

Committee on Resources

Subcommittee on Fisheries Conservation, Wildlife and Oceans

Statement

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Regarding the Development and Performance of Take Reduction Teams Established Under Section 118 of the Marine Mammal Protection Act

Before the House Committee on Resources

Subcommittee on Fisheries Conservation,

Wildlife and Oceans

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SUMMARY

My testimony summarizes my experience working as a scientist on the Pacific Take Reduction Team (TRT). The team convened in 1996 to try and reduce the mortality of marine mammals in the offshore drift gill-net fishery for swordfish and thresher shark. The team included participants from the fishing industry, environmental groups, scientists, and managers with National Marine Fisheries Service. The Pacific TRT worked extremely well together successfully developing and implementing a plan that has significantly reduced marine mammal mortality while not having a major financial impact on the fishery. The TRT process, while not always easy, was clearly worth the effort. Not only was a better plan developed as a result of the mix of participants in the team, but the direct involvement of these different constituencies resulted in their backing and helping to implement the plan. The TRT has accomplished the initial objective of reducing mortality of strategic stocks to below critical levels. It is now proceeding with the next step in the process, reducing mortality of all marine mammal species to levels approaching zero. In my testimony I review the steps taken by the Pacific TRT, how we worked together, the success we achieved, and some of the problems we encountered as well as solutions that would have helped deal with these problems.

BACKGROUND

I began working on this team in 1996 as a representative from the scientific community. Although I am employed at an independent non-profit research organization, much of my research has been under contracts from different branches of NOAA including Southwest Fisheries Science Center, the National Marine Mammal Laboratory, and several National Marine Sanctuaries. A focus of my work has involved assessments of marine mammal populations and impacts on humans on marine mammals in the North Pacific. Because I had been studying some of the marine mammal populations involved in incidental takes, my expertise was directly relevant to the goals of the TRT. For that reason, when I was asked to serve on the team, I agreed. This was despite the fact that the lack of compensation (other than reimbursement for travel) for committee members would be a hardship for both myself and the relatively small research organization with which I am employed.

The Pacific TRT was convened to reduce the mortality of a number of mostly offshore cetacean species that were becoming entangled in drift nets set for swordfish and thresher shark off Oregon and California. Most of the fishing was done in offshore waters of southern and central California. Most of the boats are fairly small (30-75 feet long).

A variety of marine mammal species were incidentally caught in the nets. Although the most common species entangled were short-beaked common dolphins, elephant seals and California sea lions, it was the smaller number of kills of several less common species that were of greater concern. Kills of these species, which included pilot whales, several species of beaked whale, pygmy sperm whale, sperm whale, and humpback whale, were of concern because the number estimated killed exceeded a level that could put the population at risk. The reduction in the kills of these so-called "strategic stocks" was the immediate priority of the TRT.

PARTICIPATION

Participants in the Pacific TRT included four fishermen directly involved in the swordfish thresher shark drift gill-net fishery, three representatives from environmental groups, several scientists who studied marine mammals in this region, and representatives from NMFS, California Fish and Game, and the Pacific States Marine Fisheries Commission. Also crucial to the process was the direct involvement of a number of scientists with Southwest Fisheries Science Center and a professional mediator who facilitated the meetings.

The active and enthusiastic participation of the fishery groups was a key to the success of the process. They acted from a genuine desire to decrease their impact on marine mammals and also understood that, for their long-term survival and public image, it was essential that they deal with this problem. Many times as the group as a whole searched to understand the causes of the problem and potential solutions, the crucial role of the fishermen was demonstrated as they provided insight hard to obtain from the data alone.

While the fishery representatives on the Pacific TRT worked faithfully and diligently to come up with solutions, there were also clear moments of tension among the participants. Early in the process, consideration of reductions in fishing effort that would reduce mortality but also make it harder to catch fish were clearly a difficult topic. We moved on from this with the agreement we would return to this after all other solutions to solve the mortality were explored first.

SEARCH FOR SOLUTIONS

The Pacific TRT worked intensively in the first half of 1996 to come up with methods to reduce mortality of the species which had been designated "critical" based on a mortality rate that exceeded what could safely be sustained. As a team we worked closely with scientists with Southwest Fisheries Science Center that conducted analyses of the data on marine mammal mortalities documented by observers place aboard a percentage of the fishing trips. The team examined all aspects of the data trying to identify patterns in the mortality that would indicate what factors caused higher rates of mortality and which appeared to result in lower mortality.

The interaction between scientists and fishermen was extremely productive. They suggested patterns they had noted in their fishing and these could be tested in the data. Other times the data would suggest a pattern and the fishermen would provide crucial information that would provide a reasonable explanation for the pattern. This was critical because there were many factors to consider and the relatively small number of mortalities documented when an observer was aboard meant there was limited "statistical power" to tease

apart confounding or inter-related factors.

At the end of 6 months the team settled on a four key recommendations:

- 1. Modify how deep the net hung in the water to require at least a six fathom gap between the surface of the water and the top of the net.** This stemmed from analyses that showed mortality was lower in nets that hung at least this deep in the water and from the observations that many marine mammals that became entangled did so near the top of the net.
- 2. Begin deployment and testing of "pingers" on the nets.** These devices generate noise in the water and had been shown to reduce the mortality of harbor porpoise in gill nets in several areas. Although they had not been tested on the principal species of concern to the Pacific TRT, data from this fishery revealed that entanglements tended to occur in the portion of the net farther from the vessel. This suggested these species might be avoiding or being alerted by the sound made by the vessel. Because of the uncertainty of the effectiveness of this strategy with the species involved the team recommended that the effectiveness of the pingers be tested with a rigorous experiment starting the next season.
- 3. Take voluntary steps to keep the fishery from expanding.** There was agreement on the TRT that it was premature to require a reduction in fishing effort as a way to reduce mortality. First we needed to try other strategies. There was agreement, however, that certain steps could be taken to at least prevent the fishery from expanding until methods were found to reduce marine mammal mortality. The team recommended that should the permits of an inactive fishermen expire, the California Department Fish and Game should not reissue that permit. We also recommended that a voluntary program of permit buy-backs be conducted, should the funds be available, to encourage inactive fishermen to let their permits lapse.
- 4. Require drift gillnet fishers to attend a workshop.** This was a program with backing of the representatives from the fishing industry to conduct workshops to educate the other fishermen in the industry. These workshops would provide a way to make fishermen aware of the problem, train fishermen in practices that would reduce mortality, make them aware of the teams recommendations, and get their input into other ways to reduce mortality.

SUCCESS

Strategies taken by the TRT have resulted in a dramatic reduction in mortalities of whales and dolphins. The experiment with pingers revealed they were extremely effective reducing mortality of many species. In the 1998 season, when all strategies recommended by the TRT were in effect, including the now mandated use of pingers, mortality of cetaceans was less than a fifth (17%) of what it had averaged in the six years prior to implementation of the plan. Most importantly to achieving the first goal of the TRT process was the reduction in mortality of the species deemed "critical". With the exception of the sperm whale, there was not a single documented mortality of another one of these critical species.

IMPLEMENTATION

One of the most important benefits of the active participation of fishermen occurred in the implementation of the plan. Decisions by the group were clearly made with the fishermen in mind, and there was clearly more respect given to the group by fishermen as a result of their own representatives being direct participants in the process. Without this, it would have been hard to convince fishermen to participate in the experiment to test the effectiveness of pingers and the next year to bear the expense of buying pingers for

their nets.

Training workshops and dialogs with fishermen were a clear priority of the plan. Mandatory skipper workshops were conducted by NMFS and TRT members participated in these. Again the direct involvement of the fishing groups in the process and in the training was critical to its success.

SPECIAL CIRCUMSTANCES

I recognize that some aspects of the success of the Pacific TRT may be partly the result of unique circumstances. The close working relationship, mutual respect, and trust that developed in our group was certainly not an inevitable part of the process. Slightly different personalities among any of the constituencies represented could easily have short-circuited the process early on when the group was trying to develop mutual respect and trust.

Our group also benefited from the dramatic and immediate effectiveness of one of the strategies the group developed; the use of pingers (sound generators placed on the net). Implementing some other alternatives the group was evaluating, the most contentious of which being further restrictions on where and when the fishery could occur, would have been far more divisive and could have fragmented the group.

IMPROVEMENTS

Through the process there were a number of limitations that hampered the team. I identify below some of the things that would have improved the success of the Pacific TRT in reducing marine mammal mortality.:

Need for biological research on population units and population size. SWFSC scientists advising the TRT did an excellent job of analyzing data, responding to questions from team members, and conducting experiments testing the effectiveness of the pingers. There was often frustration by team members, however, at the limited data on some species and the long intervals between planned surveys. Because the process of setting PBRs (Potential Biological Removals) relies on these data and uncertainties or imprecision in these estimates reduce the calculation of allowed take, the team clearly needed up to date and accurate estimates. The one thing all members of the group shared in common was a desire to see more frequent and accurate estimates made.

Need for resources to assist fishermen. The TRT recognized that many of the steps that needed to be taken were hard to do because of lack of resources. For example, everyone agreed that it would be a good idea to buy out the permits of some fishermen (those who were inactive or wanted to get out of the fishery). Removing these permit would prevent the fishery from expanding in the future and thereby causing an increase in mortality. The primary limitation was not having a source of funds to use to buy out these fishermen. Similarly, mandating the use of pingers on all nets put a hardship on many fishermen who had difficulty coming up with the thousands of dollars needed to get the required number of pingers.

Need for development of better pingers. It is clear that pingers have reduced mortality, however, they have not been designed for specific use on the drift net gear, nor are they necessarily using ideal sound parameters to reduce entanglement of the species caught in this fishery. If a pinger could be designed that could be left on the net, it would reduce the danger to fishermen trying to deploy them in rough weather and would improve compliance.

Need for clearer definitions. The group sometimes struggled to meet some of the demands of the TRT

process when there were not clear definitions for some of the terms. For example at the TRT's 1999 meeting the definition of the "Zero Mortality Rate Goal" had not yet been finalized.

Better enforcement. The Pacific TRT recognized the need for better enforcement of some of the regulations they have recommended and which have become adopted by NMFS. The lack of enforcement was suspected as one of the factors contributing to the a significant level of non-compliance (not using enough pingers or not placing them as required). Even the TRT representatives from the fishing industry backed better enforcement. They recognized that the lack enforcement hurt the fishermen adhering to the new rules while allowing those not following the regulations to obtain an unfair advantage.

In conclusion, I thank you for the opportunity to testify on my experiences as a member of the Pacific TRT. I have been honored to work with the team and am proud of our accomplishment. I think the creation of these teams proved extremely successful.

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