Ocean and Coastal Law Journal

Volume 6 | Number 2 Article 3

2001

The Conservation Of Marine Mammals Using A Multi-Party Approach: An Evaluation Of The Take Reduction Team Process

Nina M. Young

THE CONSERVATION OF MARINE MAMMALS USING A MULTI-PARTY APPROACH : AN EVALUATION OF THE TAKE REDUCTION TEAM PROCESS*

*Nina M. Young***

SUMMARY

In 1993, the Center for Marine Conservation (CMC), and other conservation organizations negotiated with the fishing industry to develop a proposal that became the basis for the 1994 amendments to the Marine Mammal Protection Act of 1972 (MMPA).[1] The take reduction team process is a direct outgrowth of that negotiation. Both the fishing industry and conservation community believed it important to create a multi-party negotiation process to devise strategies for eliminating marine mammal entanglements in commercial fishing gear while maintaining the viability of commercial fisheries. Thus, the mediated take reduction team process was created. Despite difficulties in balancing both the need to reduce marine mammal kills and minimize economic impacts on fishermen, the take reduction team process has successfully produced consensus take

---

* The author gratefully appreciates the assistance of Stephanie Mairs and Kasey Brown in the preparation of this manuscript.

** Nina M. Young is the Director of Marine Wildlife Conservation and has worked at the Center for Marine Conservation for more than eleven years. In that position, Ms. Young leads the Center's efforts to conserve great whales, dolphins, pinnipeds, and sea otters. She was involved in the implementation of the 1988 amendments to the MMPA, the negotiation with the fishing community in 1993, and the development of the amendments in the 1994 reauthorization of the MMPA. CMC has been represented on all five take reduction teams—four of which Ms. Young has been CMC's representative. Ms. Young holds an M.S. degree (Major: Physiology; Minor: Zoology and Veterinary Science) from the University of Florida.

1. Nina M. Young & Suzanne Iudicello, *Blueprint for Whale Conservation: Implementing the Marine Mammal Protection Act*, 3 OCEAN & COASTAL L.J. 149, 175–182 (1997) (discussing the implementation history of the MMPA's incidental take provisions).

reduction plans in three of the five take reduction teams, and has succeeded in establishing better working relationships among the different interest groups. Dialogue that would otherwise not have taken place has resulted in the development of creative research recommendations and strategies to reduce marine mammal entanglement in fishing gear. Facilitators have been essential to the success of the negotiation process; they helped to articulate and address participant concerns, moving participants from posturing to substance in a timely manner.

In its evolution, the negotiation process clearly had its growing pains. Initially every take reduction team has to overcome obstacles such as lack of familiarity, acceptance and trust in order to develop a take reduction plan. The dynamics of each take reduction team was unique. The Gulf of Maine Harbor Porpoise Take Reduction Team (GOMTRT), for example, had a lengthy history together in its previous incarnation as the Harbor Porpoise Working Group; moreover, its actions were intimately tied to the New England Fishery Management Council's (NEFMC) ever-changing actions to recover groundfish stocks. While there was familiarity, the GOMTRT's plan was often overtaken by the actions of the NEFMC. In contrast, some members of the Atlantic Offshore Cetacean Take Reduction Team (AOCTRT) were from competing fisheries, a situation that generated suspicion and a general unwillingness to accept the basic premises, let alone the outcome resulting from the group process. Moreover, the debate was colored by the fact that National Marine Fisheries Service (NMFS) had closed at least one of the fisheries represented on the team and there were ongoing, pre-existing gear conflicts among the commercial fishing groups that had little to do with marine mammal conflicts. The Atlantic Large Whale Take Reduction Team (ALWTRT) was unable to reach a consensus due to insufficient negotiation time and the added pressures originating from an ongoing lawsuit on this issue. Yet, throughout all of this the system worked.

The facilitators were essential in helping players get past these issues and move through posturing to substance. Those teams that moved quickly through their concerns about the quality of the science—the population and bycatch estimates and the calculation of Potential Biological Removal (PBR)—and into the development of take reduction strategies faired best in this process. Issues of team size and time available to negotiate were also critical. Smaller teams facilitated greater discussion and a sense that all participants could freely express their opinions. While the MMPA's six-month deadline pushed the teams to achieve consensus, participants cited, in two cases, it did not allow sufficient time for consensus to be reached. The process would benefit from two additional meetings—one to review the final plan before it is submitted to NMFS and another during the

comment period to allow the team to provide feedback to NMFS. In all situations the process provided a framework for dialogue among disparate groups—a dialogue that often resulted in creative research recommendations and strategies to reduce marine mammal entanglement in fishing gear.

Adding to the difficulties of team dynamics is the large shift in emphasis from adversarial advocacy to a participatory planning process. The take reduction team process represents a new way of doing business for NMFS, fishermen, and conservation groups. NMFS is struggling with the implementation schedule mandated within the statutory timeframes; incorporation of take reduction plan recommendations into federal regulations, either under the authority of MMPA or through fishery management plans developed by the regional councils under the authority of the Magnuson-Stevens Fishery and Conservation Management Act[2]; the role of the take reduction team in the development of the regulations; and its level of commitment to this process and accountability to the take reduction team. NMFS has yet to realize that consensus is hard-won at all levels. In addition, NMFS has failed to recognize that this multi-party take reduction negotiation process is equally as important to participants as the fishery management council process. Consequently, if the take reduction team process is to be successful, NMFS must also adopt the view that this process is a high priority partnership among itself and all of the various stakeholders. It must expect no less from itself than any of the other active participants. NMFS representatives to the take reduction team must have the ability to both evaluate the consensus from a legal perspective and commit the agency to that consensus. This means that the Regional Administrator, a representative from the National Oceanic and Atmospheric Administration's (NOAA) Office of General Counsel, and a NMFS enforcement officer must be present at crucial times in the negotiating process. In order to prevent the entire process from being undermined, the NMFS representative cannot be passive, but instead must advise the team as to whether the consensus recommendation can be easily implemented and enforced, and whether the research recommendations are achievable. Otherwise team members may conclude the negotiation process and leave with false or unrealistic expectations, a result that undermines the process. To further meet its commitments, NMFS must also implement the take reduction plan within the statutory timeframes set out in the MMPA, provide the necessary resources to achieve adequate levels of observer coverage, and carry out the research recommendations essential to inform take reduction strategies. These concerns highlight the need for greater

2. 16 U.S.C. § 1853 (West 1988 & Supp. 1997).

resources to implement the take reduction plans but also a greater commitment on the part of NMFS to the process and the plans.

Finally, although the take reduction plans have been in force for slightly over a year and some are showing some signs of success, it is too soon to assess the efficacy of the team consensus. Furthermore, when comparing the timetables for implementation of the take reduction plans to the timing of assessment of progress toward reducing takes to below PBR and achieving progress toward the zero mortality rate goal, it is clear that NMFS may not be able to fully evaluate progress under this regime at that time. Nevertheless, most participants look favorably upon the take reduction team process as an alternative to the traditional adversarial notice and comment rulemaking procedures.

I. INTRODUCTION

The Marine Mammal Protection Act of 1972 (MMPA) is the cornerstone of the United States' efforts to conserve and recover marine mammals.[3] Since its enactment, the MMPA has prohibited the take of marine mammals incidental to commercial fishing unless authorized by an incidental take permit or a small take exemption.[4] However, more than twenty-five years after the MMPA's enactment, marine mammals are still incidentally drowned in commercial fishing gear.[5] The regulation of such operations to protect marine mammals has become a critical, and often volatile, issue.[6]

In 1988, incidental take of marine mammals in commercial fishing operations reached its climax when it became apparent that NMFS was unable to undertake the necessary determinations to authorize takes for affected marine mammal stocks. In *Kokechik Fishermen's Association v. Secretary of Commerce,*[7] the court held that the permit system was inherently flawed because there was insufficient information to determine with any degree of certainty that incidental takes would not harm marine mammal stocks. Diminishing marine resources, insufficient federal funds, and inadequate information on marine mammal/commercial fishery interactions forced the fishing industry and conservationists to develop

---

3. 16 U.S.C. §§ 1361–1421(h) (1994).

4. *Id.* §§ 1371(a)(2), (3)(A) and 1374(a)–(c).

5. NINA M. YOUNG ET AL., CENTER FOR MARINE CONSERVATION, THE INCIDENTAL CAPTURE OF MARINE MAMMALS IN U.S. FISHERIES, PROBLEMS AND SOLUTIONS 13 (Rose Bierce and Shari Evans eds., 1993).

6. *See* Young & Iudicello, *supra* note 1, at 175–82.

7. 839 F.2d 795 (D.C. Cir. 1988), *cert. denied*, 488 U.S. 1004 (1989).

creative initiatives to conserve marine mammals, marine habitats, and species diversity, while still promoting economically viable fisheries. The first negotiation yielded a proposal that would enable fishermen to go fishing, yet minimize the impact of that activity on marine mammals.[8] It became the basis for the MMPA amendments adopted by Congress in 1988, which established an information gathering and an interim exemption program for commercial fisheries.[9]

Again in 1993, after analysis of the interim exemption program and NMFS' proposed long-term regime to authorize incidental takes in commercial fisheries,[10] the environmental community and the fishing industry held a second series of negotiations.[11] The participants jointly developed a series of amendments that resulted in sweeping changes to the MMPA's provisions to govern the incidental take of marine mammals in commercial fisheries. Congress adopted these amendments in 1994.[12] The amendments codified the informal negotiation process in the form of take reduction teams;[13] consequently nearly six years into the implementation of these amendments, representatives of the fishing industry, conservation community, and federal and state agencies continue to work through these teams to develop measures to reduce the incidental mortality and serious injury of marine mammals in commercial fisheries.

This paper evaluates the effectiveness of the take reduction team process, and whether this type of cooperative approach can result in sound management strategies to reduce marine mammal incidental mortality and serious injury.

II. BACKGROUND ON THE MARINE MAMMAL PROTECTION ACT

A. Purpose and Objective of the MMPA

The MMPA is perhaps the most comprehensive piece of marine mammal conservation and management legislation in the world.[14] Passed

---

8. *See* Young & Iudicello, *supra* note 1, at 175–82.

9. *Id.*

10. 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 2.0, 2.1 (1991) [hereinafter DLEIS].

11. *See* Young & Iudicello, *supra* note 1, at 175–87.

12. *Id.*

13. *Id.*

14. Natasha Atkins, *Summary of National Laws and International Agreements Affecting River Dolphins, in* BIOLOGY AND CONSERVATION OF THE RIVER DOLPHINS, 3

to rectify the consequences of "man's impact upon marine mammals, which has ranged from what might be termed malign neglect to virtual genocide,"[15] the Act, enforced by the U.S. Departments of Commerce and Interior, governs every interaction within U.S. jurisdiction between an individual and a marine mammal.[16] Its purpose is to protect marine mammal species of "great international significance, esthetic and recreational as well as economic."[17] The species included under the Act are whales, dolphins, porpoises, seals, sea lions, walruses, sea otters, manatees, dugongs, and polar bears.[18]

B. The MMPA's Moratorium on Taking

Under the MMPA, marine mammal species "should be protected and encouraged to develop to the greatest extent feasible commensurate with sound policies of resource management."[19] Another goal is to "maintain the health and stability of the marine ecosystem."[20] Congress also mandated that whenever consistent with these goals, marine mammals are to be protected and managed so that they do not "cease to be a significant functioning element in the ecosystem of which they are a part,"[21] or "diminish below their optimum sustainable population [(OSP)]."[22] A

OCCASIONAL PAPERS OF THE IUCN SPECIES SURVIVAL COMMISSION (SSC) 168, 173 (1987); *see also,* Nina M. Young, *Is the Marine Mammal Protection Act a Marketable Commodity to Resolve the Over-exploitation of Marine Mammals in Commercial Fisheries?* 23 PROC. INT'L ASS'N FOR AQUATIC ANIMAL MEDICINE 72 (1992).

15. H.R. REP. NO. 707-92, at 11 (1971) (reporting on H.R. 10420, proposed legislation for marine mammal protection).

16. *Id.*

17. 16 U.S.C. § 1361(6).

18. 16 U.S.C. § 1362(6). "The term 'marine mammal' means any mammal which (A) is morphologically adapted to the marine environment (including sea otters and members of the orders Sirenia, Pinnipedia and Cetacea), or (B) primarily inhabits the marine environment (such as the polar bear); and, for the purposes of this chapter, includes any part of any such marine mammal, including its raw, dressed, or dyed fur or skin." *Id.*

19. *Id.* § 1361(6).

20. *Id.*

21. *Id.* § 1361(2).

22. 16 U.S.C. § 136(2). "The term 'optimum sustainable population' means, with respect to any population stock, the number of animals that 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." 16 U.S.C. § 1362(9). The regulations define OSP as 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. 50 C.F.R. § 216.3 (2000). Maximum net productivity is defined as the greatest net annual increment in population numbers or biomass resulting from additions to the population due to

species or population stock that is determined to be below its OSP level, or is listed as endangered or threatened under the ESA, is designated as "depleted" under the MMPA.[23] The MMPA also states 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."[24] For these reasons, Congress sought to achieve broad protection for marine mammals through the MMPA by establishing a moratorium on importation and taking.[25]

III. IMPLEMENTATION OF THE 1994 AMENDMENTS TO THE MMPA: TAKE REDUCTION TEAMS AND TAKE REDUCTION PLANS

The 1994 amendments to the MMPA set out a new regime to govern incidental takes of marine mammals during commercial fishing operations. The underlying premise of these amendments was that decisions on allowable takes should be based on assessments of the status of the marine mammal stock and conducted within certain biological limits that protect the marine mammal stocks. The major elements of the 1994 amendments added three new sections to the MMPA,[26] including: (1) requirements for stock assessments, status determinations and calculation of the stock's potential biological removal level (PBR);[27] (2) requirements for the

---

reproduction and/or growth less losses due to natural mortality."). *Id.*

23. 16 U.S.C. § 1362(1) "The term 'depletion' or 'depleted' means any case in which (A) the Secretary, after consultation with the Marine Mammal Commission and the Committee of Scientific Advisors on Marine Mammals established under subchapter III of this chapter, determines that a species or population stock is below its optimum sustainable population; (B) a State, to which authority for the conservation and management of a species or population stock is transferred under section 1379 of this title, determines that such species or stock is below its optimum sustainable population; or (C) a species or population stock is listed as an endangered species or a threatened species under the Endangered Species Act of 1973." *Id.*

24. *Id.* § 1371(a)(2). *See* Mary M. Sauer, *Balancing Marine Mammal Protection Against Commercial Fishing: The Zero Mortality Goal, Quotas, and the Gulf of Maine Harbor Porpoise,* 45 ME. L. REV. 419 (1993) (presenting a more detailed review of the legislative history of the zero mortality rate goal).

25. 16 U.S.C. § 1371. "The term 'take' means to harass, hunt, capture, or kill, or attempt to harass, hunt, capture or kill any marine mammal." *Id.* § 1362(13).

26. *See* Young and Iudicello, *supra* note 1, at 175–82 (discussing the implementation history of the MMPA's incidental take provisions and a section-by-section discussion of the 1994 amendments).

27. Potential Biological Removal (PBR) level is calculated by: $(N_{min})(R_{mnpl})(F_r)$ where N_{min} is the minimum stock abundance, R_{mnpl} is the rate of increase at the maximum net productivity level, and F_r is a recovery factor. Default values for unknown R_{mnpl} are 6% for pinnipeds and sea otters and 2% for cetaceans and manatees. F_r is 1.0 for stocks at OSP, 0.5 for depleted and threatened stocks and stocks of unknown status, and 0.1 for endangered

commercial fishing industry, modeled largely after the interim exemption and contained in new section 118; and (3) provisions for a process whereby the states and NMFS can address pinniped and fishery resource interactions, contained in new section 120.[28] The incidental take provisions of section 118 also include provisions for vessel registration, observer coverage, emergency regulatory authority, the zero mortality rate goal, convening of incidental take reduction teams and preparation of take reduction plans, and prohibition of intentional marine mammal killing by fishers.[29] This analysis will focus on take reduction team process and the development of take reduction plans.

The MMPA requires that a take reduction plan be developed for each strategic marine mammal stock[30] that interacts with a fishery that frequently or occasionally kills or seriously injures marine mammals.[31] Take reduction plans, among other things, are to include team-recommended regulatory and voluntary measures designed to reduce incidental mortality and serious injury of marine mammals, and proposed dates for achieving specific objectives.[32] The immediate goal of the take reduction plan for a strategic stock is to reduce incidental mortality and serious injury to levels less than the PBR calculated in the stock assessment within six months of implementation.[33] The long-term goal of the plan is to reduce incidental mortality and serious injury to insignificant levels approaching a zero mortality rate within five years, taking into account the economics of the fishery, existing technology, and applicable state or regional fishery management plans.[34] Take reduction team members are drawn from

---

stocks. Recovery factors are in relation to current carrying capacity. The PBR value is the maximum number of marine mammals that can be removed (killed or injured) from a stock by all forms of take (exclusive of natural mortalities) while still ensuring the recovery of the stock to allow it to reach its optimum sustainable population level. 16 U.S.C. § 1362(20).

28. *See* Nina M. Young, et al., *At Point Blank Range: The Genesis and Implementation of the Lethal Removal Provisions Under the Marine Mammal Protection Act*, 5 OCEAN & COASTAL L.J. 1 (2000) (discussing the implementation history of MMPA's lethal take provisions).

29. 16 U.S.C. § 1387.

30. *Id.* § 1362(19) (defining a strategic stock as: (1) one for which the level of direct human-caused mortality exceeds the PBR; (2) which is declining and likely to be listed as a threatened species under the ESA within the foreseeable future; or (3) which is already listed as threatened or endangered under the ESA or designated as depleted under the MMPA).

31. Subsection (f) sets out requirements for the development of take reduction plans to "assist in the recovery or prevent the depletion of each strategic stock which interacts with a [listed] commercial fishery." *Id.* § 1387(f)(1).

32. *Id.* § 1387(f)(4).

33. *Id.* § 1386(f)(2).

34. *Id.* § 1387(f)(2).

federal agencies, coastal states, regional fishery management councils, interstate fisheries commissions, academic and scientific organizations, environmental groups, commercial and recreational fisheries groups, Alaska Native or Indian tribal organizations, and others deemed appropriate.[35] Take reduction plans for stocks listed as endangered are to be consistent with ESA recovery plans.[36]

To date, NMFS has convened five take reduction teams: (1) Gulf of Maine Harbor Porpoise Take Reduction Team (GOMTRT), (2) Mid-Atlantic Harbor Porpoise Take Reduction Team (MATRT), (3) Pacific Offshore Cetacean Take Reduction Team (POCTRT), (4) Atlantic Offshore Cetacean Take Reduction Team (AOCTRT), and (5) the Atlantic Large Baleen Whale Take Reduction Team (ALWTRT). All of these teams have completed and submitted draft take reduction plans to NMFS. This paper reviews the contents of these plans, the negotiated process to develop them, and NMFS implementation.

A. Gulf of Maine Harbor Porpoise Take Reduction Team (GOMTRT)

1. Background on Harbor Porpoise Take in the Gulf of Maine

The incidental catch of harbor porpoise in the Gulf of Maine multispecies sink gillnet fishery has been previously documented.[37] Pursuant to both the 1988 and 1994 MMPA amendments, NMFS classified the Gulf of Maine sink gillnet fishery as Category I, which denotes that this fishery has "frequent incidental takes of marine mammals."[38] Category I fishers are obligated, when requested by NMFS, to take observers on fishing trips.[39] Observers in this fishery documented the historical catch of harbor porpoise incidental to the Gulf of Maine sink gillnet fishery:[40] 2,900 individuals in 1990, 2,000 in 1991, 1,200 in 1992, 1,400 in 1993, 2,100 in 1994, 1,400 in 1995, 1,200 in 1996, and 782 in 1997.[41] In the 1995 harbor porpoise stock

---

35. *Id.* § 1387(f)(6)(C).

36. *Id.* § 1387(f)(11).

37. Taking of Marine Mammal Incidental to Commercial fishing Operations; Interim Exemption for Commercial Fisheries, 54 Fed. Reg. 16,072, 16,078 (Apr. 20, 1989) [hereinafter Taking of Marine Mammals]; Final List of Fisheries for 1996, 60 Fed. Reg. 67,064, 67,068 (Dec. 28, 1995).

38. *See* Taking of Marine Mammals, *supra* note 37.

39. 16 U.S.C. § 1387(d)(2).

40. GULF OF MAINE/BAY OF FUNDY HARBOR PORPOISE TAKE REDUCTION TEAM TAKE REDUCTION PLAN at 10 (Aug. 7, 1996) [hereinafter GULF OF MAINE TAKE REDUCTION PLAN] (describing the Gulf of Maine sink gillnet fishery).

41. NATIONAL MARINE FISHERIES SERVICE, NOAA TECHNICAL MEMORANDUM, 1998

assessment, NMFS estimated the mean stock size at 54,300 animals and established a PBR level for this stock of 483[42] harbor porpoise.[43] Harbor porpoise are a strategic stock because the level of mortality in the fishery greatly exceeds PBR.[44]

2. The Harbor Porpoise Take Reduction Team and Plan

Because mortality exceeded PBR, NMFS established a take reduction team pursuant to section 118(f) of the MMPA.[45] The GOMTRT was unique, in that there had been a history of efforts to define and reduce the level of incidental take of harbor porpoise. Members from a group previously known as the Harbor Porpoise Working Group[46] were asked to participate in the take reduction team. They had worked with the NEFMC in the past, under the multispecies fishery management plan, to define and reduce levels of incidental take of harbor porpoise. Unfortunately, those conservation efforts failed, as evidenced by bycatch estimates, which remained over 1,200 animals at the time the GOMTRT was convened.[47]

MARINE MAMMAL STOCK ASSESSMENTS (U.S. PACIFIC, ATLANTIC AND GULF OF MEXICO) (1998); *see also* MARINE MAMMAL COMMISSION, 1999 ANNUAL REPORT TO CONGRESS 37 (2000) [hereinafter 1999 MMC Report].

42. The 1994 stock assessment estimated the mean stock size at 47,500 and established a PBR of 403 animals. GULF OF MAINE TAKE REDUCTION PLAN, *supra* note 40, at 4, 6; NOAA TECHNICAL MEMORANDUM, 1995 MARINE MAMMAL STOCK ASSESSMENTS (U.S. PACIFIC, ATLANTIC AND GULF OF MEXICO) (1995).

43. The original PBR for this stock was 403 animals according to the 1995 stock assessment; it was later revised to 483 animals. Marine Mammals, 62 Fed. Reg. 3005, 3006 (Jan. 21, 1997).

44. Marine Mammal Stock Assessment Report, 60 Fed. Reg. 52,008 (Oct. 4, 1995); *see* Threatened Fish and Wildlife; Listing of the Gulf of Maine Population of Harbor Porpoise as Threatened Under the Endangered Species Act (ESA) 58 Fed. Reg. 3108 (Jan. 7, 1993) [hereinafter Gulf of Maine Harbor Porpoise].

45. 16 U.S.C. § 1387(f).

46. In 1989, fishers, environmentalists, and scientists formed the Harbor Porpoise Working Group. The purpose of the group was to define the extent of the harbor porpoise/gillnet interaction problem and to identify solutions that would adequately protect harbor porpoise with minimal impacts on the fishery.

47. Gulf of Maine Take Reduction Plan, *supra* note 40, at 7; *see also,* Sonja V. Fordham, *New England Groundfish: From Glory to Grief, A Portrait of America's Most Devastated Fishery,* CENTER FOR MARINE CONSERVATION 71 (1996) (discussing the history of harbor porpoise take reduction efforts); Gulf of Maine Harbor Porpoise, *supra* note 44, at 3108 (discussing the NEFMC's harbor porpoise bycatch mitigation measures adopted under the framework adjustment to Amendment 5 of the Multispecies Fishery Management Plan); Northeast Multispecies Fishery, 59 Fed. Reg. 26,972 (May 25, 1994) (instituting time and area closures contained in Framework Adjustment 4 to the Multispecies Fishery Management Plan for sink gillnet gear as a final rule); Northeast Multispecies Fishery;

The GOMTRT was convened in February 1996.[48] The GOMTRT's goal was to develop a consensus take reduction plan that contained measures the team thought likely to reduce the incidental mortality of harbor porpoise in sink gillnets to PBR within six months of the plan's implementation.[49] The GOMTRT met five times between February and July 1996 and submitted a consensus draft plan on August 8, 1996,[50] within the six-month timeline stipulated in the MMPA.[51] The core management plan focused on bycatch in waters from Maine to Rhode Island and proposed to reduce harbor porpoise bycatch by requiring a combination of pinger (acoustic devices designed to warn cetaceans of the presence of a net) use and the application of two types of time/area closures; one in which fishing is prohibited altogether and the other in which fishing is permitted only when nets are equipped with pingers.[52] To the extent possible, the plan incorporated the NEFMC harbor porpoise and groundfish closures to limit the additional regulatory burden placed on the gillnet fishery.[53] The agreement was also contingent on a rolling six-month evaluation of the plan, a pinger experiment conducted in the mid-coast area in spring of 1997 (modeled after a 1994 experiment[54] with a bycatch cap of 70 harbor porpoise), and investigations into the potential habituation and displacement effects of pingers on harbor porpoise and their effects on other marine life.[55] Finally, the plan prescribed other measures, mandating cooperation between fishermen and researchers to estimate gillnet fleet effort; undertaking outreach, training and certification activities; establishing guidelines for enforcement; initiating greater cooperation with Canada; and included other provisions to strengthen the potential for successfully meeting plan goals and objectives.[56]

Framework Adjustment 12, 60 Fed. Reg. 55,207 (Oct. 30, 1995) (expanding the Framework 4 closures).

48. The GOMTRT included representatives of the NE multispecies sink gillnet fishery, NMFS, state marine resource managers, NEFMC, environmental organizations, and academic and scientific organizations. Taking of Marine Mammals Incidental to Commercial Fishing Operations; Harbor Porpoise Take Reduction Plan Regulations, 63 Fed. Reg. 66,464, 66,465 (Dec. 2, 1998) [hereinafter December TRP Regulations].

49. 16 U.S.C. § 1387(f)(5)(A).

50. December TRP Regulations, *supra* note 48, at 66,465.

51. 16 U.S.C. § 1387(f)(7)(A)(i).

52. GULF OF MAINE TAKE REDUCTION PLAN, *supra* note 40, at 11–12.

53. *Id.* at 11.

54. Scott D. Kraus et al., *Acoustic Alarms Reduce Porpoise Mortality*, 388 NATURE 525 (1997).

55. GULF OF MAINE TAKE REDUCTION PLAN, *supra* note 40, at 11–12.

56. *Id.* at 11–28.

Although the MMPA requires that NMFS publish the proposed take reduction plan within 60 days of draft submission (October 7, 1996),[57] the agency did not publish the plan for over one year (August 13, 1997).[58] When the take reduction plan was finally published as a proposed rule for public comment, NMFS had modified it for consistency with the NEFMC Framework Adjustment 19[59] to the New England Multispecies Fishery Management Plan. This action resulted in modifications to the plan's groundfish and harbor porpoise closures that did not match the consensus in the take reduction team negotiation process.[60]

Meanwhile, during 1996 the NEFMC implemented a plan similar to the proposed harbor porpoise take reduction plan, including requirements for area closures and pinger use on gillnets. In December 1997, the GOMTRT reviewed the bycatch data presented by NMFS,[61] and agreed that the proposed take reduction plan, as published, would not reduce mortality below PBR.[62] NMFS's data clearly showed that under the NEFMC plan, overall bycatch levels remained unchanged. As harbor porpoise mortality dropped in some regulated areas, fishing efforts shifted and increased offshore in non-regulated areas, causing bycatch to increase in those areas. The GOMTRT agreed on a number of additional measures to reduce bycatch and sent a report to NMFS on January 14, 1998.[63] In formulating these measures, the GOMTRT evaluated potential changes being considered by the NEFMC to Framework 25 of the New England Multispecies Fishery Management Plan, including additional closures for the protection of severely depleted groundfish, which partially overlapped the timing of existing marine mammal closures.[64] The GOMTRT ultimately recommended expanding closure and pinger requirements.[65]

---

57. 16 U.S.C. § 1387(f)(7)(B)(i).

58. December TRP Regulations, *supra* note 48, at 66,465.

59. Fisheries of the Northeastern United States: Northeast Multispecies Fishery; Framework Adjustment 19, 61 Fed. Reg. 55,774 (Oct. 29, 1996).

60. Taking of Marine Mammals Incidental to Commercial Fishing Operations; Gulf of Maine Harbor Porpoise Take Reduction Plan Regulations, 62 Fed. Reg. 43,302 (Aug. 13, 1997) [hereinafter Harbor Porpoise Take Reduction].

61. December TRP Regulations, *supra* note 48, at 66,465.

62. *Id.*

63. *Id.*

64. *Id.*

65. *Id.* (specifying the closures as: (1) Northeast Closure, Aug. 15-Sept. 13; (2) Cape Cod South, Mar. 1-Mar. 31; (3) Massachusetts Bay, Mar. 1-Mar. 31; (4) Mid-Coast Area, Mar. 24-Apr. 26; (5) Mid-Coast Area, pingers required Sept. 15-Mar.24 and Apr. 26-May 31; (6) Cape Cod South, pingers required Sept.-May; (7) Massachusetts Bay, pingers required Feb. and Apr.; and (8) Offshore Area, pingers required Sept. 1-May 31). *Id.*

By 1998, NMFS had violated every statutory deadline for developing the harbor porpoise take reduction plan and implementing regulations. Moreover, NMFS failed to comply with the MMPA's extended, statutorily mandated date of April 1, 1997, by which time NMFS was to have established a plan that would reduce the take level to less than PBR.[66] Due to the combination of NMFS's internal delays in plan implementation and frequent changes to the New England Multispecies Fishery Management Plan closures to protect depleted groundfish stocks (which affected harbor porpoise bycatch), a situation emerged in mid-1998 in which no adequate take reduction plan was implemented to reduce harbor porpoise mortality. Mortality still numbered over three times the permissible level. Therefore, on August 21, 1998, two years after the original draft take reduction plan was submitted, the Center for Marine Conservation, the Humane Society of the United States, and the International Wildlife Coalition filed suit in U.S. district court to compel NMFS to adopt a final rule to implement a take reduction plan to protect harbor porpoises.[67] The two-count complaint alleged that: (1) NMFS had violated the MMPA by failing to publish a take reduction plan to reduce the incidental mortality and serious injury of harbor porpoise below the PBR, and (2) NMFS had violated the ESA by failing to take final action on its proposed rule to list harbor porpoise as threatened within the prescribed time frame.[68]

The suit did not proceed to court because a settlement was reached. NMFS agreed to publish a final take reduction plan for the Gulf of Maine harbor porpoise by December 1, 1998,[69] provide an update on the status of the research required by the take reduction plan, and provide information on harbor porpoise incidental take levels on a quarterly basis through December 2001.[70] In addition, NMFS was to implement a phase-in program for pingers in the Gulf of Maine and conduct a biological status review of harbor porpoise by March 31, 2000 to determine whether the listing decision should be revisited.[71]

---

66. 16 U.S.C. §§ 1387(f)(5)(A), 1389(j)(2).

67. Plaintiff's Complaint, *Center for Marine Conservation et al. v. Daley et al.* (D. D.C. 1998) (Civ. No. 1:98CV02029 EGS).

68. *Id.* at 3–4.

69. Revised Settlement Agreement at 2, *Center for Marine Conservation et al. v. Daley et al.* (USDC D.C. 1998) (Civ. No. 1:98CV02029 EGS) (order approving settlement signed on May 12, 2000). This final rule was to implement both the Gulf of Maine and the Mid-Atlantic take reduction plans.

70. *Id.* at 2–4.

71. *Id.* at 2–3.

The final rule was published on December 2, 1998[72] and included the following requirements for the Gulf of Maine: (1) Northeast Area, closed August 15 through September 13; (2) Cape Cod South Area, closed March 1 through March 31; (3) Massachusetts Bay Area, closed March 1 through March 31; (4) Mid-Coast Area, pingers required September 15 through May 31; (5) Cape Cod South, pingers required December 1 through February 28/29 and April 1 through May 31; (6) Massachusetts Bay, pingers required December 1 through February 28/29 and April 1 through May 31; (7) Offshore Area, pingers required November 1 through May 31; (8) Cashes Ledge Area, closed February 1 through 28/29.[73]

3. Evaluation of the GOMTRT Process and Plan

In December 1999, the GOMTRT met to evaluate the progress of the take reduction plan. NMFS indicated that the bycatch for the first eight months of 1999 was 227 harbor porpoises (174 porpoises off New England and 53 porpoises off mid-Atlantic coastal states).[74] In the final analyses several takes of harbor porpoise during the fall of 1999 in the Mid-Coast area increased the mortality estimate for the Gulf of Maine, but did not cause it to exceed PBR. In May 2000, NMFS notified the plaintiffs and the GOMTRT that total harbor porpoise bycatch for 1999 for the Northeast sink gillnet and Mid-Atlantic coastal gillnet fisheries was 342 animals—a number less than PBR (483).[75] Therefore, while there were significant reductions in harbor porpoise bycatch, it is still uncertain whether these reductions were attributable to the success of the plan or to the extensive closures for the conservation of groundfish stocks. The author believes the groundfish closures contributed significantly to the reduction in harbor porpoise bycatch. The GOMTRT recommended to NMFS that it: (1) monitor progress toward PBR, (2) continue the research called for in the initial take reduction plan, (3) undertake the recommendations in the GOMTRT's initial plan regarding developing mechanisms to improve the measure of effort, (4) devise an enforcement plan, (5) undertake a retrospective analysis of pinger data to evaluate different methods to estimate bycatch, (6) support and develop a study into acoustically

72. December TRP Regulations, *supra* note 48, at 66,466.

73. *Id.*

74 1999 MMC Report, *supra* note 41, at 41.

75. Letter from Patricia A. Kurkal, Regional Administrator, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, to Nina Young, Director of Marine Wildlife Conservation, Center for Marine Conservation (May 31, 2000) (on file with *Ocean & Coastal Law Journal*) [hereinafter Kurkal letter].

reflective fishing gear, (7) conduct experiments to evaluate the effectiveness of pingers at a various frequencies, (8) conduct random checks to determine whether pingers are functioning properly, (9) check whether pingers are working properly when a take occurs in a pingered net, (10) investigate other mechanisms to reduce bycatch to the zero mortality rate goal, and (11) monitor NEFMC deliberations to assess the impact of their actions on harbor porpoise take reduction measures.[76]

During the initial negotiations, there was lengthy debate over the adequacy of the bycatch and population abundance estimates. As noted, the GOMTRT recommended several research strategies to address this concern.[77] Once the members of the fishing industry generally accepted the validity of available data, the GOMTRT was able to achieve consensus by using a spreadsheet analysis—this proved to be a critical tool that helped the group arrive at consensus.[78] The analysis allowed the team to estimate bycatch reduction based on a formula that assigned pinger effectiveness levels to different times and areas where bycatch occurred, based on previous pinger experiments and bycatch estimates.[79] The GOMTRT then closed areas with peak bycatch and cushioned the closure period at both starting and ending points with pinger-use requirements for the months on either side of the closure.[80] This mechanism provided a clear means by which to evaluate the effects of closure and pinger use.

NMFS's failure to implement the consensus plan was perhaps the greatest downfall in the process. Despite the questioning of every scientific estimate by the team members, including PBR, population abundance, bycatch, and effort, the GOMTRT eventually overcame these concerns to achieve consensus on a plan. NMFS violated the team's faith in the process by failing to implement the plan within the statutory timeframes. Consequently, the consensus take reduction plan was overtaken by the NEFMC actions to conserve harbor porpoise and depleted groundfish stocks. This resulted in two changes to the original consensus plan, one generated by the GOMTRT to the original proposed rule in 1997[81] and the other adopted at NMFS's discretion to the 1998 proposed rule.[82] These actions, especially the latter, generally undermined the GOMTRT's plan

---

76. RESOLVE, GULF OF MAINE HARBOR PORPOISE TAKE REDUCTION TEAM, FINAL MEETING SUMMARY 15 (1999).

77. GULF OF MAINE TAKE REDUCTION PLAN, *supra* note 40, at 22–23.

78. *Id.* at 14–15.

79. *Id.*

80. *Id.*

81. Harbor Porpoise Take Reduction, *supra* note 60, at 43,302. December TRP Regulations, *supra* note 48, at 66,465.

82. December TRP Regulations, *supra* note 48, at 66,464.

and efforts. Moreover, the disparity between GOMTRT and NEFMC policies and action contributed to the flawed implementation of the plan. Even though the NEFMC has several representatives on the GOMTRT, the team found that there remains a general lack of co-ordination between these two bodies, so much so, that actions taken under various FMPs threaten the conservation efforts of the GOMTRT and its plan.

Additionally, the process was further marred by the lawsuit. Because of NMFS's failure to comply with the statutory timeframes of the MMPA, the conservation groups that had participated on the GOMTRT were forced to sue NMFS to implement the plan. Even though the lawsuit contested only NMFS's failure to meet the MMPA deadlines for implementation and not the adequacy of the plan itself, the suit divided the plaintiffs from members of the GOMTRT, who objected to the suit. This split was due, in part, to erroneous beliefs held by some GOMTRT members that the lawsuit resulted in changes to the plan, and therefore, the plaintiffs had violated the consensus agreement.

Finally, while the 1999 harbor porpoise bycatch is now believed to be below PBR. NMFS and the GOMTRT cannot, with any certainty, attribute this success to the take reduction plan. In fact, this reduction is most likely the result of the sweeping closures placed on the Northeast sink gillnet fishery to recover severely depleted groundfish stocks. The author believes that if the NEFMC modifies or removes these closures, harbor porpoise bycatch will likely increase because these closures are not codified as part of the regulations to reduce harbor porpoise bycatch. Consequently, the future of harbor porpoise bycatch efforts is not only uncertain, it remains intimately tied to the actions of the NEFMC.

B. Mid-Atlantic Take Reduction Team (MATRT)

1. Background on Harbor Porpoise Takes in the Mid-Atlantic

In the spring during the early 1990s, harbor porpoise began washing ashore along the Mid-Atlantic coast with net marks and other physical signs of interactions with the commercial fisheries.[83] Beginning in 1995, NMFS placed observers in Mid-Atlantic gillnet vessels. NMFS estimated harbor porpoise bycatch at approximately 103 animals.[84] However, between 1996 and 1998, harbor porpoise bycatch increased to 310 in 1996, 572 in 1997,

83. 1999 MMC Report, *supra* note 41, at 36.
84. *Id.* at 37.

and 446 in 1998, likely due to a combination of increased fishing effort and better observer coverage.[85]

2. The Harbor Porpoise Take Reduction Team and Plan

"In February 1997, NMFS convened the MATRT to address the incidental bycatch of harbor porpoise in Mid-Atlantic gillnet fisheries (from New York through North Carolina)."[86] "The MATRT included representatives of the Mid-Atlantic gillnet fisheries, NMFS, state marine resource managers, the Mid-Atlantic Fishery Management Council (MAFMC), the NEFMC, the Atlantic States Marine Fisheries Commission (ASMFC), environmental organizations, and academic and scientific organizations."[87] The MATRT adopted objectives to determine when and where harbor porpoise were becoming entangled along the Mid-Atlantic and to develop recommendations for reducing bycatch below PBR in conjunction with the GOMTRT.[88] Another objective of the MATRT was to develop recommendations for the collection and analysis of abundance, stock structure, and bycatch data for coastal bottlenose dolphins.[89] "The MATRT submitted a report to NMFS on August 25, 1997, which included both consensus and non-consensus recommendations."[90]

In this report, the MATRT recommended management measures specific to the two predominant coastal gillnet fisheries, the monkfish and dogfish fisheries.[91] It recommended a timeframe for effectiveness from January through April off New Jersey and from February through April off the southern Mid-Atlantic (Delaware, Maryland, Virginia and North Carolina).[92] For the monkfish fishery, the measures that demonstrated the greatest potential for bycatch reduction included: reduced floatline length (≤3,900 ft. or ≤4,800 ft. depending on the location); larger twine size (≥ .90 mm); mesh size (12 in.^{2}); tie downs; and a limit of 80 nets.[93]

For the dogfish fishery, the measures included reduced floatline length (≤3,000 ft. or ≤2,118 ft depending on the location), larger twine size

85. *Id.*

86. December TRP Regulations, *supra* note 48, at 66,465.

87. *Id.*

88. MID-ATLANTIC TAKE REDUCTION TEAM, MANAGEMENT AND RESEARCH RECOMMENDATIONS FOR REDUCING BYCATCH OF HARBOR PORPOISE IN THE MID-ATLANTIC GILLNET FISHERIES (1997) [hereinafter MATRT RECOMMENDATIONS].

89. *Id.* at 6.

90. December TRP Regulations, *supra* note 48, at 66,465.

91. MATRT RECOMMENDATIONS, *supra* note 88, at 1.

92. *Id.* at 1–2.

93. MATRT RECOMMENDATIONS, *supra* note 88, at 1.

(≥.81mm) mesh size (≤6.5 in.), and a 45-net limit.[94] Additionally, the MATRT recommended time/area closures for the monkfish fishery in New Jersey waters from February 15 through March 15 and in the southern Mid-Atlantic as a 20-day block between February and April, chosen by the fishermen.[95] There were, however, no time/area closures for the dogfish fishery.[96]

The MATRT also made recommendations to provide education and outreach opportunities for members of the fishing industry, to improve bycatch estimates, to increase observer coverage, and to evaluate the observer program to ensure that coverage is random and representative.[97] For the Mid-Atlantic coastal bottlenose dolphin, the MATRT recommended five research areas to: "(a) Identify Functionally Discrete Stocks Of Coastal Bottlenose Dolphins; (b) Generate Reliable Population Estimates For Coastal Bottlenose Dolphins; (c) Generate Reliable Estimates Of Fishery-Related Mortality And Injury; (d) Continue And Improve Regional Stranding Networks; [and] (e) Characterize Fisheries That May Interact With Bottlenose Dolphins."[98]

During the deliberations, the MATRT determined that a substantial portion of the harbor porpoise bycatch was from New England vessels that were fishing with finer twine and more nets.[99] This fishing strategy resulted in a higher level of harbor porpoise bycatch than the gear used by the local fishermen;[100] consequently, the MATRT based its bycatch reduction strategies on fishing practices used by local fishermen.[101] Recognizing that the gear modifications proposed by the team would require New England vessels to make a sizable financial investment in new gear if they were to fish in this area, the fishing industry proposed a federally-funded pinger experiment.[102] However, the MATRT did not achieve consensus on whether a scientifically valid pinger experiment should be part of the management regime due to unresolved concerns about funding such an experiment, target fishery, diversion of observers to the

94. *Id.* at 2.
95. *Id.* at 1–2.
96. *Id.*
97. *Id.* at 4–5.
98. *Id.* at 6–8.
99. Taking of Marine Mammals Incidental to Commercial Fishing Operations; Harbor Porpoise Take Reduction Plan Regulations, 63 Fed. Reg. 48,670, 48,678 (Sept. 11, 1998) (codified at 50 C.F.R. § 229) [hereinafter September Regulations]; MATRT RECOMMENDATIONS, *supra* note 88, at non-consensus Items A-1.
100. *Id.*
101. *Id.*
102. MATRT RECOMMENDATIONS, *supra* note 88, at non-consensus Items A-1.

experiment, and concerns about whether a statistical design could be devise for a fishery with limited bycatch.[103]

Again, NMFS failed to publish the plan within sixty days (October 25, 1997), and it was not until more than one year after the MATRT submitted its plan that NMFS, on September 11, 1998, published a proposed rule combining the Mid-Atlantic and the Gulf of Maine take reduction plans.[104] Because NMFS failed to meet its statutory deadlines for implementation of the Mid-Atlantic take reduction plan and thus was in violation of the MMPA, the Center for Marine Conservation, the Humane Society of the United States and the International Wildlife Coalition included the Mid-Atlantic take reduction plan in the lawsuit against NMFS.[105] The settlement agreement, noted above, also required NMFS to include the MATRT's plan in the final rule, which was published on December 2, 1998.[106]

Generally, the final rule for the Mid-Atlantic components of the harbor porpoise take reduction plan was consistent with the team proposal, with a few exceptions. Gear modifications and the effective closure periods from January 1 through April 30 for New Jersey waters, and February 1 through April 30 for southern Mid-Atlantic waters, remained the same as those proposed in the plan.[107] Tables 1 and 2 summarize the final rule's gear modifications requirements for the large mesh (includes gillnet with mesh size of greater than 7 inches (17.78 cm) to 18 inches (45.72 cm)) and small mesh (includes gillnet with mesh size of greater than 5 inches (12.7 cm) to less than 7 inches (17.78cm)) gillnet fisheries in the Mid-Atlantic.[108]

The most significant modification to the MATRT's plan was the application of gear modifications to all gillnet fisheries that use a mesh size of less than 7 inches (17.78 cm) but greater than 5 inches (12.7 cm), and the change in the stratification of gear modifications from fishery or subfishery to gear modifications based on mesh size.[109] NMFS concluded that the regulatory measures should not be based on subfisheries but on the characteristics that appear most related to harbor porpoise bycatch.[110] Moreover, NMFS claimed that basing regulatory measures on the subfisheries would be difficult to administer and enforce, especially because there was not a fishery management plan or permit system in place

103. *Id.* at A-2.
104. September Regulations, *supra* note 99, at 48,670.
105. *See* Plaintiff's complaint, *supra* note 67.
106. *See* December TRP Regulations, *supra* note 48, at 66,465.
107. *Id.* at 66,470.
108. *Id.* at 66,468.
109. *Id.* at 66,470.
110. September Regulations, *supra* note 99, at 48,678.

Table 1. **Gear Modifications for the Large Mesh Gillnet Fishery: Gilnets with Mesh Size >7 in. (17.78 cm) to 18 in. (45.72 cm)**

WATERS	FLOATLINE LENGTH (FT.)	TWINE SIZE (IN.)	TIE DOWNS	NET CAP (NO.)	NET SIZE (FT.)	NET TAGGING	TIME/AREA CLOSURES
New Jersey (Mudhole)	≤3,900 or (1188.7 m)	≥.035 or (.90 mm)	required	80	≤300 or (91.4 m)	Jan. 1, 2000	Feb. 15–Mar. 15 and Apr. 1–Apr. 20
New Jersey (excluding the Mudhole) (to 72° 30W. long.)	≤4,800 or (1463.0 m)	≥.035 or (.90 mm)	required	80	≤300 or (91.4 m)	Jan. 1, 2000	Apr. 1–Apr. 20
Southern Mid-Atlantic (MD, DE, DE, VA, NC to 72° 30'W. long.)	≤3,900 or (1188.7 m)	≥.035 or (.90 mm)	required	80	≤300 or (91.4 m)	Jan. 1, 2000	Feb. 15–Mar. 15

Table 2. **Gear Modifications for the Small Mesh Gillnet Fishery: Gilnets with Mesh Size >5 in. (12.7 cm) to 7 in. (17.78 cm)**

WATERS	FLOATLINE LENGTH (FT.)	TWINE SIZE (IN.)	NET CAP (NO.)	NET SIZE (FT.)	NET TAGGING	TIME/AREA CLOSURES
New Jersey (Mudhole)	≤3,000 or (914.4 m)	≥.031 or (.81 mm)	45	≤300 or (91.4 m)	Jan. 1, 2000	Feb. 15–Mar. 15
New Jersey	≤3,000 or (914.4 m)	≥.031or (.81 mm)	45	≤300 or (91.4 m)	Jan. 1, 2000	—
Southern Mid-Atlantic (MD, DE, DE, VA, NC to 72° 30'W. long.)	≤2,188 or (645.6 m)	≥.031 or (.81 mm)	45	≤300 or (91.4 m)	Jan. 1, 2000	—

under the Magnuson-Stevens Fishery Conservation and Management Act for either fishery.[111] While NMFS's argument for managing the fishery by mesh size rather than by subfishery is sound, it had the unintended consequences of including other fisheries that do not have a demonstrated take of harbor porpoise, such as the striped bass fishery. If NMFS had raised these concerns within the negotiation forum, the MATRT could have proposed management measures for restricting only those gear types that have the demonstrated potential to catch harbor porpoise.

In terms of closures, the final take reduction plan differs from the MATRT's recommendations with regard to the timing of area closures.[112] For the large mesh fishery (the monkfish fishery), the MATRT recommended a closure for New Jersey waters, including the Mudhole, from February 15 through March 15.[113] Based on bycatch data, NMFS created two closures, one from February 15 through March 15 at the Mudhole and another from April 1 through April 20 for all of New Jersey.[114]

The MATRT also recommended that the southern Mid-Atlantic be closed for a block of 20 days between February and April, the timing of the closure to be determined by the individual fishers.[115] Again, because NMFS concluded that such a closure would be difficult to enforce, NMFS mandated a set closure from February 15 through March 15 in the southern Mid-Atlantic, consistent with the timing of high harbor porpoise bycatch.[116] No time or area closures were recommended for the dogfish fishery (a small mesh fishery); however, NMFS, concerned about the high level of takes the area around the Mudhole, mandated a one-month closure from February 15 through March 15 in the Mudhole, to coincide with high fishing effort and the majority of the takes in northern New Jersey during February through April time period.[117]

---

111. *Id.*

112. *Id.*

113. September Regulations, *supra* note 99, at 48,678; *see also* December TRP Regulations, *supra* note 48, at 66,470.

114. September Regulations, *supra* note 99, at 48,678; *see also* December TRP Regulations, *supra* note 48, at 66,470 (indicating no change from the September Regulations).

115. September Regulations, *supra* note 99, at 48,678.

116. *Id.*

117. September Regulations, *supra* note 99, at 48,678; *see also* December TRP Regulations, *supra* note 48, at 66,470.

3. Evaluation of the MATRT Process and Plan

In January 2000, the MATRT met to evaluate the take reduction plan. During the first eight months of 1999, 53 harbor porpoises were taken off the mid-Atlantic coastal states.[118] As previously stated, NMFS had not completed analyses of the bycatch and effort data for 1999 to determine whether the takes exceeded PBR. However, in May 2000, NMFS notified the plaintiffs and the GOTRT that total harbor porpoise bycatch for 1999 for the Northeast sink gillnet and Mid-Atlantic coastal gillnet fisheries was 342 animals—a number less than PBR (483).[119] NMFS's preliminary data indicated that the reductions were due to a combination of the plan and fishery management restrictions.[120] In addition, the MATRT expressed concern about the insufficient observer coverage to encompass all of the fisheries in this area, a lack of enforcement, and poor fisher compliance with the plan and requirements of the MMPA (specifically the requirement to register and take observers), and the continuing need for an improved estimate of effort.[121] The MATRT recommended that NMFS address these issues.[122]

While the plan itself has been fairly successful, some MATRT members expressed frustration with NMFS's delay in implementation, and more importantly, the changes that were made to the plan without consulting the MATRT.[123] Some MATRT members felt that NMFS had severely undermined the integrity of the take reduction team process by modifying the plan to focus on gear and mesh size rather than a particular fishery.[124] In doing so, NMFS included small mesh fisheries such as shad and striped bass and some internal waters such as the Delaware Bay that the MATRT had not envisioned including during their negotiations or in their recommendations.[125] Many of the members believed that the problems that resulted from these additions could have been avoided if NMFS had discussed these changes with the MATRT during the comment period on the proposed rule or raised these issues during negotiations.[126]

---

118. MARINE MAMMAL COMMISSION, ANNUAL REPORT TO CONGRESS 1999 41 (2000) [hereinafter 1999 Report].

119. Kurkal letter, *supra* note 75.

120. MATRT RECOMMENDATIONS, *supra* note 88, at 2.

121. *Id.* at 4–5.

122. MID-ATLANTIC HARBOR PORPOISE TAKE RREDUCTION TEAM, Final Meeting Summary (Jan. 13–14, 2000) at 13.

123. *Id.* at 4.

124. *Id.* at 4–5.

125. *Id.* at 5.

126. *Id.* at 4.

The MATRT recommended that NMFS convene the MATRT during the comment period on the proposed rule to gather their input on the plan.[127]

Finally, while many members were initially both disenchanted with the process and disheartened by the MATRT's failure to achieve consensus on all aspects of the take reduction plan—specifically the pinger experiment—the team, at their January meeting, recommended that the fishing industry pursue mitigation strategies for harbor porpoise and bottlenose dolphins.[128] At this point, these strategies included acoustic deterrent devices and reflective gillnets, and the MATRT requested that NMFS provide technical advice for such efforts and work cooperatively with industry to pursue funding.[129] Given this outcome, if there had been more time, the MATRT may have reached consensus on this issue. Because they did not, individuals on both sides questioned the others' motives, and in one unfortunate instance this led to the industry verbally attacking the professional integrity of a scientist. Where consensus is not achieved, there regrettably appears to be a tendency for one group to lash out at another.

C. Atlantic Offshore Cetacean Take Reduction Team (AOCTRT)

1. Background on Marine Mammal Takes in the Atlantic Offshore Fisheries

The U.S. Atlantic and Gulf of Mexico pelagic drift gillnet fishery for swordfish, tuna, and shark interacts with six to nine strategic marine mammal stocks, including long-finned and short-finned pilot whales, common dolphins, Atlantic spotted dolphins, the offshore stock of bottlenose dolphin, humpback whales, northern right whales, and sperm whales.[130] The U.S. Atlantic and Gulf of Mexico pelagic longline fishery for swordfish, tuna, and shark interacts with two strategic marine mammal stocks: Pilot whales and Atlantic spotted dolphins.[131] Table 3 summarizes the level of take for these strategic stocks.[132]

---

127. *Id.* at 13.

128. *Id.*

129. *Id.*

130. ROBERT A. BLAYLOCK ET AL., NOAA TECHNICAL MEMORANDUM, U.S. ATLANTIC AND GULF OF MEXICO MARINE MAMMAL STOCK ASSESSMENTS (1995); *see also* Taking of Marine Mammals Incidental to Commercial Fishing Operations; Atlantic Offshore Cetacean Take Reduction Plan Environmental Assessment, 62 Fed. Reg. 59,657 (Nov. 4, 1997) [hereinafter November Regulations].

131. BLAYLOCK, *supra* note 130; *see also* November Regulations, *supra* note 130; Marine Mammals, 62 Fed. Reg 3005 (Jan. 21, 1997).

132. BLAYLOCK, *supra* note 130; *see* SUSAN PODZIBA & ASSOCIATES, ATLANTIC

Table 3. **1995/1996 Marine Mammal Stock Assessment: Strategic Stocks with Fishery Interactions**

SPECIES/STOCK	PBR	ANN. FISHERY MORTAL.	FISHERY SOURCES OF MORTALITY
Northern Right Whale/W. North Atlantic	0.4	1.1	Lobster, Gillnet, and Driftnet Gear
Common dolphin/W. North Atlantic	32	449	Atlantic Drift Gillnet Fishery
Atlantic spotted dolphin/W. North Atlantic	16	31	Atlantic Drift Gillnet /Altantic pelagic longline fishery
Pantropical spotted dolphin/W. North Atlantic	16	31	Atlantic Drift Gillnet Fishery
Mesoplodont beaked whale/W. North Atlantic	8.9	34	Atlantic Drift Gillnet Fishery
Pilot whale, short-finned/W. North Atlantic	3.7	109	Atlantic Drift Gillnet Fishery; Atlantic pelagic longline fishery
Bottlenose dolphin/W. North Atlantic, Offshore	92	128	Atlantic Drift Gillnet Fishery; Pair trawl fishery
Atl. White-sided dolphin/W. North Atlantic	125	127	Atlantic Drift Gillnet Fishery
Pilot whale, long-finned/W. North Atlantic	28	109	Atlantic Drift Gillnet Fishery, Atlantic pelagic longline fishery
Sperm Whale/W. North Atlantic	0.5	1.6	Atlantic Drift Gillnet Fishery

OFFSHORE CETACEAN TAKE REDUCTION PLAN at 12–23 (1996) (discussion of the population estimates, PBR, and the bycatch estimates).

2. Atlantic Offshore Cetacean Take Reduction Team

NMFS established the AOCTRT on May 23, 1996 to prepare a take reduction plan to reduce bycatch of the strategic marine mammal stocks, including right whales, humpback whales, sperm whales, beaked whales, pilot whales, common dolphins, bottlenose dolphins, and spotted dolphins in the U.S. Atlantic pelagic drift gillnet, longline and pair trawl fisheries.[133] The AOCTRT reached consensus on several take reduction strategies in each fishery and submitted a draft Atlantic Offshore Cetacean Take Reduction Plan to NMFS on November 25, 1996.[134] In both the drift gillnet and longline fisheries, the plan prohibited fishing in right whale critical habitat areas to reduce the risk of entanglement.[135] For each fishery, the AOCTRT recommended that NMFS prepare and distribute education and outreach materials and conduct workshops for the fishing industry.[136] The AOCTRT also recommended that NMFS develop criteria for assessing marine mammal injuries and convene a workshop to review all existing marine mammal injury data in order to: (1) develop guidelines for determining and recording serious injury, (2) recommend changes and/or additions to observer logs or reporting forms, (3) recommend necessary research, including methods for monitoring the fate of entangled and released animals, and (4) develop operation procedures for the fleet to minimize injuries and maximize survivorship of marine mammals when interactions with the fisheries do occur.[137] In addition, the AOCTRT recommended that a technical advisory group be formed to assist in the implementation of the take reduction plan and to prioritize research on cetacean behavior and abundance.[138]

For the drift gillnet fishery only, AOCTRT-recommended strategies included: (1) monitoring of vessels with 100 percent observer coverage; (2) establishing a limited entry program for the swordfish drift gillnet fishery; (3) prohibiting drift gillnet gear south of Hudson Canyon from December 1 through May 30; (4) designing a set allocation system to reduce the derby nature of the fishery; (5) experimenting with pinger use during the 1997 fishing season for all vessels (100% participation); (6) conducting real-time monitoring and evaluation of bycatch; (7) facilitating information sharing

133. Atlantic Offshore Fisheries Take Reduction Team Meeting, 61 Fed. Reg. 25,846 (May 23, 1996).

134. November Regulations, *supra* note 130, at 59,657.

135. *Id.*

136. PODZIBA, *supra* note 130, at 39.

137. *Id.* at 37–38.

138. *Id.* at 40.

among fishers regarding marine mammal "hot spots" (areas of high marine mammal concentration); (8) researching new means to standardized gear modifications; (9) developing a buy-out program to reduce effort in the fishery, by allowing fishermen to sell their allocation of sets to other driftnetters or non-fishers.[139]

For the longline fishery only, AOCTRT-recommended strategies included: (1) limiting length-of-gear of pelagic longlines to 24 nautical miles from August through November in the Mid-Atlantic Bight; (2) reducing maximum soak-time in the Mid-Atlantic Bight during August through November by hauling out gear in the order it was set; (3) requiring that longliners move after one entanglement with a marine mammal; (4) conducting research on modification of gear and/or operating practices, cetacean behavior, and acoustical systems to devise ways to reduce entanglement; (5) increasing observer coverage in the longline fishery to 10 percent in the Mid-Atlantic and Northeast Coastal areas from August through November, and at least 5 percent in the rest of the fishery; (6) developing a stratified random sampling scheme for the longline fishery to increase precision of bycatch estimates and insure optimal allocation of observer coverage.[140]

For the pair trawl fishery, AOCTRT recommended: (1) qualifying and certifying operators; (2) certifying nets; (3) researching cetacean behavior and target species; and (4) developing industry performance standards and review protocols.[141] In September 1996, prior to the completion and submission of the plan, NMFS denied the pair trawl fishery's petition for rulemaking to authorize the use of pair trawl gear in the Atlantic tuna fishery.[142] Because pair trawl gear is not currently authorized for fishing in the Atlantic tuna or swordfish fishery, the team's recommendations for this fishery were not implemented.[143]

---

139. November Regulations, *supra* note 130, at 59,657; *see* PODZIBA, *supra* note 130, at 45–46.

140. PODZIBA, *supra* note 130, at 49.

141. *Id.* at 42–44.

142. DRAFT ENVIRONMENTAL ASSESSMENT AND REGULATORY IMPACT REVIEW ON ALTERNATIVES FOR IMPLEMENTATION OF AN ATLANTIC OFFSHORE CETACEAN TAKE REDUCTION PLAN. (National Marine Fisheries Service, Office of Protected Resources and Office of Sustanable Fisheries) 2 (1997) [hereinafter Draft Environmental Assessment].

143. *Id.*

3. Evaluation of the AOCTRT

The AOCTRT submitted to NMFS the Atlantic Offshore Cetacean Take Reduction Plan on November 25, 1996.[144] According to the MMPA, NMFS should have published a proposed rule and implementing regulations by January 25, 1997.[145] Originally the closure was designated for the period of December 1, 1996 through May 29, 1997, and was for the northern portion of the Atlantic swordfish driftnet fishery, pursuant to section 305(c) of the Magnuson-Stevens Fishery Conservation Management Act, but on June 5, 1997, NMFS's failure to meet this deadline resulted in the extension of the emergency closure until November 26, 1997.[146] In November of 1997, NMFS published a draft Environmental Assessment (EA) for the Atlantic Offshore Cetacean Take Reduction Plan.[147] This EA questioned whether the AOCTRT's consensus plan would provide sufficient protection for right whales or other cetaceans.[148] In accordance with the MMPA, NMFS proposed another alternative that it believed would achieve the goals of the MMPA and the ESA.[149] This alternative had been discussed during the course of the take reduction team's negotiation, but was rejected. The Center for Marine Conservation (CMC) supported the NMFS alternative in its formal comment.[150] However, though CMC endorsed the end result, it did not approve of the method of arriving at the alternative. NMFS participants should have voiced their concerns and proposed these alternative take reduction strategies during the AOCTRT negotiations. Because NMFS circumvented the proper communication channel and delayed the implementation of the plan it undermined the entire take reduction process and at the same time its delays allowed the fishery to operate without the benefit of a take reduction plan, resulting in the kill of hundreds of marine mammals.

Finally, after conducting a comprehensive review of the swordfish fishery, NMFS published a final rule prohibiting the use of driftnet gear in

144. November Regulations, *supra* note 130, at 59,657.

145. 16 U.S.C. § 1387(f)(7)(B)(i) (1994).

146. Atlantic Swordfish Fishery; Extension of Drift Gillnet Emergency Closure, 62 Fed. Reg. 30,775 (June 5, 1997).

147. November Regulations, *supra* note 130, at 59,657.

148. *Id.*

149. *Id.*; Draft Environmental Assessment, *supra* note 142, at 18–21.

150. CENTER FOR MARINE CONSERVATION, COMMENT OF THE ON THE TAKING OF MARINE MAMMALS INCIDENTAL TO COMMERCIAL FISHING OPERATIONS; ATLANTIC OFFSHORE CETACEAN TAKE REDUCTION PLAN ENVIRONMENTAL ASSESSMENT, 62 Fed. Reg. 59,657-58, at 3–6 (Dec. 31, 1997).

the North Atlantic swordfish fishery.[151] With two of the three fisheries closed, NMFS now focused on the longline fishery. As of 1999, many of the AOCTRT recommendations for take reduction in the longline fishery were being implemented as part of the Highly Migratory Species Fishery Management Plan[152] under the Office of Sustainable Fisheries instead of under the MMPA and the Office of Protected Resources. In the author's opinion this adjustment of protocol violated the intent of the MMPA and represents yet another failure by NMFS to give the take reduction team process its proper regard. To date, NMFS has not proposed a take reduction plan for the non-regulatory aspects of the longline fishery nor has NMFS convened the AOCTRT since the take reduction plan was submitted.

In summary, the AOCTRT was a failure, even though it reached consensus, solely because NMFS severely undermined the good faith efforts of the AOCTRT at every turn by: (1) closing the pair trawl fishery during the course of the negotiations; (2) failing to raise concerns about the ability of the consensus plan to achieve PBR during the negotiation process rather than after the process was completed; (3) raising the issue of the need to address rare instances of incidental takes of endangered whales late in the process, when there was insufficient time to address the issue; (4) failing to implement a take reduction plan within the MMPA's timeframes and violating the MMPA by allowing continued takes of marine mammals; (5) ignoring the recommendations of the plan and using the MMPA to close the drift gillnet fishery rather than the provisions of the Magnuson-Stevens Act; and (6) failing to implement fully the take reduction plan or reconvene the AOCTRT in accordance with the MMPA. Two fisheries have been closed, so the fate of the AOCTRT is uncertain. Equally uncertain is whether the take reduction plan recommendations have achieved the goal of reducing takes to PBR. One thing is certain, by closing these fisheries, the Office of Sustainable Fisheries, demolished the very foundation of the take reduction team negotiation process because the MMPA was not used effectively, but was instead used as a tool to arbitrarily close fisheries--the very action that this process is designed to avoid. If the AOCTRT has any hope of being revived, implementation authority must be restored under the MMPA and the Office of Protected Resources.

---

151. Atlantic Swordfish Fishery; Management of Driftnet Gear, 64 Fed. Reg. 4055 (proposed Jan. 27 1999) (to be codified at 50 C.F.R. pt. 630).

152. Atlantic Highly Migratory Species (HMS) Fisheries; Fishery Management Plan, Plan Amendments, and Consolidation of Regulations, 64 Fed. Reg. 3159 (Jan. 20 1999).

D. Atlantic Large Whale Take Reduction Team (ALWTRT)

1. Background on Large Whale Takes in the Atlantic

> Based on data from 1991 through 1995, U.S. fishing gear [was] estimated to be likely responsible for approximately 35 percent (six events) of known human-caused serious injury and mortality to right whales, while Canadian fisheries [were] estimated to be responsible for 18 percent (three events); the remaining 47 percent (eight events) was attributed to ship strikes.... NMFS estimate[d] that a minimum of 1.2 right whales from the western North Atlantic stock [were] seriously injured or killed annually by entanglement in U.S. fishing gear.[153]

For the most part, NMFS considered this a minimum estimate because many entanglements go unobserved, occurring in areas where there is little sighting effort.[154] NMFS's PBR for this stock was 0.4 right whales, the target for any take reduction plan.[155] Therefore, "[i]f more than two serious injuries or mortalities incidental to commercial fishing operations occur within five years after the plan is promulgated," the plan will not achieve its PBR goal.[156]

In the 1996 Stock Assessment Reports, NMFS estimated "that rate of serious injury and mortality of humpback whales due to fishery interactions was 4.1 animals per year" and was therefore below the stock's PBR level of 9.7.[157] The 1996 Stock Assessment Reports indicated that over the 1991–1995 period, the total known fishery-related mortality and serious injury rate for fin whales was less than 3.4 fin whales per year, well under the PBR of 34 fin whales.[158] Likewise, NMFS estimated that "2.5 minke

---

153. Taking of Marine Mammals Incidental to Commercial Fishing Operations; Atlantic Large Whale Take Reduction Plan Regulations, 62 Fed. Reg. 16,519, 19,521 (April 7, 1997) [to be codified at 50 C.F.R. 229) [hereinafter April Regulations]. NMFS estimated that: lobster gear entangled an annual average of 0.4 whales over the last 5 years; the Southeastern U.S. drift gillnet fishery for sharks entangled an annual average of 0.2 whales over the same period; the pelagic drift gillnet fishery was annually responsible for 0.4 fishery-induced mortalities and serious injuries of right whales. The remaining known entanglements were from unknown fisheries. *Id.*

154. *Id.*

155. *Id.*

156. *Id.*

157. Taking of Marine Mammals Incidental to Commercial Fishing Operations; Atlantic Large Whale Take Reduction Plan Regulations, 62 Fed. Reg. 39,157, 39,159 (Jul. 22, 1997) (to be codified at 50 C.F.R. pt. 229) [hereinafter July Interim Rules].

158. *Id.* at 39,159.

whales are seriously injured or killed from fishery-related encounters. This level did not exceed the PBR level of 21 for this stock."[159] Nevertheless, because humpback and fin whales are endangered under the ESA and are therefore considered strategic stocks under the MMPA, NMFS included these species in the agenda for the ALWTRT.

2. The Atlantic Large Whale Take Reduction Team

"NMFS established the ALWTRT on August 6, 1996 to prepare a draft Atlantic Large Whale Take Reduction Plan designed to reduce takes of endangered humpback, fin, and right whales"[160] in the South Atlantic shark gillnet fishery, the Gulf of Maine and Mid-Atlantic lobster trap/pot fishery, the Mid-Atlantic gillnet fishery, and the Gulf of Maine sink gillnet fishery.[161] Although minke whales are not listed as strategic stock at this time, the ALWTRT was also asked to consider measures that would reduce takes of minke whales.

The ALWTRT included representatives of NMFS, the Marine Mammal Commission, Maine Department of Marine Resources, Massachusetts Division of Marine Fisheries, University of Rhode Island, Maryland Department of Natural Resources, Virginia Marine Resources Commission, North Carolina Division of Marine Fisheries, Georgia Department of Natural Resources, Florida Department of Environmental Protection, New England Fishery Management Council, Mid-Atlantic Fishery Management Council, environmental organizations, academic and scientific institutions, and participants in the fisheries.[162] The ALWTRT met six times between September 1996 through January 1997, submitting a report to NMFS on February 5, 1997. However, the team did not reach consensus on all aspects of the plan.[163]

2.1 The Report of the ALWTRT

The ALWTRT's submitted report: (1) reviewed the status of affected strategic marine mammal stocks; (2) described New England multispecies sink gillnet fishery, the mid-Atlantic coastal gillnet fisheries, the Gulf of Maine and U.S. mid-Atlantic lobster trap/pot fisheries, and the Southeast-

159. *Id.*

160. April Regulations, *supra* note 153, at 16,520.

161. Atlantic Large Whale Take Reduction Team Meeting, 61 Fed. Reg. 40,819 (Aug. 6, 1996).

162. *Id.* at 40,821.

163. April Regulations, *supra* note 153, at 16,519.

ern U.S. Atlantic drift gillnet fishery for sharks; (3) recommended potential measures to reduce the bycatch of large whales; and (4) considered research needs.[164] The ALWTRT's take reduction strategies included, among others: (1) modifying fishing gear and practices, (2) imposing area restrictions, (3) reducing inactive fishing gear and retrieving marine debris consisting of lost or discarded gear, (4) implementing a gear marking system to potentially identify the fishery and location of whale entanglement, (5) using aggressive research to discover new gear modifications and design, and (6) improving disentanglement efforts.[165] The ALWTRT also recommended initiatives for fisher education and outreach, better monitoring of the distribution of whale stocks and entanglements, joint initiatives with Canada to reduce whale bycatch in commercial fisheries, and exploration of market incentives to reduce large whale bycatch in these fisheries.[166]

While the ALWTRT agreed on many strategies, the team could not reach consensus in two areas. The first dispute involved closing critical habitat areas where low to moderate fishing effort was occurring, but where there were also few sightings of right whales.[167] The second dispute involved the location and type of gear modification requirements that should be required.[168] Specifically, the consensus disintegrated over whether to require the use of sinking groundlines in rocky bottom habitat.

2.2 NMFS Proposed Rule for the Take Reduction Plan

NMFS published the proposed rule to implement an Atlantic Large Whale Take Reduction Plan on April 7, 1997 (60 days after the plan was submitted).[169] The plan included seasonal fishery closures in times and areas where right whales were known to occur, and a list of mandatory gear modifications for gillnet and lobster fisheries, including using weak links, reducing the breaking strength of buoy and ground lines, using more sinking line, and anchoring requirements to increase the effectiveness of the weak link.[170] The plan also included a gear marking system to help determine the source of lines found on entangled whales; formation of a

---

164. ATLANTIC LARGE WHALE TAKE REDUCTION TEAM, DRAFT ATLANTIC LARGE WHALE TAKE REDUCTION REPORT 38–77 (Feb 1, 1997).

165. *Id.*

166. *Id.*; *see* April Regulations, *supra* note 153, at 16,530.

167. MARINE MAMMAL COMMISSION, ANNUAL REPORT TO CONGRESS 1997 18–19 (1998) [hereinafter 1997 Report].

168. *Id.*

169. April Regulations, *supra* note 153, at 16,519.

170. *Id.* at 16,520, 16,522–28.

gear advisory group to aid in the identification and evaluation of various research proposals; and expanded support for disentanglement teams.[171]

In the proposed rule, NMFS greatly expanded the geographic area for gear modification requirements to include waters, such as Maine state waters, where few right whale sightings had been reported.[172] This action "elicited strong opposition from thousands of New England fishermen, who cited concern about the costs of modifying gear" to fish in areas where right whales were rarely seen.[173] All interest groups raised concerns over some of NMFS's proposed gear modifications, such as 150-pound weak links, because many of the modifications were untested for take reduction efficacy and some believed that the prescription may have been premature.[174]

The issue quickly became both highly polarized and politicized. NMFS received over 13,000 comments (including form letters, postcards and signatures on petitions) from state and federal agencies, congressional offices, state legislature representatives, towns, conservation groups, industry associations, businesses, fishers and other private individuals.[175] In addition, NMFS received oral testimony at twelve public hearings held from Maine through Virginia.[176]

2.3 NMFS Interim Final Rule on the Take Reduction Plan

On July 22, 1997, NMFS published the interim final rule to implement the Atlantic Large Whale Take Reduction Plan.[177] NMFS substantially revised the interim final rule from the proposed rule.[178] In the interim rule, NMFS required all lobster and sink gillnet gear to be rigged so that the buoy line did not float at the surface of the water at any time.[179] The interim rule also prohibited 'wet storage' of lobster gear, which is the practice of leaving unbaited traps in the water rather than storing them on land.[180] Further, NMFS shrunk the geographic area for which the gear modifications applied, removed the modification requirements for gear deployed in coves and harbors, and created a menu option that allowed

171. *Id.* at 16,528–31.
172. *Id.* at 16,526.
173. 1997 Report, *supra* note 167, at 20.
174. *Id.* at 19.
175. July Interim Rules, *supra* note 157, at 39,166.
176 *Id.*
177. *Id.* at 39,157.
178. *Id.* at 69,164.
179. *Id.*
180. *Id.* at 39,162.

fishers to choose certain gear modifications to reduce the injury or mortality risks for entangled marine mammals.[181] For example, at least one modification from a list of acceptable options was to be used if the gear was set in areas whales rarely use, and at least two of the modifications were required if the gear was set in areas of more frequent whale use.[182] Additionally, there were more specific requirements for gear allowed in areas that had previously been declared "critical habitat" for right whales; critical habitat areas off Massachusetts, Georgia, and Florida were closed to some gear during times when whales were known to aggregate.[183]

2.4 Problems with the Interim Final Rule

In the opinion of the environmental community, the interim final rule for the Atlantic Large Whale Take Reduction Plan significantly weakened the proposed rule because the gear (menu) options list required a greater reliance on a gear technology list to implement the plan which, in most cases, provided no meaningful risk reduction for marine mammal entanglement and, in fact, did not depart from the normal fishing practices that had entangled whales.[184] In the summaries provided in Tables 4 and 5, it is clear that the interim final rule for both lobster and gillnet gear, requiring only two gear options for areas such as Cape Cod Bay, Great South Channel, and Stellwagen Bank/Jeffreys Ledge, was considerably less restrictive than the strategies recommended by either the Commonwealth of Massachusetts Endangered Whale Working Group (CMEWWG) in its Conservation Plan for Massachusetts Waters to Minimize Entanglement Risk for Right Whales for Cape Cod Bay, the ALWTRT's report, or the fishing industry in its Industry-State Agency Large Whale Take Reduction Plan (see tables 4 and 5). Most of these plans proposed using four or more gear technology restrictions; smaller diameter line (5/16 in.); and reduced breaking strength (< 1,100 lb.). In addition, NMFS significantly weakened the take reduction strategies for the Mid-Atlantic anchored gillnet fisheries

181. *Id.* at 39,161.

182. *Id.*

183. *Id.* at 39,161–62.

184. NMFS usurped the authority of the ALWTRT by creating a competing body in the Gear Advisory Group, a free-standing body which contained no representation from the conservation community and reported directly to the Regional Administrator rather than the ALWTRT. NMFS consulted with this team during the comment period on the proposed rule, and because NMFS did not require that the recommendations from the Gear Advisory Group be reviewed by the ALWTRT, the gear modifications recommended by this group and incorporated into the interim rule, were substantially weaker than those recommended by the ALWTRT.

because the take reduction strategy only required one gear modification. This strategy was a complete departure from the consensus strategy proposed by the ALWTRT report.

At the same time that NMFS's proposed actions that represented no real risk reduction, it removed other requirements to provide important data and information that were included in the ALWTRT report. For example, NMFS's prohibition of floating line at the water surface did not result in any meaningful risk reduction because standard fishing practices typically did not result in line floating at the surface. The same was true with the prohibition on "wet storage"; as written, fishers could potentially stow gear in the water so long as he/she "hauled it out of the water at least once in 30 days.[185] The letter of the law was satisfied while the neglected gear continued to threaten whales with entanglement. On the other hand, NMFS removed the ALWTRT requirement to mark/color code gear by region and gear type, thereby decreasing the utility of the data designed to aid in pinpointing areas and fisheries where whales encounter gear.[186] Finally, NMFS removed all contingency measures to extend gear requirements or to close a restricted area in the event of anomalous right whale distribution.[187] NMFS did not replace these contingency measures with any early warning mechanisms to notify the commercial fishing fleets of unexpected right whale presence.

Table 4. Summary of the Various Proposed Take Reduction Strategies for Cape Cod Bay Critical Habitat and the Areas Adjacent to or West of Cape Cod Bay Critical Habitat

INDUSTRY PROPOSAL[188]	TAKE REDUCTION PLAN[189]	PROPOSED RULE	INTERIM FINAL RULE
Lobster Gear Other Restrict Period: May 16–Dec. 31	Lobster Gear Other Restrict Period: May 16–Dec. 31	Lobster Gear: Other Restrict Period: May 16–Dec. 31	Lobster Gear Other Restrict Period: May 16–Dec. 31

185. July Interim Rules, *supra* note 157, at 39,185.

186. *Id.* at 39,165.

187. *Id.* at 39,165-66.

188. Industry proposal as presented in Industry-State Agency Large Whale Take Reduction Plan. Implementation as presented for January 1, 1998.

189. The ALWTRT Team Report was designed to implement the Commonwealth of Massachusetts Conservation Plan for Massachusetts Waters to Minimize Entanglement Risk for Right Whales (State Plan); however, since the submission of that report, the State Plan has been modified to require restrictions from Jan. 1 – May 7, no single pot trawls, sinking groundlines, modified sinking buoy lines with the bottom 1/3 floating line, and weak link below the buoy.

		Limit on buoy lines—no more than one buoy line is used per trawl consisting of fewer than four pots and no more than two buoy lines used per trawl consisting of four or more pots.	
Sinking buoy lines--all buoy lines are sinking except for the bottom 1/3.	Sinking buoy lines--all buoy lines are sinking.	Sinking or modified sinking buoy lines[190]	Asinking buoy lines—all buoy lines are composed entirely of sinking line
Weak line or break-away at or just below the buoy in all lines	Weak link or break-away at or just below the buoy in all lines (recommended breaking strength— 150 lbs.).	Breakaway buoys[191] or weak buoy lines[192] (breaking strength 150 lb.).	All buoys are attached to the buoy line with a weak link having a max. breaking strength of up to 1,100 lbs. Weak links may include swivel, plastic weak links, rope of appropriate breaking strength, hob rings, or rope stapled to a buoy stick.
Sinking groundlines—All lines are sinking line.	Sinking groundlines—All lines are sinking line.	Sinking groundlines—All lines are sinking line.	Sinking groundlines—All lines are sinking line.

190. The floating line is not attached to the buoy, is used only in the bottom-most section of the buoy line, and is not longer than 10 percent of the depth of the water at mean low water; the floating line is not larger than ½ inch in diameter; and the floating line is attached to the sinking line by a splice, not by a knot.

191. The buoy line is attached at the top of the line to a breakaway buoy of breaking strength no more than 150 pounds.

192. The buoy line has a weak buoy line that is at least as long as the depth of the water at mean high water, is attached to the buoy at the top of the line, and is attached to a functional buoy line at the bottom, the weak buoy line must have a breaking strength no greater than 150 pounds.

Table 5. Summary of the Various Proposed Take Reduction Strategies for the Great South Channel Critical Habitat's Other Restricted Period

INDUSTRY PROPOSAL	TAKE REDUCTION PLAN	PROPOSED RULE	INTERIM FINAL RULE
Lobster Gear Other Restricted Period: Jul. 16–Mar. 31	Lobster Gear Other Restrict Period: Jul. 16–Mar. 31 NO PROPOSALS	Lobster Gear: Other Restrict Period: Jul. 1–Mar. 31	Lobster Gear Other Restricted Period: Jul. 1–Mar. 31 At least TWO characteristics from the Gear Technology List must be used.[193]
		Limit on buoy lines—no more than one buoy line is used per trawl consisting of fewer than four pots and no more than two buoy lines used per trawl consisting of four or more pots.	All buoy lines are 7/16 inches in diameter or less.
Sinking buoy lines except for the last 10 fathoms, which may be up to ½ inch floating rope, spliced in to prevent formation of a knot.		Sinking or modified sinking buoy lines.[194]	Sinking buoy lines—all buoy lines are composed entirely of sinking line

193. In the interim final rule, NMFS states that, " . . . although portions of the Great South Channel critical habitat would be considered offshore, NMFS believes that the weaker maximum breaking strengths allowed for inshore gear are more appropriate in the critical habitat, since right whales may return to the area when not expected. Therefore, the Great South Channel critical habitat is not considered 'offshore' for the purposes of this plan." July Interim Rules, *supra* note 157, at 39,163. CMC supported this position.

194. The floating line is not attached to the buoy, is used only in the bottom most section of the buoy line, and is not longer than 10 percent of the depth of the water at mean low water; the floating line is not larger than ½ inch in diameter; and the floating line is attached to the sinking line by a splice and not by a knot.

Weak line at or just below the buoy in all buoy lines.		Breakaway buoys[195] or weak buoy lines[196] (breaking strength 150 lb.).	All buoys are attached to the buoy line with a weak link having a max. breaking strength of up to 1,100 lbs. Weak links may include swivel, plastic weak links, rope of appropriate breaking strength, hob rings, or rope stapled to a buoy stick.
		Sinking groundlines—All groundlines are sinking line.	Sinking groundlines—All groundlines are sinking line.

The conservationists' concerns about the plan were well-founded. During 1998, under the regime of the interim final rule, two right whales were entangled. One was seen entangled in unidentified gear in the Bay of Fundy and another was entangled and disentangled on two occasions in lobster gear in Cape Cod Bay.[197]

2.5 Modifications to the Interim Final Rule and the Final Rule

On February 7 and 8, 1999, NMFS reconvened the ALWTRT. Despite the lack of consensus, disillusionment with the process, and the divisive dialog that occurred during the proposed and interim rules, the ALWTRT was, nevertheless, able to formulate several consensus recommendations concerning gear marking requirements and anchoring provisions.[198]

---

195. The buoy line is attached at the top of the line to a breakaway buoy of breaking strength no more than 150 pounds.

196. The buoy line has a weak buoy line that is at least as long as the depth of the water at mean high water, is attached to the buoy at the top of the line, and is attached to a functional buoy line at the bottom, the weak buoy line must have a breaking strength no greater than 150 pounds.

197. 1999 Report, *supra* note 118, at 20.

198. Taking of Marine Mammals Incidental to Commercial Fishing Operations; Atlantic Large Whale Take Reduction Plan Regulations, 64 Fed. Reg. 7529 (Feb. 16, 1999).

NMFS published the final rule on February 16, 1999 with an effective date of April 1, 1999.[199] On April 9, 1999, NMFS published a final rule with a partial stay concerning the final rule's gear marking regulations until November 1, 1999, or until a better system is designed.[200] The other recommendations from the ALWTRT's February 1999 meeting were largely ignored.

In the spring of 1999, six right whale entanglements were confirmed, with one right whale entangled in gillnet gear dying.[201] This information clearly indicated that the take reduction plan was not meeting its goal of reducing entanglement, serious injury, or mortality of right whales. Therefore, in February, April, and May of 2000, the ALWTRT met to revise the plan.[202] The team has tentatively agreed to additional gear modifications and has done away with the menu options approach, requiring instead, several modifications for fisheries both in and adjacent to critical habitat.[203] The ALWTRT also discussed, but did not reach a consensus, several options for dynamic area management as a tool to reduce whale/gear interactions, in such areas as the Great South Channel, Cape Cod Bay, Jeffreys Ledge, and Stellwagen Bank.[204] NMFS published regulations in December of 2000 and is in the process of revising the take reduction plan with the intent of publishing regulations to address the dynamic management options for the northeast and further modifications to the regulations for the Mid-Atlantic and the Southeast in the summer 2001.[205]

2.6 Right Whale Litigation

In *Strahan* v. *Linnon*[206] the plaintiff alleged in an amended complaint, filed in June 1996, that NMFS failed to establish take reduction teams or implement take reduction plans for right whales and other whale species within the mandated timeframes and that NMFS improperly refrained from

---

199. *Id.*

200. Taking of Marine Mammals Incidental to Commercial Fishing Operations; Atlantic Large Whale Take Reduction Plan Regulations, 64 Fed. Reg. 17,292 (April 9, 1999).

201. Taking of Marine Mammals Incidental to Commercial Fishing Operations; Atlantic Large Whale Take Reduction Plan Regulations, 65 Fed. Reg. 80,368 (Dec. 21, 2000).

202. *Id.* at 80,369.

203. *Id.* at 80,374–75.

204. *Id.*

205. RESOLVE CENTER FOR ENVIRONMENTAL DISPUTE RESOLUTION, MEETING SUMMARY OF THE ATLANTIC LARGE WHALE TAKE REDUCTION TEAM (August 22, 2000).

206. Strahan v. Linnon, 967 F. Supp. 581, 590–91 (D. Mass. 1997), *aff'd*, 187 F.3d 623 (1st Cir. 1998); 1997 Report, *supra* note 167, at 21.

classifying the New England lobster fishery under Category I on its list of fisheries.[207] On August 30, 1996, the plaintiff filed a motion for a preliminary injunction, claiming that the government had failed to develop a large whale take reduction plan.[208] NMFS indicated that the agency would issue a draft plan by April 1, 1997, and a final plan by July 15, 1997.[209] Consequently, with those assurances, the court denied the motion for an injunction.[210]

In another lawsuit, *Strahan* v. *Coxe*,[211] the plaintiff alleged that Massachusetts's licensing of gillnet and lobster fishing in state waters was a violation of the ESA and the MMPA, and that allowing the use of such gear in critical habitat is an impermissible modification of that habitat.[212] The court granted the plaintiff partial relief and instructed the state to: (1) apply for incidental take permits under the MMPA and the ESA; (2) develop and submit a proposal to restrict, modify, or eliminate the use of fixed fishing gear in coastal waters of Massachusetts listed as right whale critical habitat; and (3) convene a working group on endangered whales to discuss modifications to fishing gear and other measures to minimize the harm to such whales.[213] The team was convened and a plan was developed in response to the court order, many of the provisions of that plan were included in the final take reduction plan.

3. Evaluation of the ALWTRT

It was unfortunate that the ALWTRT failed to reach consensus; perhaps if more time were available for additional negotiations and the ALWTRT did not have the added pressure of both state and federal lawsuits, consensus may have been reached. On the other hand, NMFS failed to take advantage of the ALWTRT's substantive and political progress and the level of agreement that was achieved on many issues, including some take reduction strategies. Instead, NMFS proposed an initial regulation that was too restrictive in some areas such as Maine state waters, and an interim version that lacked sufficient conservation and risk reduction. With the pendulum swinging from one extreme to the other,

---

207. *Id.*

208. 1997 Report, *supra* note 167, at 21.

209. *Id.*

210. *Id.*

211. Strahan v. Coxe, 127 F.3d 155, 158 (1st Cir. 1997), *cert. denied* 525 U.S. 830 (1998), *cert. denied sub nom.* Coates v. Strahan, 525 U.S. 978 (1998).

212. *Id.*; 1997 Report, *supra* note 167, at 22.

213. *Id.*

NMFS failed to achieve any real conservation measures for right whales or any other whale species in the Atlantic.

The CMC and most of the fishing industry participants recommended repeatedly that NMFS focus limited enforcement resources and mitigation strategies on those areas where there is the greatest potential for interaction with whales; areas outside already-designated and restricted critical habitat, such as Stellwagen Bank and Jeffreys Ledge (not Maine state waters).[214] These high-risk areas should receive the majority of gear modification requirements. Two years later ALWTRT is proposing exactly these types of recommendations. Moreover, the many members of the ALWTRT agreed that if data analysis shows large whale entanglement increasing and/or further action is needed to meet the goals of the MMPA, tested and refined gear modifications could be used in areas other than the Gulf of Maine (e.g. Maine State waters). For the present, however, the priority should be to aggressively research and field test gear modifications that will eliminate the risk of entanglement for whales.

It is extremely unfortunate that NMFS failed to consider the progress made in the take reduction team process, because the commonalities were many between environmentalists and fishers and instead of being overlooked they should have been fostered, thus allowing NMFS to avert the political interventions, volatile discourse, and explosive reactions from all members of the ALWTRT and public. The harsh reality is that NMFS's proposal fueled the communication breakdown within the ALWTRT resulting from the team's failure to reach consensus. For example, some members joined the press in generating rumors and half-truths by mischaracterizing the position of various organizations and individuals and questioning the motives of these individuals.[215] NMFS did a disservice to both the conservation community and the fishing industry. Proposals developed over six months of negotiations and the ALWTRT's 1999 recommendations were completely ignored. Fragile goodwill, so hard-won between the environmental community, fishing industry, and the federal and state governments, vanished. The NMFS interim rule merely postponed needed gear regulations on Stellwagen and Jeffreys Ledge, causing whales to become entangled, injured, and killed as a direct result in 1998, 1999, and 2000. Nevertheless, the environmental community and

---

214. Comments from CMC to Michael Payne, Chief, Marine Mammal Division of the National Marine Fisheries Service on the Proposed rule for the Atlantic Large Whale Take Reduction Plan. *See also* Letters from Center for Marine Conservation to the Editor (May 1, 1997) (on file with the *Ocean and Coastal Law Journal*).

215. *National Fisherman* Letter to the Editor regarding CMC's position on the Take Reduction Plan; *see also* Letter from CMC to the Editor (Aug. 13, 1997) (on file with the *Ocean and Coastal Law Journal*).

the fishing industry must hold onto the last fragile hope that, despite NMFS actions, the ALWTRT can still function and devise consensus recommendations.

***Table 6.* 1995 Marine Mammal Stock Assessment - Strategic Stocks with Fishery Interactions**

SPECIES/STOCK	PBR	ANN. FISHERY MOR-TALITY	FISHERY SOURCES OF MORTALITY
Humpback Whale/ California-Mexico	0.5	>0.5	CA/OR Drift gillnet Fishery
Sperm Whale/ CA to WA	1.0	17	CA/OR Drift gillnet Fishery
Baird's Beaked Whale/CA, OR, WA	0.2	>0.15	CA/OR Drift gillnet Fishery
Pygmy sperm whale/ CA, OR, WA	4.8	5.7	CA/OR Drift gillnet Fishery
Cuvier's beaked whale/ CA, OR, WA	8.9	24	CA/OR Drift gillnet Fishery
Mesoplodont beaked whale/ CA, OR, WA	1.4	7.7	CA/OR Drift gillnet Fishery
Minke whale/ CA/WA/OR	2.6	0.5	CA/OR Drift gillnet Fishery

E. Pacific Offshore Cetacean Take Reduction Team (POCTRT)

1. Background of Marine Mammal Takes in the Pacific Fisheries

The California/Oregon drift gillnet fishery has an historical incidental bycatch of several strategic marine mammal stocks, including several beaked whale species, short-finned pilot whales, pygmy sperm whales, sperm whales, and humpback whales.[216] The California/Oregon drift gillnet (CA/OR DGN) fishery for thresher shark and swordfish is classified as a

216. JAY BARLOW ET AL., NOAA TECHNICAL MEMORANDUM, U.S. PACIFIC MARINE MAMMAL STOCK ASSESSMENTS (1995).

Category I fishery under section 118 of the MMPA.[217] It "is a pelagic fishery, with the majority of the fishing effort occurring within 200 miles (320 kilometers) offshore of California and Oregon."[218]

2. Pacific Offshore Cetacean Take Reduction Team

NMFS established the Pacific Offshore Cetacean Take Reduction Team (PCTRT) on February 13–14, 1996, to prepare a draft take reduction plan.[219] "The PCTRT included representatives of NMFS, the California Department of Fish and Game (CDFG), the Pacific States Marine Fisheries Commission, environmental organizations, academic and scientific organizations, and participants in the CA/OR DGN fishery. In selecting these team members, NMFS sought an equitable balance among representatives of resource user and non-user interests."[220]

The PCTRT was tasked with developing a consensus plan for reducing incidental mortality and serious injury of strategic marine mammal stocks of beaked whales, pilot whales, pygmy sperm whales, sperm whales, and humpback whales in the CA/OR DGN fishery.[221] "The PCTRT met five times between February and June 1996 and submitted a consensus draft plan to NMFS on August 15, 1996."[222]

The take reduction plan relies on four primary strategies, with a strong contingency section in the event these strategies fail.[223] The PCTRT proposed regulations to implement three of these primary strategies, which included establishing a depth of fishing requirement, using acoustic deterrent devices (pingers), and requiring skipper workshops.[224] The PCTRT recommended implementation of another primary strategy by NMFS, through a vehicle other than federal regulation. NMFS was to encourage California Department Fish and Game (CDFG) "not to reissue lapsed permits, and to encourage the Oregon Department of Fish and Wildlife (ODFW) to continue issuing the same number of permits."[225]

---

217. Taking of Marine Mammals Incidental to Commercial Operations; Pacific Offshore Cetacean Take Reduction Plan Reductions, 62 Fed. Reg. 6931 (Feb. 14, 1997) [hereinafter February Regulations].

218. *Id.*

219. Pacific Offshore Fisheries Take Reduction Team Meeting, 61 Fed. Reg. 5385 (1996).

220. February Regulations, *supra* note 217, at 6931.

221. *Id.*

222. *Id.*

223. *Id.*

224. *Id.*

225. *Id.*

"The PCTRT recommended that NMFS establish a fleet wide 16 fathom (36 feet or 10.9 meters) minimum extender line length requirement. Extender lines attach buoys (floats) to the drift gillnet's floatline and determine the depth of the water column at which the net is fished."[226] Based on the analysis of NMFS' observer data for the CA/OR DGN fishery from 1990 to 1995, the PCTRT noted that the majority of the cetaceans incidentally taken were observed entangled in the upper third of the net and a significantly greater number of cetaceans were caught during net sets that were shallower--using extenders that are less than 6 fathoms (10.9 m) deep; therefore, lowering nets in the water column was expected toill likely significantly reduce the incidental bycatch of cetaceans.[227]

"The PCTRT recommended that NMFS conduct mandatory skipper workshops on the components of the PCTRP, together with expert skipper panels, to further generate and consider potential, additional take reduction strategies."[228] Workshops were to provide drift gillnet skippers with information relevant to the development history of the take reduction plan, the components of the plan, plan implementation, species identification information, and methods to avoid marine mammal entanglement.[229] All CA/OR DGN vessel operators were to attend one Skipper Education Workshop before fishing in the 1997/98 fishing season (May 1 to Dec. 31).[230] Finally, the workshops were to solicit feedback from fishers on methods to successfully reduce marine mammal interactions.[231]

"The POCTRT recommended that NMFS and the CA/OR DGN fishery initiate an acoustic deterrent device (pinger) experiment in the fishery during the 1996–97 fishing season to evaluate the effectiveness of pingers at reducing incidental cetacean and strategic stock bycatch."[232] If experimental results indicated a reduction in cetacean bycatch, then the PCTRT recommended that NMFS require mandatory fleet-wide pinger use for all CA/OR DGN fishery vessels prior to the next fishing season (1997–98).[233]

---

226. *Id.* at 6932.

227. *Id.*

228. *Id.*

229. *Id.*

230. *Id.*

231. *Id.*

232. *Id.* "[A] workshop of cetacean and acoustic experts concluded that a pinger experiment should be conducted in the CA/OR DGN fishery to test its effectiveness at reducing cetacean entanglement. The workshop participants recommended that the pingers used in the New England sink gillnet fishery (10 kHz at 132 dB re 1<μ> Pa at 1 meter) be used experimentally in the CA/OR DGN fishery because the sound frequency of the pingers was within the hearing sensitivity of most of the cetaceans that interact with that fishery." *Id.*

233. *Id.*

"NMFS and the CA/OR DGN fishery initiated a pinger experiment in the CA/OR DGN fishery in August 1996."[234] Pingers used were of the same sound frequency, level, pulse duration, and rate as those used in the New England sink gillnet fishery. The results indicated that observed cetacean entanglement rate was almost 4 times greater for non-pinger sets than pinger sets.[235]

Finally, the take reduction plan also included:

> (1) a review of the current information on the status of the affected strategic marine mammal stocks; (2) a description of the CA/OR DGN fishery; (3) an analysis of data from NMFS's CA/OR DGN fishery observer program from 1990–1995; (4) primary strategies to reduce takes of strategic marine mammal stocks; (5) contingency measures that would reduce fishing effort; and (6) other recommendations regarding voluntary measures to reduce takes, enhance the effectiveness of the observer program, research on oceanographic/environmental variables, and other potential strategies considered and rejected by the team.[236]

The plan also contained language on operating procedures to use as contingency measures if takes continue to exceed PBR levels."[237]

3. Evaluation of the POCTRT Process and Plan

The PCTRT submitted its plan on August 15, 1996, and NMFS published the proposed rule to implement the plan on February 14, 1997, six months after submission. On October 3, 1997, NMFS published the final rule to implement the plan, effective October 30, 1997, requiring that the top of the nets be set at a minimum depth of thirty-six feet below the water surface, that pingers[238] be used on all nets, that the states of Califor-

---

234. *Id.*

235. *Id.*

236. Final Rule, Pacific Offshore Cetacean Take Reduction Plan Regulations, 62 Fed. Reg. 51,805 (Oct. 3, 1997) (to be codified at 50 C.F.R. pt. 229).

237. *Id.* "If . . . the [take reduction plan] objectives have not been met, the [take reduction team] will evaluate and recommend methods to reduce fishing effort in the upcoming season . . . ." *Id.* at 51,808.

238. "Under this rule, [NMFS-approved] pingers must be used on all vessels, during every set, and during the entire fishing season. A [NMFS-approved] pinger is an acoustic deterrent device which, when immersed in water, broadcasts a sound frequency range of approximately 10 to 80 kHz at 132 dB re 1 micropascal at 1 m with a pulse duration of 300 milliseconds and a pulse rate of 4 seconds." *Id.* at 51,810.

nia and Oregon reduce the number of "inactive" permittees, and that vessel operators be required to attend educational workshops regarding marine mammals and the take reduction plan.[239]

In the 1997/1998 fishing season, marine mammal incidental mortality was reduced by sixty-five percent.[240] At the PCTRT's recommendation, NMFS published an interim final rule on January 22, 1999, which modified specifications to allow for longer attachment lanyards to achieve safer deployment of pingers.[241] In 1999, the PCTRT met and again found that the marine mammal mortality had declined in the 1998/1999 fishing season, although one sperm whale was reported killed.[242] "[T]his mortality occurred in a set where the required number of pingers had not been deployed."[243]

In May 2000, the PCTRT met and reviewed the data for the 1999–2000 fishing season, which "indicate[d] that the entanglement of Cetaceans has increased in comparison to the prior seasons since the mandatory use of pingers."[244] "The increase in takes was particularly notable in the months of December 1999 and January 2000."[245] Although the take of species addressed by the take reduction plan remains below PBR and take is below ten percent of PBR (the current proposed definition of ZMRG) for all but three species, the PCTRT, concerned about the increase in take, recommended a package of measures for the next fishing seasons with the goal of addressing some of the potential causes for a possible trend that has been identified and obtaining additional data to assist in its analysis of appropriate recommendations.[246] These recommendations included:

- NMFS continue to require that fishers utilize a 36' extender in accordance with the final rule and technical amendment;
- NMFS continue to require fishers to use pingers on both the lead line and float line;
- NMFS and the industry conduct "research and development" on an alternative pinger that would be attached to the net and left on for the entire season;

---

239. *Id.* at 51,805–11.

240. 1999 Report, *supra* note 197, at 105.

241. Interim Final Rule, Pacific Offshore Cetation Take Reduction Plan Regulations, 64 Fed. Reg. 3431, 3432 (Jan. 22, 1999) (to be codified at 50 C.F.R. pt. 229).

242. 1999 Report, *supra* note 197, at 105.

243. *Id.* at 36.

244. 2000 PACIFIC OFFSHORE CETACEAN TAKE REDUCTION TEAM DRAFT RECOMMENDATIONS REP. 1 (2000).

245. *Id.*

246. *Id.*

- fishers convert to pingers that can be permanently attached to the net when they become available;
- fishers check the operation of each pinger to ensure compliance with the regulations for every set;
- appropriate state agencies continue not to re-issue permits that have lapsed in California, and encourage the continuation of the same level of permits issued by Oregon;
- NMFS continue to conduct mandatory Skipper Education Workshops[247] during September of this fishing season and continue this policy annually;
- fishers avoid setting in areas of high sightings and entanglements and establish a real-time communication system regarding sightings and entanglements;
- NMFS conduct timely abundance surveys;
- Observers check the functioning of pingers (whether they are on or off) and record their findings on the data form and if a mammal entanglement occurs, observers should record whether the pingers in the area adjacent to the take are working;
- NMFS should provide a tester for the observers to utilize; and
- NMFS implement an aggressive program of at-sea boardings in cooperation with CDFG and the US Coast Guard be implemented to enforce the Take Plan regulations.[248]

Overall, the PCTRT functioned smoothly, and the plan was nearly implemented within the time frame required by the MMPA. This is the only team that achieved its goal of reaching PBR. Reasons for this success were varied. For one, both regional and headquarter NMFS staff considered plan implementation under the authority of the MMPA a high priority. As such the plan required no further action by a fishery management council. Strong and timely modeling and analysis efforts by the NMFS scientific staff were also key, as well as the fact that the fishery was

247. "Workshops should include the following topics: information on the number of entanglements observed in the 1999–2000 season and the late season trend of increased entanglements; an update on the new pinger product options; new observer data collection efforts regarding the functioning of pingers; approaches for testing pinger efficacy; information from the Southwest Center regarding the correlation between sightings of marine mammals and entanglements and how to integrate this into fishing practices; approaches for establishing a real-time communication system among members of the fleet with respect to sightings and entanglements; potential relationship between sightings and water color, particularly for greener water (concentrations of chlorophyll); fisher feedback to improve current strategies and to evaluate possible additional strategies; [and] NMFS policy regarding enforcement of the regulations." *Id.* at 3.

248. *Id.* at 1–5.

minimally burdened by closures and restrictions in comparison to other fisheries. The team was small, open, and willing to accept scientific premises and work toward consensus; consequently, these factors contributed to the group's achieving their goals. Finally, NMFS's science staff quickly conducted the necessary experiments to support the research needs of the plan. This mix of commitment to the process and its implementation at all levels, along with the willingness to accept the data and actively engage in the process, is the keystone to success in the take reduction team process.

IV. CONCLUSIONS AND ANALYSIS OF THE TAKE REDUCTION TEAM PROCESS

A. Survey of the Take Reduction Team Process

In the fall of 1998, RESOLVE, a dispute resolution firm contracted by NMFS to facilitate the take reduction teams, surveyed take reduction team members to solicit feedback on the negotiation phase of the take reduction team process. The goal of the survey was to evaluate the take reduction team process for each of the five teams, to provide team members with an opportunity to express their interests and concerns about the negotiation process, and to assist NMFS in improving its future multi-party negotiation processes.

In summary, the results of the survey indicated that:

- Most respondents felt the process is effective in resource management decision-making. (eighty-six percent of respondents)
- Most respondents felt that the negotiation process was fair. (seventy-eight percent)
- Most respondents felt that there was adequate time for the overall negotiations. (sixty percent)
- Many participants were *not* satisfied with the results or the outcome of the negotiation. (sixty percent)
- Most respondents felt that there was *insufficient* data to support the negotiation. (sixty-eight percent)

B. The Role of the Facilitator

Through the take reduction team negotiation process, members were able to learn more about the status of marine mammals and their interac-

tions with commercial fisheries and the ecosystem than was previously known. A process has begun by which resource managers, users of the marine environment, and the public can develop relationships that lead to better public policy. The use of a facilitator was a key reason that several respondents experienced a sense of fairness in the negotiations.[249]

During the take reduction team negotiations, the facilitator was essential to identifying potential participants, achieving a representative balance of interest groups, formulating a team,[250] ensuring adherence to ground rules, setting dates and places for meetings, keeping the group on schedule, providing a means to keep discussions flowing and open to all participants, collecting notes and materials, and circulating drafts of various elements of emerging proposals. The facilitators were necessary to help players get past conflicts and move through posturing to substance. As talks progressed to increasingly difficult issues, the facilitator helped identify obstacles and assisted the group in reaching critical breakthroughs.[251] The author recommends that NMFS continue to use facilitators in the take reduction team process.

C. Commitment of Participants

The composition of the team and the authority of the NMFS staff person at the take reduction team negotiations are critical. The success of negotiations, particularly those requiring consensus, rely heavily on the good faith efforts of the participants to actively negotiate and not arbitrarily attempt to block consensus or the progress of the group. Therefore, it is necessary to select participants who are fully prepared to support the negotiation and consensus process, and to commit their organization to implement the outcome. Facilitators have noted that participants will only engage in multi-party negotiations if they believe that their particular interests will be better promoted by building consensus rather than directly lobbying their specific interests directly with the agency or Congress, or by initiating lawsuits.[252] For the most part, in all five of the take reduction teams, representatives from industry and environmental organizations and

---

249. RESOLVE, NATIONAL MARINE FISHERIES SERV. TAKE REDUCTION TEAM NEGOTIATION PROCESS EVALUATION 10 (1999).

250. Prior to the commencement of the negotiations it is important to identify and determine whether all of the necessary interest groups will be represented in the negotiations.

251. Telephone interview on September 16, 1996 with Abby Dilly, Vice President of the Keystone Center, Washington, D.C.

252. Nina M. Young & Suzanne Iudicello, *Blueprint for Whale Conservation: Implementing the Marine Mammal Protection Act*, 3 OCEAN & COASTAL L.J. 149, 209 (1997).

state managers negotiated in good faith and did their utmost to devise consensus plans.

However, the RESOLVE report noted that the role of NMFS's staff was not the same on all five take reduction teams, and sometimes the roles of NMFS's staff changed over the course of the six-month negotiation.[253] During the process, it was expected that representatives have the ability to speak on behalf of their organization, association, or agency. It was apparent that NMFS's staff did not represent the senior management team and did not have the authority to commit the agency to the consensus.[254] This inequity resulted in a significant amount of frustration with the process after the conclusion of the negotiations and at the time of plan publication.[255] Often, participants perceived that their recommendations were not being considered or implemented as submitted because a NMFS staff person with higher authority, who was not present at the negotiations, significantly changed the team recommendation before publishing it for public comment.[256] Sometimes these changes were made in direct violation of the MMPA because they contained little or no justification for the change.

If the take reduction team process is to succeed and participants to regain faith in NMFS decision makers, those staff with decision-making authority must be present at the table, and they must actively engage in the negotiation process.

D. Allowing Enough Time for Take Reduction Team Negotiations

While the survey indicated that sixty percent of respondents felt that there was sufficient time for negotiations, one team stated that insufficient time may have resulted in the failure of the team to reach consensus.[257] One of the benefits of the MMPA's six-month statutory time frame is that it pushed players to achieve closure; however, two teams in particular, the MATRT and the ALWTRT, could have benefitted from one additional meeting.

Generally, the timelines specified by the MMPA should not be changed. Time limits call for both the facilitator and negotiators to set priorities and identify issues on which they are most likely to achieve consensus early in the process. This then establishes a foundation whereby

253. RESOLVE, *supra* note 249, at 19.
254. *Id.*
255. *Id.*
256. *Id.*
257. RESOLVE, *supra* note 249, at 12–13.

the more contentious issues are tackled later in the process. It is important to recognize, however, that difficult issues require sufficient time for resolution, and any successful negotiation needs at least one opening session where parties do little more than "posture" and stake out territory before getting down to the business of compromise. In all situations, the take reduction teams met at least four times over a period of several days. The process requires a significant amount of time, and team members often found themselves trying to reach consensus on issues or adopting draft take reduction plans over the phone or by e-mail. Again, in the case of both the ALWTRT and the MATRT, consensus may have been reached had there been one additional meeting. The author recommends that NMFS work to ensure sufficient time for deliberations and the development of a take reduction plan. To the maximum extent possible, there should be one final meeting where the plan is approved. In addition, it was the author's experience that nearly every take reduction team has recommended that the team meet during the public comment period for the proposed rule to implement the plan. The teams have voiced that this meeting would be critical to discuss changes or modify the plan, should unexpected issues arise.

E. Improve the Data Needs and the Science

In the crafting of the 1994 amendments, the authors deliberately set out to separate processes for scientific assessment from the regulatory regime by creating two separate processes. Section 117 of the MMPA specifically addressed stock assessments, independent peer-reviews of those assessments, and consultations.[258] The goal of this two-pronged approach was to create greater confidence in the science upon which management measures were based.[259] This objective has not been entirely fulfilled.

Approximately sixty-eight percent of the RESOLVE survey respondents thought the data inadequate to support negotiations.[260] The survey indicated that government and environmental representatives were more prone to accept the available data and interpretations than the fishing community.[261] As noted in this manuscript, nearly every take reduction team identified data gaps and recommended research to address these gaps. Some members of the team were particularly skeptical about the methods

258. 16 U.S.C § 1386 (1994).
259. *See* Young, *supra* note 252, at 200.
260. RESOLVE, *supra* note 249, at 9.
261. RESOLVE, *supra* note 249, at 18–19.

to derive PBR or stock abundance or bycatch estimates.[262] These doubts generated heated debates regarding the necessary level of protection for marine mammals. The success of the take reduction team deliberations is strongly correlated to each group's ability to accept the underlying stock assessments, bycatch estimates, and PBRs, even if they are 'imperfect' science, and move forward to discuss conservation measures. Those teams that were 'data rich' and put their trust and confidence in the ability of the scientists to present and analyze data according to the best available scientific methods fared best. Because the population abundance data, bycatch estimate, observer data, and fishing effort data are central to the success of both the development and implementation of the take reduction plan, NMFS must make every attempt to acquire these data in a timely fashion and present them to the team.

Despite these conflicts, the relationship between the take reduction team and the scientific community can be mutually beneficial. Teams often give valuable feedback to scientists by identifying gaps and recommending research to fill these gaps in the take reduction plan. Also, scientific participation is helpful in negotiations for several reasons. First, discussions appeared to fare better when a person on the take team, who is either perceived as unbiased or perhaps was part of regional scientific review group, is present. Participation by scientists makes the scientific aspects of the management process more credible to fishers.[263] Second, scientists who participated in consultations within the scientific review groups and discussions within the take reduction teams are able to convey a better understanding of calculation origins to the fishers and conservationists of the take teams.[264] Third, the scientist on the take team can also act as a liaison with the regional scientific peer review group to ensure that recommendations related to scientific research are given proper attention. Finally, participation by scientists makes the scientific aspects of the management process more transparent.[265] Since fishers tend to be skeptical and challenge data, the presence of an individual with scientific expertise lends credibility to the underlying scientific information.

Nevertheless, the issue of reliable and sufficient scientific data upon which to develop and implement take reduction plans is critical to participants' perception of the legitimacy of the process. NMFS must make every attempt to acquire accurate stock assessment, bycatch, effort, and observer data in a timely fashion. Furthermore, that data must be presented and

---

262, RESOLVE, *supra* note 249, at 19.
263. Young, *supra* note 252, at 210–211.
264, *Id.* at 211.
265. *Id.*

statistically analyzed in a manner that is accessible to all team members. Finally, NMFS must work with take reduction team members to better integrate the scientific process with the management process to garner greater understanding and acceptance of the available science and the biological premise for PBR and the MMPA.

F. NMFS Implementation of the Take Reduction Plans

Perhaps the greatest downfall in the take reduction team process was not the negotiation, but the implementation of the product. In every case, NMFS failed to implement the take reduction plans within the statutory timeframe. In the cases of the GOMTRT and the MATRT, NMFS had to be sued to implement the consensus portion of those plans. NMFS also made other critical errors, attempting to implement the take reduction plans under the authority of the Magnuson-Stevens Fishery Conservation and Management Act and using the take reduction team process to close fisheries, the author believes this violates the intention of the MMPA's take reduction team process. There also exists a disturbing reality that NMFS is reluctant to accord this process the same level of importance as the fishery management council process. For those individuals engaged in this process, and whose livelihoods depend on the outcome, the process is equally important to fishery management council deliberations. Yet, as previously noted, NMFS does not require the staff that has the decision-making authority, such as the regional administrator, to attend negotiations. Furthermore, as in the case of the ALWTRT, when consensus was not reached on a plan, NMFS ignored areas where there was common ground evident in the history of the debate. If the group dynamics had been properly analyzed, a plan resulting in less controversy and greater risk reduction could have been promulgated by NMFS. The ultimate question is exactly how NMFS views this conglomerate body of parties. NMFS through its actions, has at times demonstrated that the take reduction team's views and comments carry no greater weight than those of the general public. This goes against the MMPA's intent in devise the take reduction team as an advisory body to devise, through a consensus negotiation, the take reduction plan—the basis for the regulations that would ultimately govern the fishery interactions with marine mammals.

In conclusion, take reduction teams are a valuable multi-party process, having great potential to yield effective conservation strategies for the elimination of marine mammal entanglement in gear of commercial fishing operations. However, the take reduction teams and plans rely heavily on the good faith efforts and commitment of all participants, effective and timely implementation of plans, and adequacy of resources to gather

information needed to evaluate whether the plan is achieving its goals. The success of these teams hinges on NMFS's ability to be an active participant and secure the necessary resources. To date, NMFS has severely undermined this process and the good faith that developed among the various interest groups in the course of the negotiations. This obstacle cannot be overlooked because the implementation of plans is not in the control of either the environmental community or the fishing industry, but instead rests with NMFS. Therefore, the CMC strongly recommends that NMFS give higher priority to the take reduction team process, the implementation of the plan, the commitment of its decision-makers to be active participants in the process, and the view that the take reduction team is as an advisory body on par with the fishery management council.