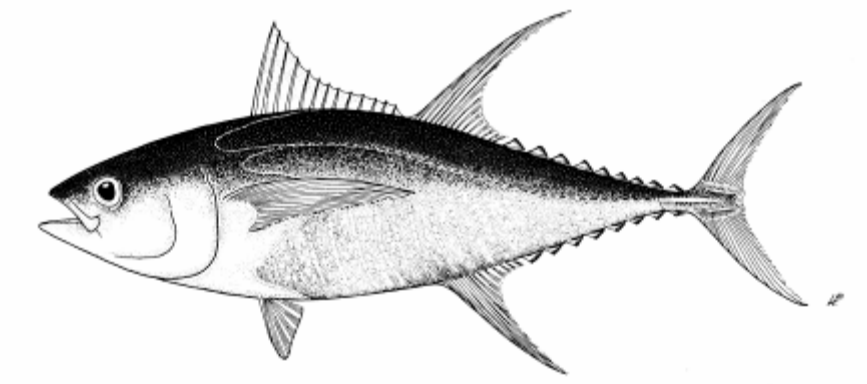
WCPFC–SC1 **EB IP–1**

1st Meeting of the Scientific Committee of the Western and Central Pacific Fisheries Commission
WCPFC–SC1
Noumea, New Caledonia
8–19 August 2005

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



Cleo Small

Birdlife International Global Seabird Programme

August 2005

BirdLife
INTERNATIONAL

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

Prepared for the first meeting of the WCPFC Ecosystems & Bycatch Specialist Working Group, Noumea, 13 August 2005

Dr Cleo Small
BirdLife International Global Seabird Programme
cleo.small@rspb.org.uk

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

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 RFMOs. Reproduced from *Tracking Ocean Wanderers* (BirdLife, 2004).

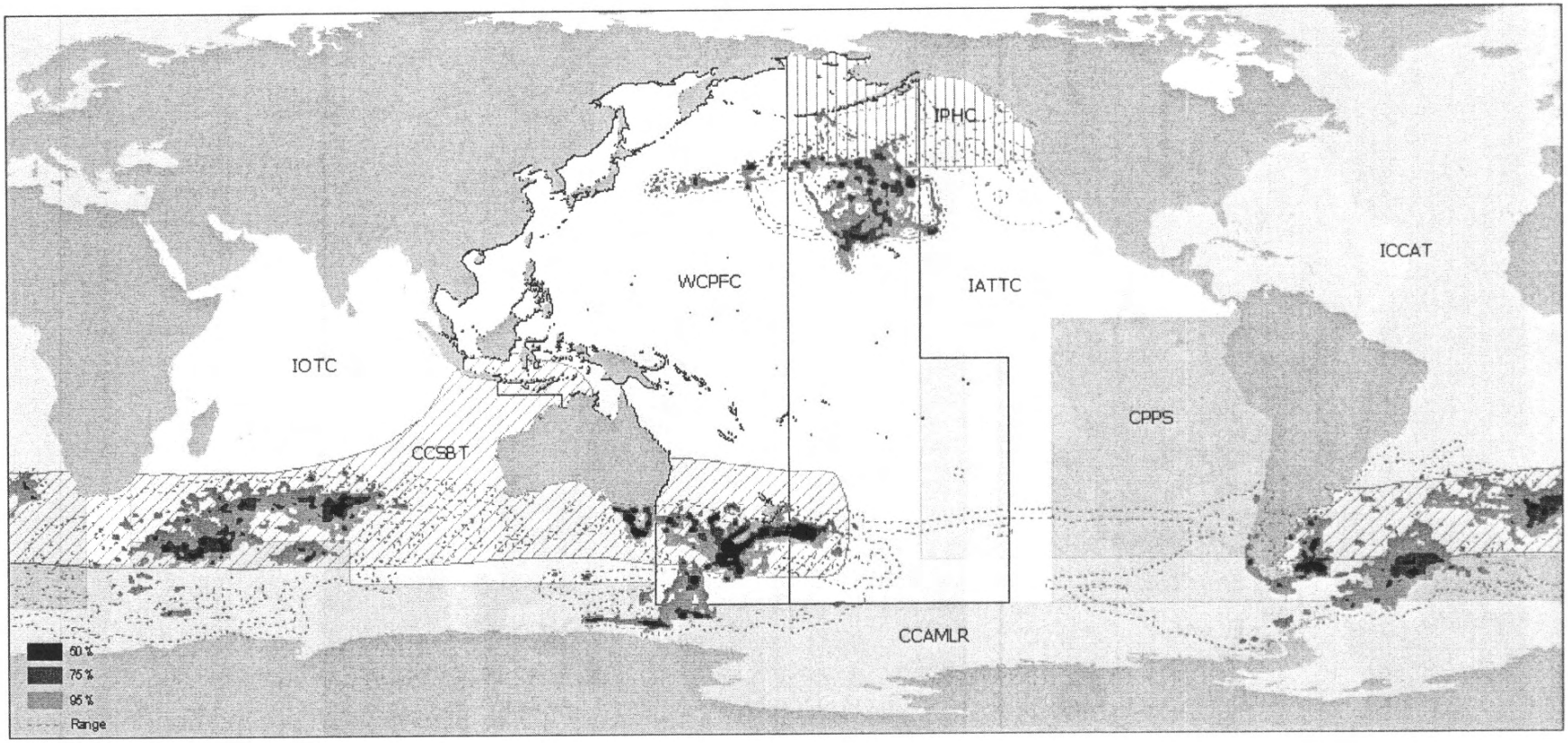
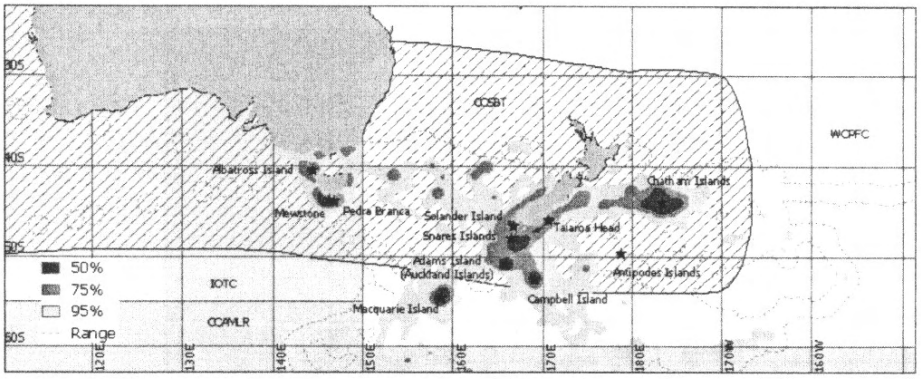


Fig 3. Distribution of (a) breeding and (b) non-breeding albatrosses from Australia and New Zealand. Breeding data from 9 species of albatross, non-breeding data from 7 species of albatross. Reproduced from Figures 4.4 and 4.5 from *Tracking Ocean Wanderers* (BirdLife, 2004).

(a) Breeding



(b) Non-breeding

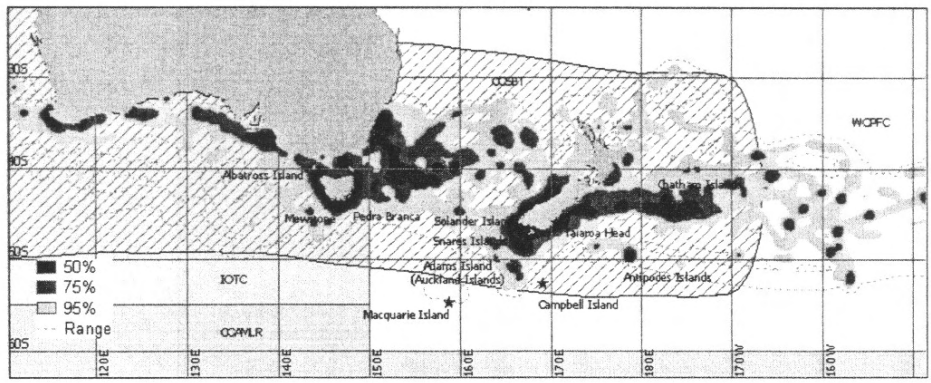
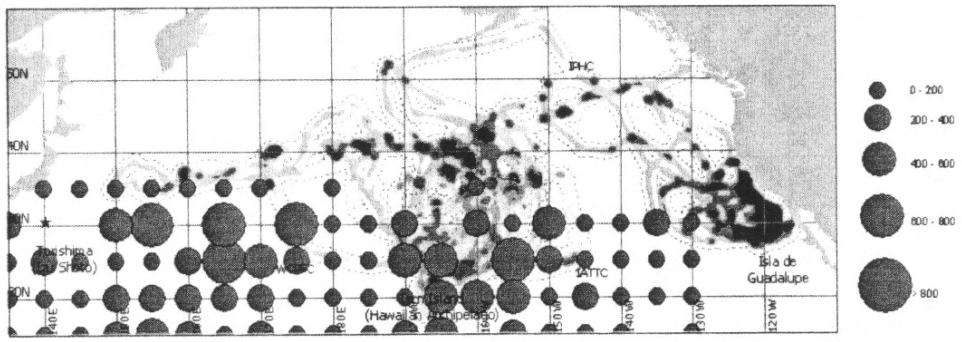
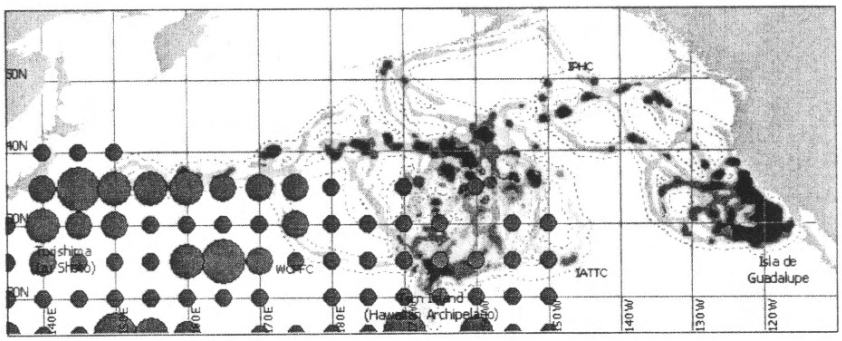


Fig 5. Distribution of breeding albatrosses in the North Pacific and overlap with WCPFC pelagic longline fishing effort. Fishing effort average 2000-2002 ('000 hooks), summarized by year-quarters.

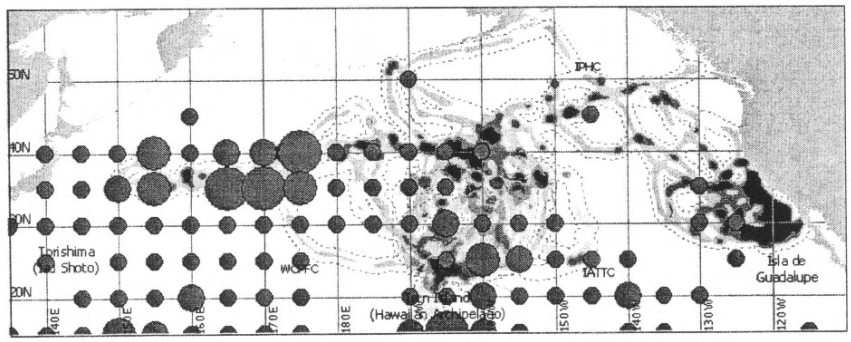
(a) First quarter (January – March)



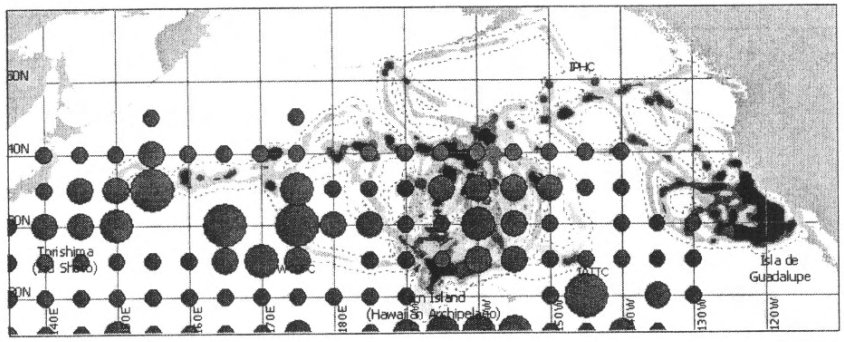
(b) Second quarter (April – June)



(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:

Baker, B., Gales, R., Hamilton, S., Wilkinson, V. 2002. Albatrosses and petrels in Australia: a review of their conservation and management. Emu 102: 71-97.

Baird, S.J.2001. Report on the International Fishers' Forum on solving the incidental capture of seabirds in longline fisheries, Auckland, New Zealand, 6-9 November 2000. Department of Conservation, Wellington.

BirdLife International, 2004. Tracking Ocean Wanderers: the global distribution of albatrosses and petrels. Results from the Global Procellariiform Tracking Workshop, 1-5 September 2003, Gordon's Bay, South Africa. Cambridge, UK, BirdLife International.

Brothers, N.,1991. Albatross mortality and associated bait loss in the Japanese longline fishery in the Southern Ocean. Biological Conservation 55: 255-268.

Gales, R., 1993. Cooperative mechanisms for the conservation of the albatross. Australian Nature Conservation Agency Review. Tasmanian Government Printer, Hobart.

Gilman, E., Freifeld, H. 2003. Seabird mortality in North Pacific Longline Fisheries. Endangered Species Update 20 (2): 35-46.

Reid, T., Brothers, N., Gales, R. 2001. Seabird interactions with longline fishing in the AFZ: Seabird mortality estimates and 1988-1999 trends. Internal report of the Department of Marine and Coastal Management, South Africa. 13pp

Rivera, K. 2002. Information on incidental mortality of seabirds and other protected species in the US west coast pelagic longline fisher. CCAMLR-WG-FSA-02/39

Tuck, G.N., 2004. A comprehensive study of the ecological impacts of the worldwide pelagic longline industry: Southern Hemisphere studies. Hobart. CSIRO Marine Research. 243p.

Waugh, S.M., Weimerskirch, H., Moore, P.J., Sagar, P.M. 1999. Population dynamics of Black-browed and Grey-headed albatrosses *Diomedea melanophrys* and *D. chrysostoma* at Campbell Island, New Zealand, 1942-96. Ibis 141: 216-225.

Weimerskirch, H., Brothers, N., Jouventin, P., 1997. Population dynamics of Wandering Albatross *Diomedea exulans* and Amsterdam Albatross *D. amsterdamensis* in the Indian Ocean and their relationships with long-line fisheries: conservation implications. Biological Conservation 79: 257-270.