

 <p>Agreement on the Conservation of Albatrosses and Petrels</p>	<p>Tenth Meeting of the Seabird Bycatch Working Group <i>Virtual meeting, 17 - 19 August 2021 (UTC+10)</i></p> <p>Hauling mitigation for small longline vessels</p> <p><i>Goad, D. & Peatman, T.</i></p>
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Attachment: Goad, D. and Peatman, T. 2021. Hauling mitigation for small longline vessels. MIT2018-02 final report prepared by Vita Maris for the Conservation Services Programme, Department of Conservation. 34 p. <https://www.doc.govt.nz/our-work/conservation-services-programme/csp-reports/202021/hauling-mitigation-for-small-longline-vessels/>

SUMMARY

Simple haul mitigation devices were trialled on three small longline vessels in New Zealand; two pelagic longline vessels and one demersal longline vessel. A combination of real time observations and Go Pro footage was used to collect data on the pelagic longline vessels. Additionally, on the demersal longline vessel, electronic monitoring video footage collected to monitor seabird captures was used to collect data over a longer time period. All data sources were comparable and returned similar results.

Due to low capture and direct interaction rates, it was necessary to use bird attendance in the area around the longline as a proxy for bycatch risk. Model results showed that mitigation devices reduced the number of birds moving into the area immediately around the hauling station. On the demersal longline vessel, retrieving surface floats also reduced bird attendance beside the hauling station.

Data collected in real time allowed for investigation of the influence of additional variables on the numbers of birds moving into the area beside the hauling station. For the models fitted to pelagic longline data, and both pelagic and demersal longline data, higher proportions of squid bait reduced the number of birds entering the area beside the hauling station. The model fitted to demersal longline data showed that higher wind speeds increased the number of birds entering the area beside the hauling station. Although not selected in the final models, observations of bird behaviour indicated that wind strength and direction relative to the vessel influenced the ease with which birds could access baited hooks. Exploring these relationships statistically would require larger real time data sets.

The use of EM data allowed for generation of a longer-term data set, and the mitigation employed by the vessel should be routinely recorded when collecting data from video footage, to allow for analysis across larger data sets.

This work shows that simple and cheap hauling mitigation devices have the potential to reduce bycatch risk to seabirds during longline hauling with minimal impact on fishing operations.