

 <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>Predicting the relative effectiveness of different management scenarios at reducing seabird interactions in a demersal trawl fishery</p> <p><i>Sebastián Jiménez, Enrique Páez, Rodrigo Forselledo, Agustín Loureiro, Pablo Troncoso, Andrés Domingo</i></p>
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SUMMARY

The incidental mortality in trawl fisheries is considered a conservation threat for many seabirds. We simulate management scenarios, combining bird scaring lines (BSL; zero, one and two) and variables describing discards (occurrence, levels, type, and mode), to predict the total seabird collisions with warp cables potentially produced by a demersal trawl fleet operating in a region and season of high seabird abundance. A total of 2067 collisions, including 439 heavy collisions and 53 fatal collisions, were recorded on five trips aboard the Uruguayan trawl fleet. One BSL reduced collisions and heavy collisions by 89%, and the associated mortality by 94%. Best management scenarios in terms of reducing collisions were those without discards, where the models with BSL outperformed the scenarios without BSL. Scenarios with two BSL presented slight improvements, likely caused by the small sample size. Under a scenario without discards, the mortality caused by the entire fleet is likely to be negligible. Given the inability to eliminate discards in most situations, we simulated scenarios of discharge produced in batches with BSL. This could drive mortality to negligible levels. We provide six recommended scenarios (S) ordered by expected reduction in seabird mortality. Fisheries implementing BSL as a single mitigation measure should present a strong reduction in seabird mortality. However, the ability to hold discards on board, at least partially, can drive mortality to negligible levels. This should occur without discards and BSL use (S1), without discards and without BSL (S2), and with batch discharge and BSL use (S3).