

 <p>Agreement on the Conservation of Albatrosses and Petrels</p>	<p>Eleventh Meeting of the Seabird Bycatch Working Group</p> <p><i>Edinburgh, United Kingdom, 15 - 17 May 2023</i></p> <p>Global prevalence of setting longlines at dawn highlights bycatch risk for threatened albatross</p> <p><i>David Kroodsma¹, Joanna Turner¹, Cian Luck¹, Tim Hochberg¹, Nathan Miller¹, Philip Augustyn², Stephanie Prince²</i></p> <p><i>¹Global Fishing Watch, California, USA. ²BirdLife International, Cambridge, UK.</i></p>
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SUMMARY

Longline fishing kills over 160,000 seabirds annually, with bycatch in these fisheries contributing significantly to the widespread, global decline in albatross populations. One of the most effective ways to reduce this bycatch is for pelagic longliners to set their hooks entirely at night, when albatross are least active, and setting at night is recommended in some areas of the ocean by Regional Fisheries Management Organizations. To develop a global dataset of where and when longliners actually set their hooks, we apply machine learning to three years of GPS data of the global longline fleet (~5000 vessels). Our data reveal the vast footprint of longline fishing: over 40 % of the ocean is, at least one time during a year, within 30 km of a set, the distance within which an albatross can detect a vessel. On a given day, about 1.5 % of the ocean is within this distance of a set. Almost all of these sets were during daylight hours, with only 3 % of sets occurring entirely at night. In regions with threatened albatross species, night setting is more common (7–12 %), but it is much lower than suggested by on-board observer programs, highlighting the limitations of current monitoring. Furthermore, in albatross habitat, vessels more often set their lines during dawn hours when these birds are most active and bycatch risk is highest.