Distribution of albatrosses and petrels in the Western & Central Pacific & overlap with WCPFC longline fisheries

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Summary

- The WCPFC area includes 46% of the global breeding distribution of albatrosses, making it a highly important area for the conservation of these vulnerable species.
- Distribution is concentrated below 30°S and above 20°N, and a substantial proportion is in high seas areas.
- WCPFC longline fisheries set approximately 100 million hooks below 30°S and above 20°N per year. Overlap in the North Pacific is greatest in the 1st and 4th quarters. Overlap around Australia and New Zealand is greatest in the 2nd quarter.
- Available bycatch data indicate that seabird bycatch mitigation measures are highly likely to be necessary in the WCPFC areas.
- BirdLife strongly supports WCPFC's commitment to developing a regional observer program and hopes that WCPFC will collaborate with seabird bycatch mitigation experts in developing appropriate data-collection methods for recording seabird bycatch within this program.
- BirdLife offers its assistance to WCPFC to undertake detailed analysis of spatial and temporal overlap between WCPFC longline fisheries and distribution of albatrosses and petrels.

1. Background

Seabirds are becoming increasingly threatened faster than any other group of birds, largely due to threats to albatross and petrel populations. It has been identified that the principle threat to most species is through being caught as bycatch in pelagic and demersal longline fisheries (Brothers, 1991; Gales, 1993; Weimerskirch et al., 1997). Bycatch of albatrosses and petrels occurs when they are attracted to fishing vessels to feed on offal and bait, and when attempting to dive on the baited hooks during setting, become caught and drown. Albatross and petrel populations are long-lived and have low reproductive rates, meaning that they are highly vulnerable to increased adult mortality. Nineteen of the 21 species of albatross are currently under global threat of extinction (IUCN red list).

Albatrosses travel vast distances across the oceans, and consequently, as for highly migratory fish stocks, their protection depends on collaboration between States. Regional Fisheries Management Organisations (RFMOs) have a central role to play in the conservation of albatross and petrel species, managing a number of the fisheries that are known, or likely, to be killing substantial numbers of albatrosses and petrels each year.

CCAMLR has demonstrated the scale of achievement that is possible through action by an RFMO, having reduced albatross and petrel bycatch in its regulated fisheries by over 99%. Under the international legal framework for the oceans (UN Fish Stocks Agreement, FAO Code of Conduct for Responsible Fisheries), other RFMOs also have the duty to take action to minimise bycatch of vulnerable non-target species such as albatrosses and petrels.
Fig. 1. Density distribution of breeding albatrosses in relation to the areas managed by selected RMOS.

Reproduced from *Tracking Ocean Wanderers* (BirdLife, 2004).
Fig 3. Distribution of (a) breeding and (b) non-breeding albatrosses from Australia and New Zealand. Breeding data from 9 species of albatross, non-breeding data from 7 species of albatross. Reproduced from Figures 4.4 and 4.5 from *Tracking Ocean Wanderers* (BirdLife, 2004).

(a) Breeding

(b) Non-breeding
Fig 5. Distribution of breeding albatrosses in the North Pacific and overlap with WCPFC pelagic longline fishing effort. Fishing effort average 2000-2002 ('000 hooks), summarized by year-quarters.

(a) First quarter (January – March)

(b) Second quarter (April – June)

(c) Third quarter (July – August)

(d) Fourth quarter (October – December)
4. Seabird bycatch within WCPFC longline fisheries
The extent of seabird mortality is poorly known for most of the world’s longline fisheries (Baird 2001). Currently there are few bycatch data for fisheries operating on the high seas within the WCPFC area (as discussed in EB WP-1).
However where data is available, including within the EEZs of Australia, New Zealand and the US, bycatch of albatrosses and petrels has been identified as a serious and urgent conservation concern (e.g. Baker et al., 2002; Gilman & Freifeld, 2003; Reid et al., 2001; Rivera, 2002; Tuck et al., 2004; Waugh et al., 1999).
Given the bycatch within EEZ areas, it is highly likely that significant albatross bycatch is taking place in these high seas areas, and that this may be posing significant threat to the survival of albatross and petrel species.
Further bycatch data are critically needed in order to understand the rates of bycatch of albatross and petrel bycatch in the Western and Central Pacific Ocean, and the rates associated with each fishery.

5. Recommendations for consideration by the WCPFC Ecosystem & Bycatch Specialist Working Party
- Seabird bycatch mitigation measures are highly likely to be necessary in longline fisheries in the WCPFC areas. The potential exists to reduce bycatch rates to minimal levels
- BirdLife strongly supports WCPFC’s commitment to developing a regional observer program and hopes that WCPFC will collaborate with seabird bycatch mitigation experts in developing appropriate data-collection methods for recording seabird bycatch within this program.
- BirdLife offers its assistance to WCPFC to undertake detailed analysis of spatial and temporal overlap between WCPFC longline fisheries and distribution of albatrosses and petrels.

References: