



PROGRESS REPORT: Fishers Reduce Bycatch in the Eastern Tropical Pacific

An olive ridley turtle off the Pacific coast of Costa Rica is hooked on a longline. © SAM FRIEDERICHS

The impacts of fisheries are among the five top hazards to sea turtles worldwide according to the IUCN Marine Turtle Specialist Group. One of the gravest fishery concerns is that of incidental capture, or bycatch, which accounts for the deaths of tens of thousands of turtles annually—deaths that are unintended, unwanted even by the fishers involved, and preventable. With years of data, world opinion, and technology combining to make the problem solvable, the fight against sea turtle bycatch may be reaching its tipping point at last.

Among Eastern Tropical Pacific countries, for instance, three years of collaborative engagement of fishers, nonprofit organizations,



Bycatch is one of the greatest current threats to sea turtles, including olive ridleys (shown in this photo). Solutions that effectively reduce catch rates and do not put fishermen out of business are socially acceptable and likely to be sustainable. © ALVARO SEGURA / WWF

researchers, and government agencies have led the way toward a profound transformation in the longline fishing industry. Nearly 300 vessels, 1,200 fishers, and 300 captains now participate in a bycatch reduction program. Eighty-six vessels now fully use turtle-friendly circle hooks and best fishing practices, and many more are making the shift.

This regional effort was initiated in 2003 in Ecuador by fishers, WWF, the Inter-American Tropical Tuna Commission, the National Oceanic and Atmospheric Administration, and the Ocean Conservancy, as reported in *SWOT Report, Vol. I* (2005). The effort has expanded to a network of partners in Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Mexico, Panama, and Peru, actively seeking solutions to bycatch problems and making changes that ensure the sustainability of their fisheries.

In the coming three years, this network will reach at least 2,000 artisanal longline vessels—a testimony to the fishers' willingness to prevent sea turtle bycatch and to adopt an ecosystem perspective toward the business of extracting ocean resources. The change is timely, amid an international market that increasingly demands sustainably sourced seafood.

Sea turtle bycatch is a major issue in longline fisheries targeting mahi mahi, swordfish, tuna, and other large fish. To achieve solutions, fishers deploy experimental fishing lines and act as onboard observers to collect scientific information, including turtles' interactions with the fishing gear. More than 1,000 experimental fishing trips and 1.6 million set hooks feed the regional database to test the gear's ecological and economic performance. One important conclusion has been that circle hooks are less harmful for turtles than J-hooks.

Most fishers are satisfied with the gear change, because in addition to reducing marine turtle mortality, large circle hooks and J-hooks have similar catch rates of tuna. However, catch rates of mahi mahi may be reduced by certain circle hooks in some fisheries. Continued research will refine the solutions to best suit the industry and to protect the turtles.

By far the most important achievement of this program to date has been the development of a trusting relationship among the fishing industry, non-profit organizations, and government agencies in focusing on the common goal of bycatch reduction.

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