MARINE MAMMAL COMMISSION
AN INDEPENDENT AGENCY OF THE U.S. GOVERNMENT

Marine Mammal Interactions with Fisheries

Fisheries Impacts on Marine Mammals

Fishing activities present a significant global conservation threat to numerous marine mammals. Bycatch poses the greatest direct threat. However, some fishing activities may also indirectly affect marine mammals through trophic interactions.

Bycatch

The most significant threat to marine mammals due to fishing is bycatch, which occurs when individuals are accidently captured in fishing gear. Bycatch levels are alarmingly high across the world's oceans. Globally, approximately 650,000 marine mammals are killed annually due to bycatch[1] and nearly 25% of marine mammal species are at risk of extinction. [2]

FACTS

- Bycatch is the unintentional capture of non-target species, such as marine mammals, in fishing gear.
- Gillnets, longlines, and trawls are the gear types that most commonly result in bycatch.
- In addition to mortality, prolonged entanglement in fishing gear can impair the animal's ability to feed or reproduce.

Ecological Interactions

By depleting marine mammal prey populations or degrading habitats, fishing can indirectly affect marine mammal populations. Moreover, in some regions around the world, marine mammals are killed for use as bait. Marine mammals may come into conflict with fisheries when they consume bait and catch or damage fishing gear—a behavior referred to as depredation. Fishermen, in turn, may attempt to deter or retaliate against depredating marine mammals, leading to marine mammal injury or mortality.

Legal Requirements

Domestic

In the United States, fisheries interactions with marine mammals are managed under the Marine Mammal Protection Act of 1972 (MMPA). The MMPA aims to ensure that populations of marine mammals are maintained at optimum sustainable levels and requires regular stock assessments for those occurring in U.S. waters. The MMPA mandates that mortality and serious injury (MSI) levels should be below a biological reference point known as Potential Biological Removal (PBR); marine mammal stocks are classified as 'strategic' when direct, human-caused MSI exceeds PBR. The National Observer Program places federal observers aboard commercial fishing vessels to collect the data used to estimate bycatch MSI.

International

The United States has developed a sophisticated system to manage marine mammal bycatch, but many other nations lack similarly robust systems. To address this inequity, the U.S. implemented the MMPA Import Provisions, which require that other nations wishing to export fisheries products to the U.S. have comparable bycatch mitigation standards. As of January 1, 2026, international fisheries that do not meet the requirements of comparability will no longer be allowed to export their products to the U.S.[3]

[1] (Read, Drinker, and Northridge 2006) https://pubmed.ncbi.nlm.nih.gov/16909669/
[2] (Davidson et al. 2012) https://www.pnas.org/doi/10.1073/pnas.1121469109
[3] https://www.fisheries.noaa.gov/international-affairs/2025-marine-mammal-protection-act-comparability-finding-determinations

Domestic Management

To address the bycatch of strategic stocks in U.S. commercial fisheries, the National Marine Fisheries Service (NMFS) convenes multi-stakeholder Take Reduction Teams (TRTs)[4] composed of members from the fishing industry, academia, conservation groups, and state and federal government. TRTs develop consensus-based Take Reduction Plans (TRPs) that include voluntary and regulatory measures to reduce MSI below PBR. As of January 2026, there are eight active TRTs.

Pacific Offshore Cetaceans: A TRT Success Story

The Pacific Offshore Cetacean TRT was established in 1996 to reduce MSI of various cetacean species, including beaked, sperm, and humpback whales, by the thresher shark and swordfish drift gillnet fishery. The TRT successfully reduced MSI of all affected stocks in the fishery to below PBR. Many factors contributed to this success: scientists and fishermen cooperated to test new bycatch mitigation approaches, such as **pingers** and **net extenders**, state governments limited the number of permits available, and NMFS reaffirmed its commitment to its observer program.

Atlantic Large Whales: A Work in Progress

The Atlantic Large Whale TRT was created in 1997 to reduce MSI of three species of large whales—North Atlantic right, humpback, and fin—in gillnet and trap/pot fisheries. The Atlantic Large Whale TRT has employed a variety of mitigation measures to reduce the MSI of large whales, but this TRT has yet to reduce MSI below PBR for North Atlantic right whales. This team exemplifies the challenges of balancing competing economic and conservation priorities.

The Team is evaluating new approaches including **"ropeless" or "on-demand" trap or pot gear**, which could greatly reduce the number of entanglements. Moreover, **time-area closures** and other **modifications of fishing practices** have been implemented to reduce interactions between whales and fishing gear. Despite these efforts, MSI of North Atlantic right whales remains above PBR.

Pictured right: North Atlantic right whale entangled in fishing gear. Credit: Marineland Right Whale Project (NOAA permit 20626)

Takeaways

Of the eight current TRTs, only two have been fully successful. All TRTs encounter challenges in achieving—or in the case of successful TRTs, maintaining—their goals. Many of these challenges are consequences of inadequate funding:

- Funding for the National Take Reduction Program, which finances the TRTs to meet, and conduct research, develop, and implement new mitigation initiatives, needs to be increased.
- Programs that supply critical data to support the work of the TRTs, such as NMFS's observer program and the Marine Mammal Health and Stranding Response Program are vastly underfunded.[5]
- Although the number of protected species has tripled since 2005, NMFS's budget for monitoring and evaluating these species has not kept pace. As a result, the status of many marine mammal stocks is unknown or outdated, making it difficult to accurately track MSI and estimate PBR.[6]

Overall, reducing marine mammal bycatch requires that TRTs, and the data that support them, are adequately funded and prioritized by Congress and NMFS. The Marine Mammal Commission regularly engages with these and other interested parties to help promote this issue and spread awareness of the Take Reduction Program's needs.

[4] https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-take-reduction-plans-and-teams
[5] Other crucial data sources include fisher self-reports, opportunistic observations, and outside observer programs.
[6] Each year, the Commission publishes a letter regarding the stock assessments produced by NMFS. These letters are available at www.mmc.gov.