

 <p>Agreement on the Conservation of Albatrosses and Petrels</p>	<p><b>Tenth Meeting of the Seabird Bycatch Working Group</b> <i>Virtual meeting, 17 - 19 August 2021 (UTC+10)</i></p> <p><b>Tori lines mitigate seabird bycatch in a pelagic longline fishery</b></p> <p><b><i>Eric Gilman, Milani Chaloupka, Asuka Ishizaki, Matthew Carnes, Hollyann Naholowaa, Colby Brady, Sarah Ellgen, Eric Kingma</i></b></p>
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### SUMMARY

Albatross bycatch has been increasing over the past decade in the US central North Pacific tuna longline fishery. A controlled field experiment was used to assess the efficacy of bird scaring or tori lines as a seabird bycatch mitigation measure for this fishery in a 3-factor sampling design with other mitigation methods (blue-dyed bait, offal discharge). A multilevel geospatial Bayesian regression modeling approach was used to assess 3 albatross-gear interaction metrics (attempted contacts, contacts, captures) recorded for each longline set using an electronic monitoring system. We found albatross contacts with baited hooks were ca. 3 times (95% highest posterior density interval [HDI]: 1-7) less likely for sets equipped with tori lines rather than without tori lines. Attempts to contact baited hooks were ca. 2 times (95% HDI: 1-4) less likely for tori line-equipped sets. Albatrosses were also less likely to be captured in tori line sets but captures were too few to support strong inference compared with the contact rates. Tori lines were therefore found to be an effective management measure to mitigate albatross interactions with this fishery. Offal discharge during setting, however, was associated with higher seabird interactions — but that inference was not strong since offal discharge and blue-dyed bait were confounded treatments in some sets. Nonetheless, it was apparent that neither offal discharge nor blue-dyed bait was helpful in reducing albatross interactions in this trial and so the efficacy of those measures warrants further experimental investigation.