



Agreement on the Conservation  
of Albatrosses and Petrels

**Joint Thirteenth Meeting of the Seabird Bycatch  
Working Group and Ninth Meeting of the Population  
and Conservation Status Working Group**

*Swakopmund, Namibia, 26 May 2026*

**Navigating uncertainty in fine-scale fisheries  
overlap to assess bycatch risk of a wide-  
ranging pelagic seabird**

***Jonathan D. Rutter, Ana P.B. Carneiro, Igor Debski,  
Maria R. Düssler, Johannes H. Fischer, Graham Parker,  
Kalinka Rexer-Huber, Olivia Rowley, Paul Sagar,  
Henrik Schultz, Kate Simister, Tim Guilford, Katrina J.  
Davis***

**A password is required to view the full text document**

**SUMMARY**

Long-term tracking is an increasingly important tool for assessing bycatch risk of pelagic seabirds, which overlap with fisheries from multiple jurisdictions across vast spatiotemporal ranges. However, it can be difficult to compare measures of fine-scale fisheries overlap across tracking datasets, as tracking data from both birds and vessels vary widely in spatial and temporal uncertainty. Here, we navigated this challenge to examine fine-scale fisheries overlap of the toroa (southern Buller's albatross, *Thalassarche bulleri bulleri*) through breeding and early migration (January-October). Fifty-two adults from the Tini Heke/Snares Islands were tagged with GPS tags (2-120 min interval, low spatial error), while 20 adults from Hautere/Solander Island were tagged with Argos-PTT tags (4-9 hr interval, high spatial error). Using continuous-time movement models (CTMMs) to account explicitly for these differences in uncertainty, we quantified where and how long birds may have attended (co-occurred within 3 km of) individual actively fishing vessels from various fleets across the South Pacific. We found that attendance rates were highest with trawl fisheries around Aotearoa New Zealand and Tasmania during chick-rearing, with some fishery-specific attendance rates differing significantly between breeding colonies. Attendance rates with pelagic longliners were lower than for trawlers. Although we observed birds foraging in Chile, Peru, and the High Seas, we found relatively little attendance in these areas, potentially reflecting low AIS coverage. Our results underline the high degree of responsibility borne by the domestic fisheries of Aotearoa New Zealand, particularly deepwater trawlers, for conservation of the toroa. More broadly, we highlight the importance of accounting for uncertainty in estimates of fine-scale seabird-fishery overlap, and the difficulty of assessing bycatch risk in areas with low AIS coverage.