeded. Further it is unlikely that NMFS would have timely indication that it was necessary to trigger restrictions on a fishery that is approaching its allocation or quota.").

tality goal in the legislative proposal would be a workable system to reduce marine mammal mortalities. Ideally, the zero mortality goal would serve to put tension on the quota system to avoid the problems associated with the status quo. The setting and enforcement of quotas would serve to ensure that takings do not interfere with the primary goal of the MMPA, that is, to maintain marine mammal stocks and species within their optimum sustainable population levels.

In the proposal, NMFS envisioned that over the long term, the regulatory approach would move away from a quota-based process to a process based on modifying fishing activity to achieve the zero mortality goal for all stocks.²⁰¹ Such a system would be driven by mechanisms for reducing interactions.²⁰² NMFS anticipated that information obtained from the stock assessment process²⁰³ on ways to reduce marine mammal mortalities through modification of fishing methods, and information obtained from experience managing stocks, could be used to move toward a behavior modification approach.²⁰⁴ In proposing to move away from quotas over the long term, NMFS implicitly recognized the problems inherent to a quota system.

As NMFS develops more information regarding the interactions between marine mammals and commercial fishing activities, a system based solely on regulating the means of fishing in order to minimize incidental take seems feasible. Such an approach may be appropriate for a fishing method such as gillnetting if and when research results indicate that the incidental take of harbor porpoises could be reduced significantly by certain fishing modifications or devices. For example, research is currently underway on using acoustic devices to keep harbor porpoises from becoming entrapped in gillnets.²⁰⁵ After all, the primary goal of a quota system is to ensure that takings will not disadvantage a species or stock. Thus, if known methods exist that will minimize interactions between marine mammals and commercial fishing operations for a particular fishery, enacting regulations to require and enforce use of those methods and devices should suffice without a quota system to ensure that the stock is not disadvantaged. Abandoning a quota system could be

201. NMFS, PROPOSED REGIME, *supra* note 1, at 53, 67.

202. *Id.*

203. Under the stock assessment program, NMFS would conduct population surveys for marine mammal stocks. *Id.* at 13.

204. *Id.* at 53, 67.

205. See Canfield, *Net Alarms*, *supra* note 199, at 1B; *Pinger Tests Show Promise for Gillnets*, COMMERCIAL FISHERIES NEWS, Jan. 1993, at 9A. See also Plante, *Working Group*, *supra* note 8, at 19A (reporting on NMFS funding of technical workshop that will review previous gear work, assess potential for future gear work, and determine costs and experimental designs for any promising gear work or acoustic deterrent experiments).

more problematic, however, for a fishery where how the gear is used by fishermen has a significant impact on marine mammal mortality, as, for example, in commercial tuna fishing with purse-seine nets.²⁰⁶ Even if performance standards are in place for fishermen, and those standards could achieve minimal incidental take if followed, quotas in such cases may still be necessary to ensure the most appropriate and effective use of fishing gear.²⁰⁷

C. NMFS's Approach To Implementing the Zero Mortality Goal

Although NMFS recognized the previous lack of guidance on how the zero mortality goal should be attained,²⁰⁸ the guidance in their current proposal is still not completely clear.²⁰⁹ The proposal appears to envision regulations such as performance standards and restrictions on certain fishing practices in order to move toward the zero mortality goal.²¹⁰ Unfortunately, however, the standards by

206. The practice of using purse-seine nets to encircle porpoises is used only for illustration purposes since Congress excluded this practice from the scope of the guidelines. MMPA, 16 U.S.C. § 1383a(l)(1) (1988).

207. As pointed out by one commentator, in his review of the MMPA, [q]uotas have less value . . . since a gill net fishery is a passive fishery in which incidental mammal mortality occurs as a result of entanglement with drifting nets. Once the nets are deployed, there is little or nothing that can be done by the fishermen themselves to influence the number of marine mammals incidentally taken. In the case of the tuna industry, an active fishery in which porpoises are chased and purposely encircled with nets, it is the manner in which the gear is used far more than the inherent characteristics of the gear itself that determines how many porpoises are killed. Thus, in the tuna fishery, quotas will continue to be necessary to insure the most effective use of the safest gear available.

BEAN, *supra* note 29, at 314.

208. See NMFS, PROPOSED REGIME, *supra* note 1, at 52 (noting that the status quo has not significantly advanced the zero mortality goal and that, in many cases, the lack of guidance on how this goal should be attained has led to inaction). See also *supra* text accompanying notes 165-70 for a brief summary of the NMFS proposal for implementing the zero mortality goal.

209. See Center for Marine Conservation, *supra* note 182, at 4 ("The proposal lacks requirements or objective measures that fisheries must meet in progressing toward a [zero mortality goal].").

210. See, e.g., NMFS, PROPOSED REGIME, *supra* note 1, at 52.

[T]he proposed approach focuses on solving problems. NMFS would coordinate its efforts with the fishing industry so that realistic solutions can be developed. For example, NMFS could develop a monitoring program that provides an adequate estimate of the number of removals, evaluates the extent of takes relative to the fishing effort, and evaluates the observed incidental take relative to a fishing technique or gear type (i.e., does the take occur near the middle or end of a gillnet, near the float line, etc.). Other approaches to reducing takes that have worked in the past also would be employed in the new program. For example, over the past two years, NMFS has instituted performance standards for U.S. skippers in the purse seine fishery for yellowfin tuna in the eastern tropical Pacific. In combination with restrictions on certain fishing practices (i.e., elimination of "sun-

which NMFS will determine when and if gear or practice changes will be required remain unclear. Congress, in amending the MMPA, should be explicit in providing factors to be considered by NMFS in moving the fishing industry toward the zero mortality goal.

A reasonable approach would be to require those modifications and restrictions that are technologically and economically practicable. These criteria are not new to the MMPA. In the 1981 MMPA amendments, Congress put into words what it had originally intended the zero mortality goal to reflect, when it specified *economic and technological practicability* as criteria for meeting the zero mortality goal in the case of purse-seine fishing of yellowfin tuna.²¹¹ Under the MMPA, the Secretary is already authorized to issue regulations "to reduce to the lowest *practicable* level the taking of marine mammals incidental to commercial fishing operations."²¹² Also, in issuing general permits for incidental takings, the Secretary could consider the *economic and technological feasibility* of implementation as a factor in prescribing regulations necessary to ensure that takings would not be to the disadvantage of marine mammal species or stocks.²¹³ Requiring only those measures that are economically and technologically feasible to move toward the zero goal may not be popular with those who would advocate approaching the zero mortality goal regardless of cost to the fisherman. It may also displease those fishermen who view current levels of marine mammal bycatch as an inevitable part of commercial fishing. Nevertheless, requiring fishermen to do what is both economically practicable and technologically feasible in order to approach the goal of zero mortality is a workable compromise that is consistent with the overall scheme of the MMPA.²¹⁴

down" sets), the level of incidental mortality has been significantly reduced. Instituting similar programs in other fisheries may also reduce mortality levels in these fisheries.

Id.

211. See MMPA, 16 U.S.C. § 1371(a)(2) (1988).

212. *Id.* § 1381(b) (emphasis added).

213. *Id.* § 1373(b)(5).

214. In fact, NMFS has recognized the possibility of "[r]equiring the use of economically and technologically practicable techniques and gear that are known to decrease the mortality and serious injury of marine mammals," in order to implement the zero mortality goal, in its Draft Legislative Environmental Impact Statement. NMFS, DRAFT LEIS, *supra* note 1, § 2.6.2, at 2-41.

While "economically practicable" and "technologically feasible" are somewhat vague terms, this does not negate their usefulness in the context of determining measures fishermen must adopt in order to approach zero mortality of marine mammals. See *supra* note 102 for a discussion of the lack of guidance for these terms in the 1981 amendments to the MMPA. For example, common sense dictates that before NMFS could require fishing vessels to use an acoustic device for deterring marine mammals from becoming entrapped in fishing nets, such a device must be demonstrated to work, and to be capable of being used in a practical fashion on the fishing vessels targeted. Furthermore, any measures for moving toward the zero mortality goal, be-

A further problem with the NMFS proposal is its lack of clear guidance as to the adjustment of allocations to move toward the zero mortality goal based on results of research on fishing techniques.²¹⁵ NMFS failed to specify the criteria by which it should determine when allocations are to be ratcheted down. Again, economic and technological feasibility may be appropriate factors to consider in reducing quotas to reflect current research.

A problem with the application of economic and technological practicability as criteria for implementing the zero goal is that, in the absence of an active research program, progress toward attaining insignificant mortality levels may be stalled. NMFS has recognized the critical need for scientific research to assess the status of marine mammal stocks and to determine ways to reduce or avoid conflicts between marine mammals and commercial fishing operations.²¹⁶ Congress, in amending the MMPA, should specifically require such research, and thereby make the zero mortality goal a means for ensuring development of technologically and economically practicable methods for reducing incidental take to insignificant levels.

D. Should Depleted, Endangered, and Threatened Species Be Allowed To Be Taken During Commercial Fishing Operations?

In allowing for the incidental taking of depleted, endangered, and threatened species²¹⁷ under particular circumstances, the 1992 legislative proposal took a significant and appropriate step to accommodate commercial fishing. Prior to 1988, the MMPA prohibited takings of depleted, endangered, and threatened species incidental to

yond those necessary to maintain sustainable populations, should be subject to a requirement of economic practicability. While a thorough discussion of economic criteria is beyond the scope of this Comment, bycatch reduction measures to meet the zero goal should be imposed only where the financial burden will not significantly impair the affected fishermen's ability to continue fishing profitably. *See, e.g.*, 42 Fed. Reg. *supra* note 89, at 64,550 (finding "that the imposition of the proposed quotas will not adversely affect the profitability of purse seiners to any great extent through 1980").

215. *See* NMFS, PROPOSED REGIME, *supra* note 1, at 64-66.

216. *Id.* at 43-54. One environmental group, however, has criticized the NMFS proposal because it did not provide for a "specific plan to ensure the occurrence of research designed to reduce the level of take of marine mammals." 1993 *Hearings*, *supra* note 172 (statement of Sharon Young on behalf of International Wildlife Coalition and the Humane Society of the United States). *See also id.* (testimony of Andrew Read, Woods Hole Oceanographic Institution, pointing out the lack of a long-range gear research program for developing and testing ways of reducing marine mammal mortalities and injuries).

217. Under the MMPA, the statutory definition of depleted species includes a species or population stock that is below its optimum sustainable population, as well as a species or population stock that is listed as an endangered or threatened species under the ESA. *See* MMPA, 16 U.S.C. § 1362(1) (1988). *See also supra* text accompanying note 36.

commercial fishing.²¹⁸ In 1988, however, Congress authorized such takings as part of the five-year interim exemption for commercial fishing.²¹⁹ Allowing some taking from depleted, endangered, or threatened stocks adds considerable flexibility to the proposed quota system and avoids potentially harsh effects on commercial fishing.

For example, if the Gulf of Maine harbor porpoise is classified as a threatened species under the Endangered Species Act, as is currently proposed, NMFS could still allow some low level of incidental take of porpoises by gillnet fishermen. This approach to management of marine mammals provides for their protection, but recognizes that some incidental take of depleted, endangered, or threatened species may also be necessary to allow for the ecologically sound use of other marine resources.²²⁰ Marine mammals should be viewed in the broader context of resource management of the marine environment, which includes human utilization of fish resources. The corollary to this proposition, however, is that authorizing incidental take of marine mammals for the purpose of unsound utilization of fish resources would be inappropriate. As an example, the current overfishing of New England groundfish should be factored into any formula for authorizing the taking of harbor porpoises.²²¹ Only within the context of a management plan to reduce fishing pressure and allow fish stocks to recover would it be appropriate for NMFS to authorize the incidental taking of harbor porpoises.

It is important to note that the NMFS proposal would not exempt fishermen from the requirements of the Endangered Species Act and associated regulations in the case of endangered species. Fishermen taking endangered, and in some cases, threatened species would still need to apply for authorization under the ESA in addition to the MMPA permitting process.²²² The NMFS proposal to amend the

218. See *supra* note 154 and accompanying text.

219. MMPA, 16 U.S.C. § 1383a(b)(2)(C) (1988).

220. See NMFS, PROPOSED REGIME, *supra* note 1, at 9 (citing Marine Mammal Commission's guidelines). The fishing community, not surprisingly, supports the NMFS proposal to authorize some take of endangered and threatened species under the MMPA. See, e.g., letter from National Fisheries Institute, *supra* note 19, at 7. It is noteworthy that the concept of allowing some taking of endangered and threatened marine mammals has also received some support from environmental groups. See, e.g., Center for Marine Conservation, *supra* note 182, at 4 ("It may be acceptable to amend the MMPA to allow some small take of threatened and endangered marine mammals.").

221. The problem of decreasing populations of groundfish in New England coastal waters is presently being addressed by the New England Fisheries Management Council in proposals for amendment to its fishery management plan for groundfish. See *supra* note 27 and accompanying text.

222. See NMFS, PROPOSED REGIME, *supra* note 1, at 54-56. See also *supra* note 159 and accompanying text. Authorization under the ESA for taking harbor

small-take exemption section²²³ in the MMPA to include commercial fishing, thereby providing a means under the ESA to allow incidental take,²²⁴ is reasonable because NMFS must still determine, under this section, that the total taking of marine mammals would have a "negligible impact" on the species.²²⁵ Of course, a "negligible impact" determination is only as sound as the scientific data upon which it is based. While some level of uncertainty is unavoidable, requiring the determination to be scientifically defensible should prevent adverse impacts on the survival and recovery of endangered and threatened species. Nevertheless, the uncertainty inherent to these types of determinations points to the critical need for continued scientific study of those endangered and threatened species for which some incidental take may be authorized.

V. MARINE MAMMALS AND THE MAGNUSON FISHERY CONSERVATION AND MANAGEMENT ACT

To date, the conflict between marine mammals and commercial fishing operations has been addressed principally through the MMPA and, to a lesser extent, through the Endangered Species Act. As the harbor porpoise issue illustrates, however, the Magnuson Fishery Conservation and Management Act may soon be playing a larger role in the regulatory approach to marine mammal protection.

The incidental taking of Gulf of Maine harbor porpoises will likely be subject to regulation under the MFCMA soon. While the 1988 MMPA amendments granted an exemption to commercial fishing from the moratorium on takings, those amendments also specifically granted authority to the Secretary of Commerce to request the

porpoises, if they are determined to be a threatened species under the ESA, however, would not be required. See 58 Fed. Reg., *supra* note 7, at 3117. This is because, under the ESA, the prohibition against the taking of endangered species, 16 U.S.C. § 1538(a)(1)(B) (1988), does not apply to threatened species unless a prohibition is specifically adopted through regulations. ESA, 16 U.S.C. § 1533(d) (1988). In the proposed listing of the harbor porpoise as a threatened species under the ESA, NMFS proposed certain prohibitions applicable to endangered species, but NMFS also specifically proposed to allow the taking of harbor porpoise incidental to commercial fishing operations if the incidental takings are consistent with the proposed bycatch reduction program. 58 Fed. Reg., *supra* note 7, at 3117.

223. MMPA, 16 U.S.C. § 1371(a)(5)(A) (1988) (small-take exemption for activities other than commercial fishing).

224. The ESA requires that takings of endangered or threatened marine mammal species be authorized under the MMPA, 16 U.S.C. § 1371(a)(5) (1988), which currently allows only for small takes of marine mammals incidental to activities other than commercial fishing. NMFS has proposed to amend this section to allow for taking by commercial fishermen and to delete 16 U.S.C. § 1371(a)(4), which in its current form refers to small takes in the course of commercial fishing operations. NMFS, PROPOSED REGIME, *supra* note 1, at 14, 54-55. See also *supra* notes 159-60 and accompanying text.

225. See *supra* note 160 for a definition of "negligible impact."

appropriate regional fishery management council to take action within its authority as necessary to mitigate adverse impacts on a marine mammal population stock.²²⁶ In 1992, NMFS requested the New England Fishery Management Council to take action under the MFCMA to reduce harbor porpoise mortality in the Gulf of Maine.²²⁷ Currently, the Council is developing proposed regulations as part of an amendment to its groundfish plan to reduce harbor porpoise mortality incidental to gillnetting.²²⁸

The request by NMFS that the Council act to reduce porpoise mortality raises the issue of the relationship between the MFCMA and the MMPA. The primary goal of the MFCMA is to promote domestic fishing under sound conservation and management principles,²²⁹ while the principal goal of the MMPA is to protect marine mammals commensurate with sound policies of resource management.²³⁰ It is therefore not surprising that these disparate goals clash.²³¹

While the principal goals of the MMPA and the MFCMA are very different, each statute makes reference to concerns within the ambit of the other. For example, the MMPA states that the primary objective of marine mammal management should be to maintain the health and stability of the marine ecosystem, and whenever consistent with this primary objective, the goal shall be to obtain an optimum sustainable population.²³² By using this language, Congress recognized the larger ecosystem in which marine mammals are an important component. The MMPA is also clear in allowing for some accommodation of commercial fishing interests. The legislative history of the MMPA clearly shows congressional concern for the continued viability of commercial fishing in the United States.²³³ In fact, the 1988 interim exemption to the moratorium for commercial fishing represented the result of a compromise struck between environmental groups and fishing interests in order to allow commercial fishing to continue.²³⁴

In contrast, the MFCMA makes fewer direct references to marine

226. MMPA, 16 U.S.C. § 1383a(g) (1988).

227. See *supra* note 26 and accompanying text.

228. See *supra* note 27 and accompanying text.

229. See MFCMA, 16 U.S.C. § 1801(b)(3) (1988).

230. See MMPA, 16 U.S.C. § 1361(6) (1988).

231. A thorough examination of the relationship between the MMPA and the MFCMA is beyond the scope of this Comment. For analyses of the relationship between the MMPA and the MFCMA, see James A. R. Nafziger, *The Management of Marine Mammals After the Fisheries Conservation and Management Act*, 14 WIL-
LAMETTE L. J. 153 (1978), and Child & Haley, *supra* note 173.

232. MMPA, 16 U.S.C. § 1361(6) (1988).

233. See *supra* notes 45-64, 92-108, 125-36 and accompanying text for an analysis of the legislative history of the MMPA.

234. See *supra* text accompanying notes 129-31.

mammal concerns. The MFCMA does require that fishery management plans and associated regulations be consistent with other applicable law, including the MMPA.²³⁵ While the MFCMA does not specifically provide for consideration of impacts on marine mammals as a goal, "conservation and management" principles are defined, *inter alia*, as measures "which are designed to assure that . . . irreversible or long-term adverse effects on fishery resources *and the marine environment* are avoided."²³⁶ In some cases, regulations implementing the MFCMA have specifically taken into account marine mammal interests. For example, the fishery management plan guidelines for optimum yield list several factors relevant to determining optimum yield, including ecological factors.²³⁷ One example of an ecological factor is the dependence of marine mammals on a stock of fish.

The interrelationship between the two statutes reflects the fact that fishery resource management and marine mammal management are closely interconnected. The need for holistic ecosystem management is clear.²³⁸ While a single, unified statutory approach to protecting and managing the biological resources of the marine environment is unlikely to be adopted anytime soon, Congress should amend the MFCMA to clarify when a regional fishery management council should consider marine mammal impacts.²³⁹

For example, a regional fishery management council in a fishery management plan and associated regulations should have the authority to require modifications of fishing gear or fishing times in order to minimize the incidental take of marine mammals. Currently, a council has such authority if specifically requested to take action by the Secretary pursuant to the 1988 amendments to the MMPA.²⁴⁰ Action to reduce incidental take of marine mammals

235. MFCMA, 16 U.S.C. § 1853(a)(1)(C) (1988 & Supp. III 1991).

236. *Id.* § 1802(2) (1988) (emphasis added). While "marine environment" is not specifically defined in the MFCMA, amendments in 1990 to the MFCMA on large-scale driftnet fishing provide some insight into its meaning. In § 1826(b)(1) (Supp. III 1991) of the MFCMA, Congress found that "the continued widespread use of large-scale driftnets beyond the exclusive economic zone of any nation is a destructive fishing practice that poses a threat to living marine resources of the world's oceans." Congress defined "living marine resources" to include "fish, mammals, sea turtles, and seabirds and other waterfowl." *Id.* § 1826(h).

237. 50 C.F.R. § 602.11(f)(3) (1992).

238. See NMFS, DRAFT LEIS, *supra* note 2, § 1.43, at 1-30 to 1-32 (discussing ecosystem management but noting that the issue was beyond the scope of the legislative proposal).

239. The current authorization for the MFCMA expires on September 30, 1993. The newly created Subcommittee on Fisheries Management, chaired by Rep. Thomas Manton, has recently begun to conduct public hearings on the reauthorization. See *Magnuson Bill Filed; Hearings Underway*, COMM. FISHERIES NEWS, March 1993, at 27A.

240. The lawful authority for such action by a regional fishery management coun-

would also be lawful where necessary to achieve consistency with other applicable law, including the MMPA.²⁴¹ The requirement of consistency with other applicable law could possibly support regula-

cil derives from express language in the MMPA, 16 U.S.C. § 1383a(g)(3) (1988), authorizing the Secretary to request a regional fishery management council to take action within its authority as necessary to mitigate the adverse impacts of incidental take of marine mammals. Where congressional intent is clear, a reviewing court must give effect to the unambiguously expressed intent of Congress. See *Chevron U.S.A., Inc. v. Natural Resources Defense Council*, 467 U.S. 837, 842-43 (1984); *NLRB v. United Food & Commercial Workers Union*, 484 U.S. 112, 123 (1987).

Any specific action taken by a council in response to a request by the Secretary under § 1383a(g)(3) (1988) of the MMPA also must be within the council's authority under the MFCMA. Under MFCMA, any fishery management plan, and any regulation prepared pursuant to the MFCMA, must be consistent with the seven national standards for fishery conservation and management. These include the following:

- (1) Conservation and management measures shall prevent overfishing while achieving, on a continuing basis, the optimum yield from each fishery for the United States fishing industry.
- (2) Conservation and management measures shall be based upon the best scientific information available.
- (3) To the extent practicable, an individual stock of fish shall be managed as a unit throughout its range, and interrelated stocks of fish shall be managed as a unit or in close coordination.
- (4) Conservation and management measures shall not discriminate between residents of different States. If it becomes necessary to allocate or assign fishing privileges among various United States fishermen, such allocation shall be (A) fair and equitable to all such fishermen; (B) reasonably calculated to promote conservation; and (C) carried out in such manner that no particular individual, corporation, or other entity acquires an excessive share of such privileges.
- (5) Conservation and management measures shall, where practicable, promote efficiency in the utilization of fishery resources; except that no such measure shall have economic allocation as its sole purpose.
- (6) Conservation and management measures shall take into account and allow for variations among, and contingencies in, fisheries, fishery resources, and catches.
- (7) Conservation and management measures shall, where practicable, minimize costs and avoid unnecessary duplication.

MFCMA, 16 U.S.C. § 1851(a) (1988). Consistency of the fishery management plan and associated regulations with the seven national standards would be subject to a deferential standard of review, that is, whether the actions are arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the law. 5 U.S.C. § 706(2)(A) (1988) (as incorporated by MFCMA, 16 U.S.C. § 1855(b)(1)(B) (Supp. III 1991)). See *C & W Fish Co. v. Fox*, 931 F.2d 1556, 1562-64 (D.C. Cir. 1991) (holding that Secretary's conclusion that fishery management plan banning drift gillnets in mackerel fishery complied with MFCMA national standards was adequately supported by the record and was neither arbitrary nor capricious); *Alaska Factory Trawler Ass'n v. Baldrige*, 831 F.2d 1456, 1460 (9th Cir. 1987) (holding that Secretary's decision to adopt Gulf of Alaska groundfish plan was not arbitrary or capricious and the Secretary could reasonably have concluded that the plan did not violate the national standards). (The Secretary of Commerce's name was incorrectly spelled "Baldrige" in the *Alaska Factory Trawler Ass'n* decision; the correct spelling is "Baldrige.")

241. See MFCMA, 16 U.S.C. § 1853(a)(1)(C) (1988 & Supp. III 1991).

tions of gear or fishing areas and times to reduce marine mammal mortalities, as long as such measures are consistent with the goals and mandates of the MMPA. Nevertheless, it is clear that the ambiguities involved with protecting marine mammals under a statute designed primarily to promote fishing are such that Congress should clarify the role of the regional fishery management councils in taking steps to protect marine mammals. Congress should allow councils to take such steps independent of a request from the Secretary. Specifically, Congress should amend the national standards²⁴² for fishery conservation and management contained in the MFCMA to specifically include conservation of species incidentally taken during commercial fishing operations as a factor to be considered in the development and approval of a fishery management plan.

VI. CONCLUSION

The history of marine mammal protection in the United States has continually demonstrated a significant concern for the continued viability of commercial fishing. Like the original MMPA of 1972, as well as amendments to the MMPA since that time, the 1992 legislative proposal by NMFS represents a compromise between the competing interests of marine mammals and commercial fishermen. As such, the 1992 proposal strikes a reasonable balance between protecting marine mammals and accommodating commercial fishing operations. While retaining the MMPA's central principle that populations should be maintained at their optimum sustainable level, the NMFS proposal allows some taking of marine mammals in order to protect the sound utilization of another element of the marine ecosystem—fish. By allowing the incidental take of depleted, endangered, or threatened species under certain circumstances, the proposal further accommodates the interests of commercial fishing. This resource management approach appropriately recognizes that, rather than protect each individual animal, the critical goal should be to prevent adverse impacts on maintaining sustainable populations of these marine mammals.

While the quota system focuses on protection of sustainable population levels of marine mammals, the zero mortality goal retained in the 1992 proposal acts as a counterbalance to keep takings incidental to commercial fishing to a minimum. Understood within the context of the history of the MMPA, the zero goal should not be merely symbolic, nor should it represent a mandate that all takings be eliminated. Rather, the zero mortality goal should be regarded as a mandate requiring NMFS and commercial fishermen to work toward reducing marine mammal mortality to the lowest levels practically

242. See *supra* note 240 for a list of the seven national standards under the MFCMA.

achievable. For the zero goal to work effectively, however, Congress, in reauthorizing the MMPA, should make explicit the factors to be considered by NMFS in moving toward the zero goal. In particular, Congress should make technological and economic considerations part of the balancing process in moving commercial fishermen toward reducing their incidental kill of marine mammals to insignificant levels. Congress also should provide for research on means to reduce or avoid conflicts between marine mammals and commercial fishing operations. In the absence of sufficient research, further progress in reaching toward the zero goal is unlikely.

In addition, Congress also should amend the MFCMA to clarify when fishery management plans should include measures to protect marine mammals. Including conservation of marine mammal species incidentally taken during commercial fishing operations as an element in the fishery management plan process would help to achieve the MMPA's goal to approach zero mortality.

The quota system and zero mortality goal of the 1992 NMFS legislative proposal could have a significant effect on the plight of the Gulf of Maine harbor porpoise, which currently finds itself considered for regulation under the ESA and the MFCMA, as well as the MMPA. The regulatory schemes that emerge will represent a compromise between the extremes of allowing gillnetters to fish unimpeded and totally protecting harbor porpoises. Such a compromise is necessary and appropriate in order to develop a realistic and workable solution.

The tension between marine mammal protection and commercial fishing is evident in the language and history of the MMPA, in the 1992 legislative proposal by NMFS, and in the harbor porpoise bycatch problem. That tension is certain to continue as Congress strives to protect marine mammals while at the same time allowing commercial fishermen to pursue their livelihood. While the balance between marine mammal protection and commercial fishing is not easily found, the goal of finding compromise solutions that strike an appropriate balance is worth the struggle.²⁴³

Mary M. Sauer

243. As this Comment was about to go to press, a group of conservation and fishing groups released a negotiated compromise proposal to address incidental take of marine mammals in the course of commercial fishing operations. CONSERVATION AND FISHING COMMUNITY NEGOTIATED PROPOSAL FOR A MARINE MAMMAL RESEARCH AND CONSERVATION PROGRAM TO BE ENACTED THROUGH THE MARINE MAMMAL PROTECTION ACT REAUTHORIZATION OF 1993 (June 10, 1993) (on file with author) (submitted to Congress by the MMPA Negotiating Group on behalf of 36 groups including, among others, the Animal Protection Institute, Center for Marine Conservation, Maine Gillnetters Association, National Audubon Society, National Fisheries Institute, New England Fishery Management Council, Pacific States Marine Fisheries Commission, The Associated Fisheries of Maine, and World Wildlife Fund). This proposal was intended to offer an alternative to the NMFS proposal, which was sent to Congress in

late 1992, and which was discussed at length in this Comment. While a thorough analysis of the negotiated proposal cannot be undertaken at this point, the proposal's key points are summarized for the purpose of comparison to the NMFS proposal.

Like the 1992 NMFS proposal, the negotiated proposal retains the goal of keeping stocks within their optimum sustainable populations, retains the zero mortality goal, and allows some taking of endangered, threatened, and depleted species. *See id.* at 3, 6. The negotiated proposal set forth three main objectives: (1) "[t]o involve all interested parties early in every aspect of research, conservation, and management," (2) "[t]o reduce immediately the lethal takes of marine mammals from all sources to a level that allows the recovery of stocks," and (3) "[w]ithin ten years, to reduce incidental mortality rates of marine mammals caused by commercial fishing to insignificant levels approaching zero." *Id.* at 4-5.

Under this proposal, incidental take of stocks at their optimum sustainable population levels would be governed by the MMPA process in place before 1988, including the general permit and small-take permit authorizations, rather than by a new regime. *Id.* at 4-5. For those stocks below their optimum sustainable population levels, or for stocks whose status is not known, the proposal recommends that the Secretary issue a general authorization providing for incidental take of marine mammals by commercial fishermen. *Id.* at 5. This represents a major change from the NMFS proposal because taking of marine mammals from these stocks would not be subject to quotas allocated from the potential biological removal calculated for a stock.

The negotiated proposal provides for a system to identify critical and non-critical stocks. *Id.* at 2, 7-8. An advisory conservation team would be convened for each critical stock. *Id.* at 10. The team's immediate task would be to reduce incidental lethal takes to below the calculated removal level for that stock by recommending to the Secretary appropriate mitigation measures. *Id.* at 10-12. (The calculated removal level, or "biological level at which the mammal population sustains itself," *id.* at 3, 7, is similar to the potential biological removal level in the NMFS proposal.) Taking of critical stocks would be governed by the measures in the conservation team's plan as approved by the Secretary. *Id.* at 5. Conservation teams could recommend "[f]ishery-specific lethal take limits" (that is, quotas), but alternatively, teams could also recommend a wide variety of other measures including but not limited to time/area closures, incentive programs for fishermen, voluntary measures, permits, alternative gear techniques, new technologies, education, workshops, and observer coverage. *See id.* at 12. The negotiated proposal also requires conservation teams to develop "benchmarks to measure actual performance against the goal of reducing incidental fishing mortality to an insignificant rate approaching zero within 10 years." *Id.* at 11.

The conservation team approach to reducing take for marine mammal stocks has much potential because it provides for increased flexibility, compared with the NMFS proposal, in developing solutions on a fishery-specific basis. It also provides for benchmarks to be set against which real progress may be measured. Furthermore, the conservation team approach recognizes the considerable benefits to be achieved from regulations built upon consensus.

As stated by the MMPA Negotiating Group, "[t]he content of the proposal is important not only because of the ideas and recommendations contained within the document, but also because of the diversity of perspectives and interests represented by the participants who came together in a good-faith effort to address difficult and often contentious issues that are of common concern." Memorandum from MMPA Negotiating Group, to Interested Parties (June 10, 1993) (on file with author) (transmitting the *Conservation and Fishing Community Final Negotiated Proposal for a Marine Mammal Research and Conservation Program To Be Enacted Through the Marine Mammal Protection Act Reauthorization of 1993*). This coming together of a "diversity of perspectives" offers promise for reaching effective compromise solutions on the future of the MMPA.