

Setting nets below the surface means fishermen catch almost 80 percent fewer dolphins and whales

September 21 2021, by Chrystian Tejedor



A fisherman in Pakistan frees a dolphin caught in a gillnet in the Indian Ocean. Credit: WWF-Pakistan

Lowering gillnets into the water—instead of using them on the surface—can lower the chances of tuna fishermen accidentally hauling in dolphins and whales, according to new research led by Florida International University and World Wildlife Fund (WWF) in Pakistan.

Bycatch, the incidental capture of a non-targeted species, is the deadliest

threat facing [dolphins](#) and [whales](#) around the globe. It led to the extinction of the Yangtze River Dolphin and will probably lead to the extinction of the vaquita, of which less than 10 individuals remain the northern Gulf of California due to [bycatch](#) in gillnets.

Roughly 300,000 whales and dolphins are accidentally caught annually in global fisheries. Today, bycatch is the leading cause for the decline of 11 of 13 critically [endangered species](#) on the International Union for Conservation of Nature's Red List.

In a study of the fishing methods used by semi-industrial tuna gillnet fisheries in Pakistan, an international team led by FIU Institute of Environment researcher Jeremy Kiszka determined dolphin bycatch was reduced by 78.5 percent when gillnets were deployed about 6 feet below the surface. Given the estimated 100,000 whales and dolphins accidentally caught each year in gillnets in the Indian Ocean, the life-saving potential is monumental.



FIU Institute of Environment Researcher Jeremy Kiszka (far right) meets with fellow researchers from WWF-Pakistan at the beginning of the research study in 2018. Credit: Jeremy Kiszka

"In this case, lowering the net is something that works with dolphins. Our results are very significant," said Kiszka, an FIU marine biology assistant professor who is the study's lead author. "We can also see tuna capture is does not change significantly, which means that fishermen's livelihoods are not compromised by this change of fishing method."

To conduct the study, FIU and WWF Pakistan partnered to train five Pakistani captains to help collect data that otherwise could not have been

collected on the cramped fishing vessels used in that part of the Indian Ocean.

More research is needed to determine why lowering gillnets is an effective method to lower dolphin and whale bycatch, said Kiszka, who is also studying whether the method also leads to a drop in sea turtle bycatch.

More information: Jeremy J. Kiszka et al, Setting the net lower: A potential low-cost mitigation method to reduce cetacean bycatch in drift gillnet fisheries, *Aquatic Conservation: Marine and Freshwater Ecosystems* (2021). [DOI: 10.1002/aqc.3706](https://doi.org/10.1002/aqc.3706)

Provided by Florida International University

Citation: Setting nets below the surface means fishermen catch almost 80 percent fewer dolphins and whales (2021, September 21) retrieved 27 April 2024 from <https://phys.org/news/2021-09-nets-surface-fishermen-percent-dolphins.html>

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