

available technology" standard to meet the ZMRG.

MMPA Amendments of 1994 (Public Law No. 103-238, 108 Stat. 532)

The legislative history for the MMPA amendments of 1994, which enacted MMPA section 118, reiterates the statutory language for ZMRG and does not expand on what it means (See H. R. Rep. No. 103-439, at 37 (1994); S. Rep. No. 103-220 at 16 (1994)). Importantly, these amendments included a specific date (7 years following enactment or April 30, 2001) by which commercial fisheries had to reduce incidental mortality and serious injury to insignificant levels approaching a zero mortality and serious injury rate.

The International Dolphin Conservation Program Act of 1997 (Public Law No. 105-42, 111 Stat. 1122)

Congress amended the MMPA again in 1997 to establish a new dolphin conservation program for the tuna fishery. The House Committee on Resources noted that, "while current law focuses on techniques of reducing dolphin bycatch, the alternative fishing practices exacerbate fishing pressure on other sensitive marine populations." (H. R. Rep. No. 105-74, Part I at 15 (1997))

This set of amendments to the MMPA did not specifically mention "insignificant levels approaching a zero mortality and serious injury rate". It did, however, authorize entering into a binding international agreement to establish a total dolphin mortality limit of 5,000 with an objective of progressively reducing dolphin mortality to a level approaching zero by setting annual limits (see MMPA section 302(1)). Furthermore, the 1997 amendments established stock-specific annual mortality limits (starting in 2001) of less than or equal to 0.1 percent of the minimum population estimate of the stock (section 302(3)). This stock-specific mortality limit is the mathematical equivalent of 10 percent of PBR for a cetacean stock of unknown or depleted status when using the default values for net productivity and the recovery factor.

The 1997 amendments required that all sets on dolphins must cease for the applicable fishing year if a mortality limit is exceeded and required the establishment of a per vessel annual mortality limit (MMPA section 302(4) and (7)); thus, high levels of mortality by a single vessel would not affect operations of other vessels that are not taking too many dolphins. Furthermore, the goal of eliminating dolphin mortality beyond the insignificant levels must be accomplished through a system

of incentives rather than regulation of fishing activity (MMPA Section 302(8)). As a result of these changes, the MMPA now includes a regulatory framework for reducing mortality to levels below dolphin mortality limits (which may be interpreted to be "insignificant levels") and includes further reductions to meet the ultimate goal of eliminating dolphin mortality to be accomplished through incentives.

Although the 1997 amendments made no explicit reference to the ZMRG, at least one constituent group noted the relationship between stock-specific mortality limits and the long-term goal of reducing incidental mortality and serious injury to a zero rate. In their written statement during hearings on the 1997 amendments, the Center for Marine Conservation (now known as the Ocean Conservancy) stated, "While any human-caused dolphin mortality is undesirable and recognizing that our objective is to eliminate dolphin mortality, the great majority of independent and government marine mammal scientists consider mortality levels of less than 0.1 percent to have a "negligible impact" on the dolphin stocks and to meet the MMPA's zero mortality rate goal." (Transcript of the "Hearing Before the Subcommittee on Oceans and Fisheries of the Committee on Commerce, Science and Transportation, United States Senate, One Hundred Fifth Congress, First Session, May 14, 1997).

ZMRG Concepts in Use

On June 16, 1995 (60 FR 31666), NMFS proposed regulations to implement provisions of MMPA section 118. In that proposed rule, NMFS stated that a fishery could have satisfied the requirements of ZMRG in two ways. First, mortality and serious injury of marine mammals incidental to that fishery, in combination with all other fisheries, was no more than 10 percent of PBR of the affected stocks of marine mammals. Second, in those cases where total fishery mortality was above 10 percent of PBR for one or more stocks of marine mammals, a single fishery was responsible for the removal of one percent or less of the PBR of any stock of marine mammals. The definition of the ZMRG in the proposed rule was related to proposed regulations for classifying fisheries so that only those fisheries that had achieved insignificant levels of incidental mortality and serious injury would be in Category III. NMFS related ZMRG and fishery classification in this manner because take reduction plans are the mechanism to reduce incidental mortality and serious injury to insignificant levels,

and Category III fisheries are not subject to take reduction plans.

When NMFS published its final rule (60 FR 45086, August 30, 1995) implementing MMPA section 118, these provisions related to the ZMRG were omitted. NMFS noted in the final rule only that the definition of ZMRG had been removed because the agency was still considering what would be an appropriate goal.

The proposed rule using 10 percent of PBR was based upon preliminary simulation models investigating a level of mortality and serious injury that would not delay recovery of a depleted stock by more than 10 percent of the time it would take to recover if the incidental mortality were not occurring. NMFS used these preliminary models as the scientific background for its description of fisheries in stock assessment reports as to whether the level of incidental mortality and serious injury rate of the affected stock of marine mammals "is insignificant and is approaching a zero mortality and serious injury rate." (MMPA section 117(a)(4)(D); 16 U.S.C. 1386(a)(4)(D))

Subsequent, more complete, simulation modeling revealed that annual mortality of 10 percent of a stock's PBR or less would, indeed, not delay the stock's recovery by more than 10 percent; however, for some stocks, particularly those endangered species with a recovery factor of 0.1, a higher level of mortality would not delay recovery by more than 10 percent. Thus, it appeared that the use of 10 percent of PBR in a final rule could result in over-regulation of some fisheries.

Although it was not used in a regulatory program, NMFS continues to use a value of 10 percent of a stock's PBR as a criterion in the stock assessment reports to evaluate whether incidental mortality is at insignificant levels approaching a zero mortality and serious injury rate and will continue to do so until a final rule defining the threshold for insignificant levels of mortality and serious injury is completed. The stock assessment reports have no regulatory role; therefore, a conservative value of "insignificant levels" within these reports has no adverse impact on fisheries.

Application of ZMRG to Reducing Bycatch in Commercial Fisheries

To evaluate whether or not commercial fisheries have attained the ZMRG, NMFS must consider at least two questions related to MMPA section 118(b) and (f). First, what is the level of mortality and serious injury for each stock of marine mammals that could be