

 <p>Agreement on the Conservation of Albatrosses and Petrels</p>	<p>Third Meeting of the Population and Conservation Status Working Group</p> <p><i>La Serena, Chile, 5 – 6 May 2016</i></p> <p>Evaluating alternative approaches to predicting at-sea distributions and fisheries overlaps of ACAP species in Ecological Risk Assessments</p> <p><i>R.A. Phillips, J.R.D. Silk and C. Small</i></p>
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SUMMARY

The objective of this ACAP-funded project was to evaluate different approaches to predicting overlap between the at-sea distributions of seabirds and fishing effort. Overlap indices are often included in seabird Ecological Risk Assessments (ERAs) in fisheries to identify the species most at risk, the specific fisheries, areas and times of year when the threat of bycatch may be highest, and for predicting important areas at sea that might merit a particular management or conservation focus. The evaluation involved cleaning and standardisation of data (1798 tracks) from 7 ACAP species from South Georgia (Islas Georgias del Sur)¹ tracked during the breeding and nonbreeding seasons. Separate maps created for each stage of the breeding season (incubation, brood-guard and post-guard), and the nonbreeding season, were weighted to create annual distribution maps for each species. The weightings allowed for the different durations of each phase, and assumed for the breeding season that 50% of the population were breeding birds and the remainder were nonbreeders (juveniles, immatures and deferring). These distributions were then compared with density distributions predicted using (i) BirdLife range maps (assuming uniform densities throughout the range), or (ii) the BirdLife range maps for the non-breeding distribution and assuming during the breeding season that the density of breeding birds is uniform within the mean maximum foraging radius (based on tracking data submitted to the BirdLife Seabird Tracking Database). Anomaly (difference) maps were created on a global projection with a 500 km grid to highlight areas where the two predictions over- or underestimated bird densities compared with the tracking data. The results are discussed in the context of pitfalls associated with predicting seabird distributions and relative overlap with fisheries in the absence of tracking data for these highly pelagic species.

¹ "A dispute exists between the Governments of Argentina and the United Kingdom of Great Britain and Northern Ireland concerning sovereignty over the Falkland Islands (Islas Malvinas), South Georgia and the South Sandwich Islands (Islas Georgias del Sur y Islas Sandwich del Sur) and the surrounding maritime areas".