



## CETACEAN BYCATCH MITIGATION RESEARCH IN THE INDIAN OCEAN

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Purpose, expectation and action intended (select one or more and include corresponding text)

Feedback (to collect input and suggestions)

The authors seek any initial comments or feedback on the project underway, including advice on the most beneficial method(s) to disseminate results upon its conclusion. The IWC also requests suggestions for any further collaborative initiatives that the WPEB considers relevant or useful for the IOTC.

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## Abstract

Following recommendations from the 21st Session of the WPEB, the International Whaling Commission (IWC), through the GEF-funded FAO Common Oceans Tuna Project, has initiated a pilot study in Sri Lanka to evaluate subsurface and illuminated drift gillnets as cetacean bycatch mitigation measures. Led by Blue Resources Trust, the project will compare bycatch and target catch rates across modified and traditional gillnets using a controlled experimental design with commercial fishers in the port of Jaffna. The IWC welcomes any feedback on the project and dissemination of future results.

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*Following recommendations from the 21st Session of the WPEB, the International Whaling Commission (IWC), through the GEF-funded FAO Common Oceans Tuna Project, has initiated a pilot study in Sri Lanka to evaluate subsurface and illuminated drift gillnets as cetacean bycatch mitigation measures. Led by Blue Resources Trust, the project will compare bycatch and target catch rates across modified and traditional gillnets using a controlled experimental design with commercial fishers in the port of Jaffna. The IWC welcomes any feedback on the project and dissemination of future results.*

### Background and rationale

At the 21<sup>st</sup> Session of the IOTC Working Party on Ecosystems and Bycatch, The WPEB NOTED paper IOTC-2025-WPEB21(AS)-43<sup>9</sup> on Co-Designing a Trial for reduction of cetacean bycatch: A Proposal for Collaborative Bycatch Mitigation Research, including the following abstract provided by the authors:

*“In accordance with Resolution 23/06 and recommendations from several WPEB meetings, the IWC is proposing three potential projects for cetacean bycatch monitoring and mitigation. These are summarised as follows: 1. Pilot study to further investigate sub-surface gillnets as a mitigation measure 2. Developing a roadmap for reducing cetacean bycatch in the Indian Ocean, and 3. Analysing a new long-term dataset from Pakistan's small-scale fleet. IWC would appreciate any feedback on which of these initiatives would be more valuable in the context of IOTC, as well as suggestions for locations and project partners with which IWC should collaborate.”*

The WPEB AGREED that a pilot study of sub-surface gillnets in a new location of the IOTC area was the preferred way forward, as it was considered the most practical and had been previously recommended by the WPEB.

Following on from this decision the IWC, through its capsule project “Assessing and addressing cetacean bycatch in tuna fisheries” of the GEF-funded FAO Common Oceans Tuna Project, is funding a pilot study of sub-surface gillnets in Sri Lanka.

### Project outline

The project, led by Sri Lanka-based non-profit Blue Resources Trust, is testing subsurface and illuminated drift gillnet bycatch rates compared to control (surface-set) gillnet panels, providing the first controlled trial and comparison of these two bycatch mitigation methods. Whilst a previous study had compared bycatch rates in subsurface versus surface-set gillnets and found promising reductions in bycatch rates of small cetaceans, these trials were conducted independently of each other and so did not systematically evaluate the effect of subsurface gillnets while controlling for potentially confounding factors<sup>10</sup>. In addition, subsurface and illuminated gillnets have never been directly

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<sup>9</sup> IOTC (2025). Co-Designing a Trial for reduction of cetacean bycatch: A Proposal for Collaborative Bycatch Mitigation. Paper IOTC-2025-WPEB21(AS)-43. 21st Session of the Working Party on Ecosystems and Bycatch (WPEB), Indian Ocean Tuna Commission.

<sup>10</sup> Kiszka, J., Moazam, M., Boussarie, G. et al. 2021. Setting the net lower: a potential low-cost mitigation method to reduce cetacean bycatch in drift gillnet fisheries. *Aquatic Conservation: Marine and Freshwater Ecosystems*, 31: 3111-3119.

compared in bycatch mitigation trials, leaving uncertainty in the best approach for reducing bycatch of different species.

Over a one-year period, the project is working collaboratively with fishers in Jaffna, Sri Lanka, to test these two mitigation methods. This location was chosen as it had been identified as a hotspot for small cetacean bycatch following structured interviews with fishers throughout Sri Lanka.

The experimental design consists of one control gear type and two treatments: (1) Traditional surface-set gillnets (control); (2) Subsurface gillnets set at 2m depth; and (3) surface-set gillnets with green lights spaced at 10m intervals. Each gillnet includes 500m segments of each of the control and treatment nets, separated by 500m buffer zones of surface-set gillnets to ensure there are no spillover effects. Five fishing crews who have previously worked with Blue Resources Trust on fisheries research projects have been trained to use alternative gears and record data on target catch and bycatch rates. 3-6 months of gear testing will take place with each participating fisher, and fishers will receive a stipend for testing gear and collecting data.

### **Project update**

The project commenced in May 2026, following receipt of a No Objection Letter for the research from the Director General of the Department of Fisheries and Aquatic Resources (DFAR). Project staff have visited Jaffna and met with several government officers. Through these discussions, the team has been able to connect with several multi-day fishing boat owners. These are vessels that typically operate offshore for multiple days (often 7–10 days, and sometimes up to several weeks or months at sea) and are more likely to interact with cetaceans during their fishing activities. Most of these boats are engaged in longline fisheries for part of the year, and shift to gillnet fisheries in August–September.

Fishers have been trained to collect data on operational factors and bycatch rates in each panel and will collect images of bycatch species of interest for data validation and species identification. This approach has already been implemented successfully over the past 1.5 years with six fishing crews on the east coast of Sri Lanka. Preliminary results from these previous trials indicate reduced cetacean bycatch rates in both subsurface and illuminated gillnets. During these trials, 60 small cetaceans were captured in systematic trials, with the fewest captured in subsurface gillnets. These catches occurred in 774 recorded gillnet sets. Collecting additional data, particularly in areas with high reported bycatch rates, will be critical due to the zero-inflated nature of the data collected across the two mitigation methods.

Trained fishers record gillnet soak time, number and type of target catch in each set, number and type of bycatch in each test panel, time required to haul in the net, and the sale price of all target catch and bycatch from each fishing trip. Participating vessels are outfitted with solar-powered GPS units to record fishing locations, and observers and fishers have been provided with GPS-equipped cameras to take photos of bycatch specimens, providing precise data on the spatial distribution and species identification of bycatch.

### **Call for feedback and collaboration**

The IWC thanks the WPEB for its previous input and seeks any initial comments or feedback on the project underway, including advice on the most beneficial method(s) to disseminate results upon its conclusion. The IWC also requests suggestions for any further collaborative initiatives that the WPEB considers relevant or useful for the IOTC.