Distribution of Albatross and petrels in the WCPFC Convention Area and overlap with WCPFC longline fishing effort

BirdLife International

APPENDIX:

Maps of albatross and petrel distribution in the WCPFC area

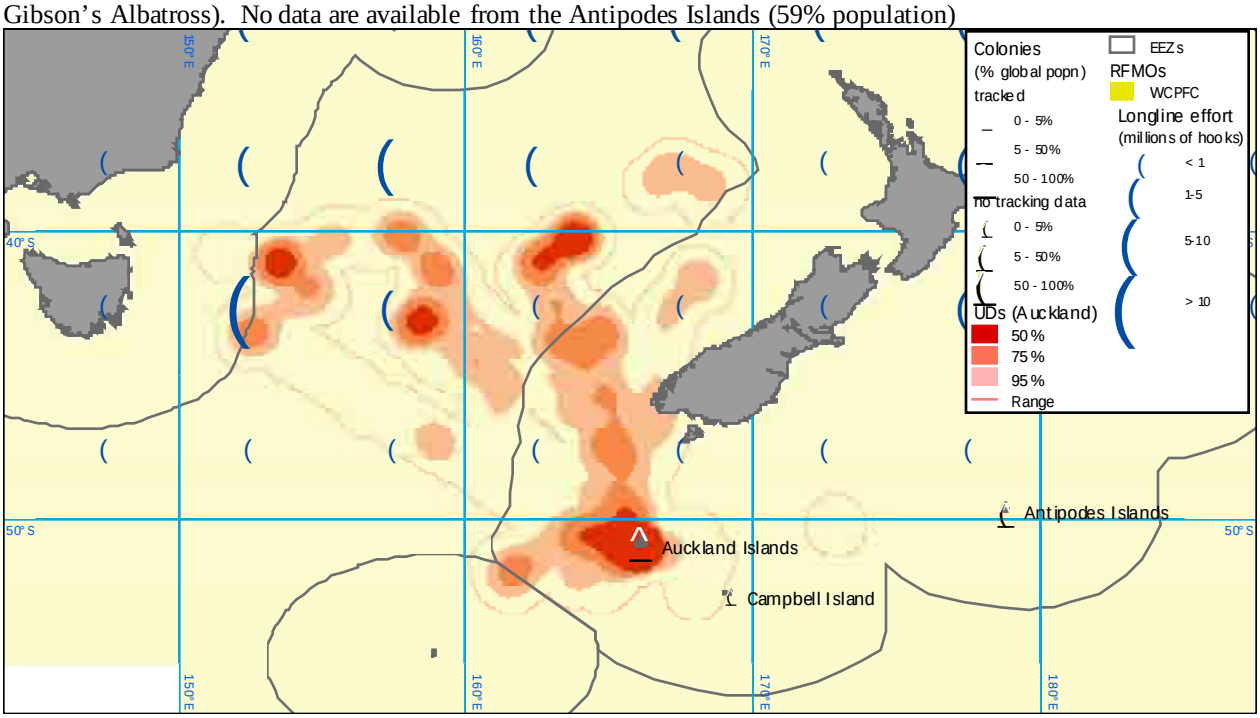
Figures

Note on depiction of EEZs on maps:
Several disputes exist worldwide regarding delimitation of boundaries between the EEZs of different States. The EEZs in maps in this document are therefore presented without boundaries between countries. The exceptions are for the maps that are zoomed in to focus on the New Zealand EEZ, for which the boundary with the Australian EEZ around Macquarie Island has been included, for sake of clarity. The EEZs presented here are for illustrative purposes only and do not imply the expression of any opinion whatsoever on the part of BirdLife International concerning the legal status of any country, territory or area, or concerning the delimitation of its boundaries.

Figure A1. Distribution of Antipodean Albatross and overlap with the WCPFC Convention Area and WCPFC longline fishing effort from 2000-2003 (hooks per 5º grid square per year).

A. BREEDING DISTRIBUTION

Data from D.G. Nicholls, M.D. Murray E.C. Butcher, K. Walker, G. Elliott and Department of Conservation, New Zealand. Birds tracked from the Auckland Islands (41% of the global population, and representing the sub-species of Gibson's Albatross). No data are available from the Antipodes Islands (59% population)



B. NON-BREEDING DISTRIBUTION

Data from D.G. Nicholls, M.D. Murray E.C. Butcher, K. Walker, G. Elliott and Department of Conservation, New Zealand. Data available from the Antipodes Islands and Auckland Islands, representing >99% of the population.

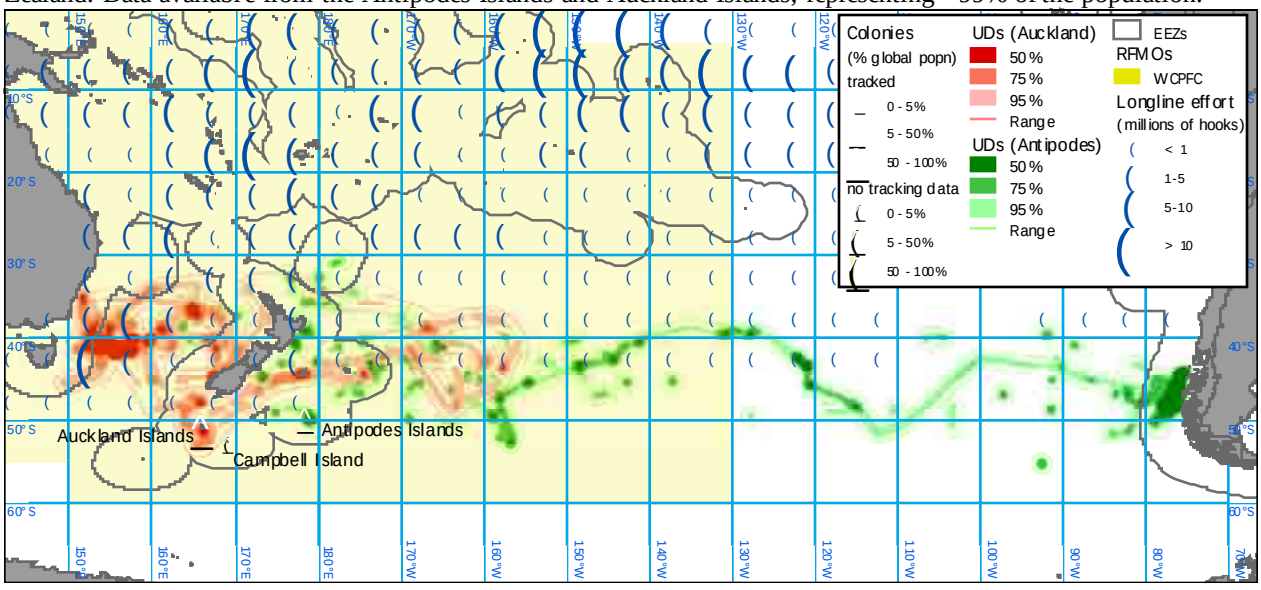


Figure A2. Distribution of Black-browed Albatross and overlap with the WCPFC Convention Area and WCPFC longline fishing effort from 2000-2003 (hooks per 5º grid square per year).

A. BREEDING DISTRIBUTION

Overlap <1%.

No tracking data from Antipodes, Campbell Island, Snares, although together these represent<1% global population.

B. NON-BREEDING DISTRIBUTION

Data from J. Croxall, J. Silk, British Antarctic Survey and J. Arata, Universidad Austral de Chile. No tracking data from Antipodes, Campbell Island, Snares, although together these represent<1% global population.

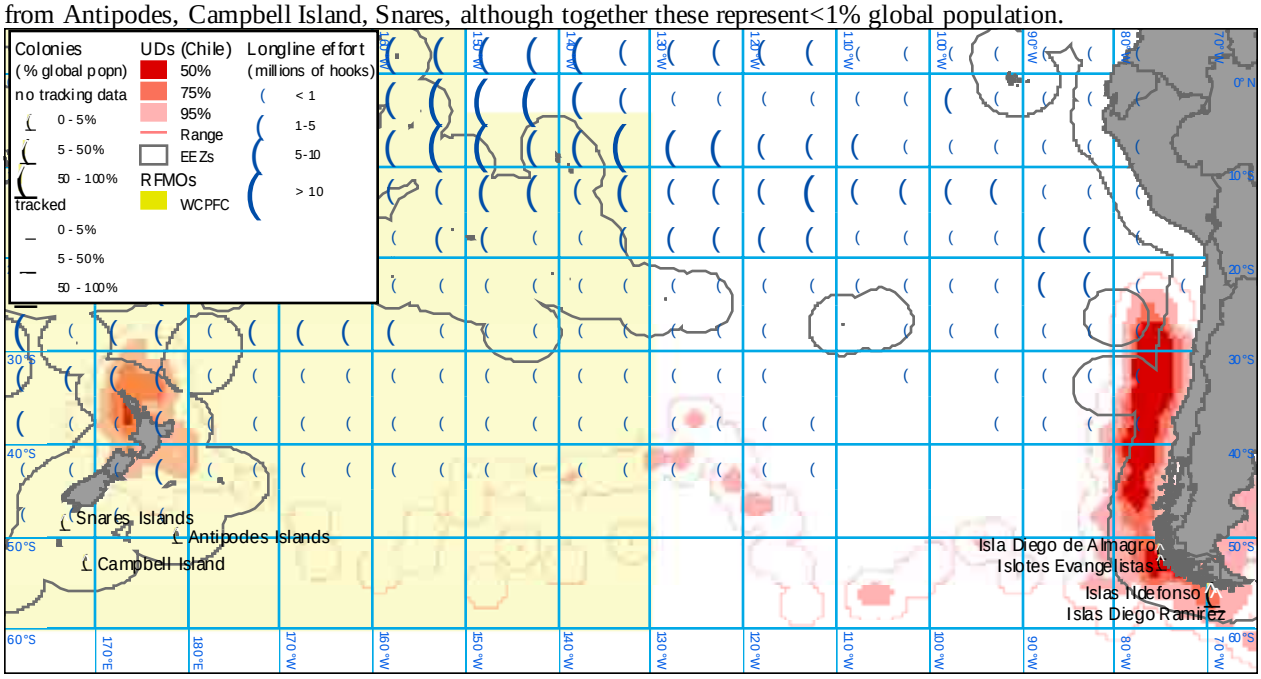
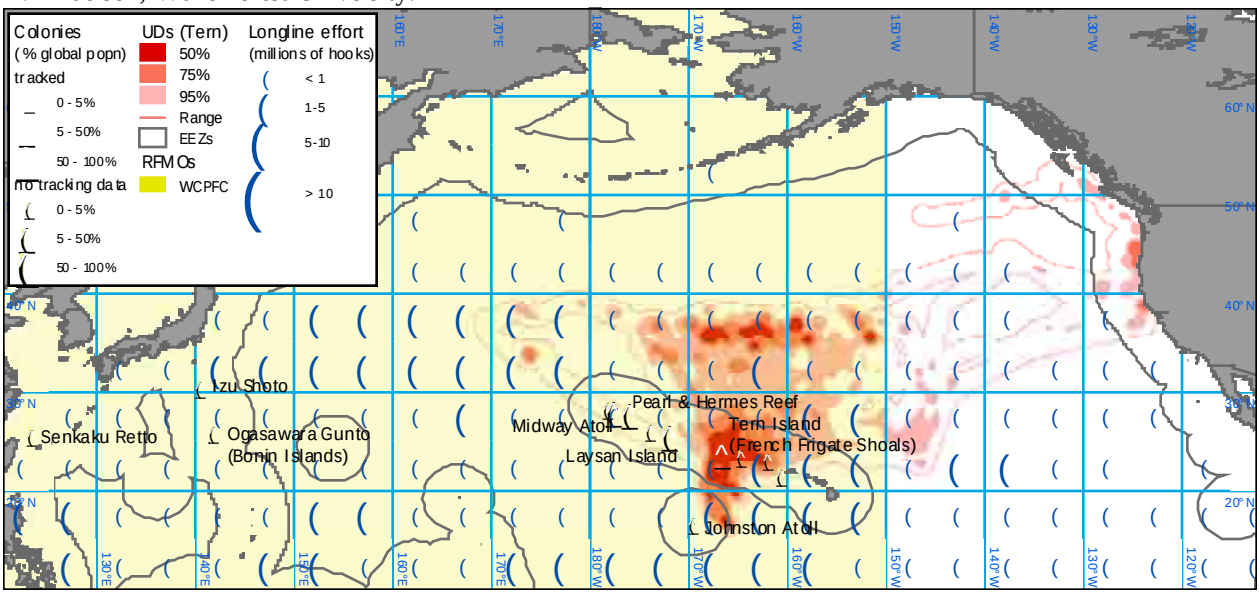


Figure A3. Distribution of Black-footed Albatross and overlap with the WCPFC Convention Area and WCPFC longline fishing effort from 2000-2003 (hooks per 5º grid square per year).

A. BREEDING DISTRIBUTION

Data from S. Shaffer, Y. Tremblay, D.P. Costa, M. Antolos, University of California Santa Cruz and J. Awkerman, D. Anderson, Wake Forest University.



B. NON-BREEDING DISTRIBUTION

Data from D. Hyrenbach, U.C. San Diego; Rob Suryan, K. Fischer, Hatfield Marine Science Center; Greg Balogh, USFWS. Birds tracked after capture at-sea (deployment locations shown with white stars). The birds tagged in California remained east of 130°W while the 10 birds tracked from the Aleutian Islands ranged across much of the northern Pacific.

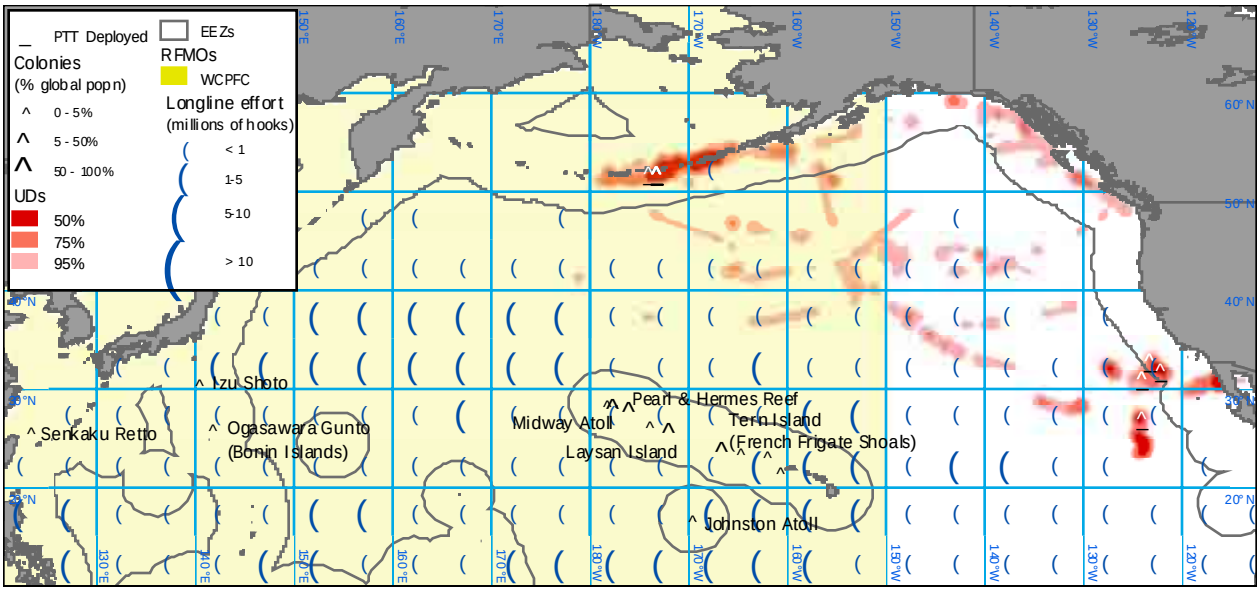
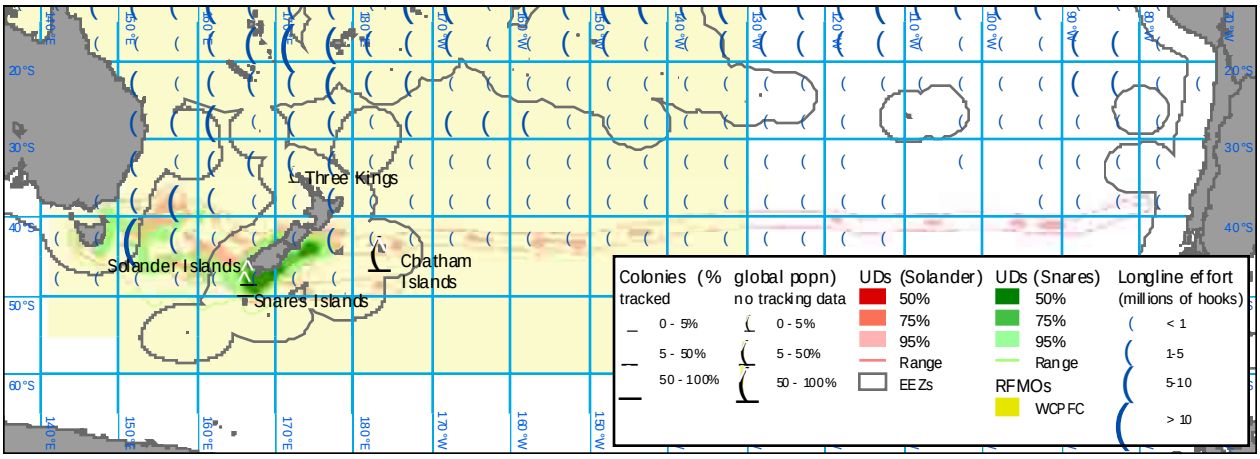


Figure A4. Distribution of Buller's Albatross and overlap with the WCPFC Convention Area and WCPFC longline fishing effort from 2000-2003 (hooks per 5º grid square per year).

A. BREEDING DISTRIBUTION

Data from J.C. Stahl, Museum of New Zealand and Paul Sagar, NIWA, New Zealand. Birds tracked from Solander and Snares Islands. No tracking data available from Chatham Islands (58% global population)



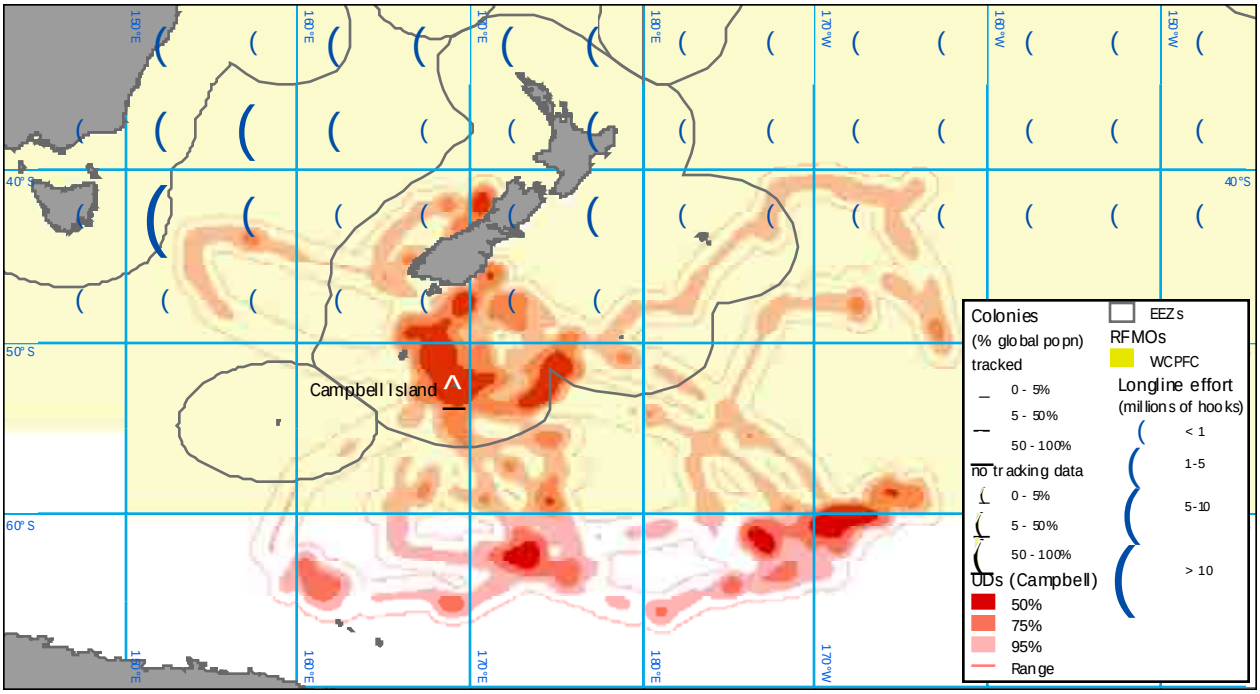
B. NON-BREEDING DISTRIBUTION

No tracking data available for birds during the non-breeding season

Figure A5. Distribution of Campbell Albatross and overlap with the WCPFC Convention Area and WCPFC longline fishing effort from 2000-2003 (hooks per 5º grid square per year).

A. BREEDING DISTRIBUTION

Data from H. Weimerskirch, Centre d'Etudes Biologiques de Chizé, CNRS, France.



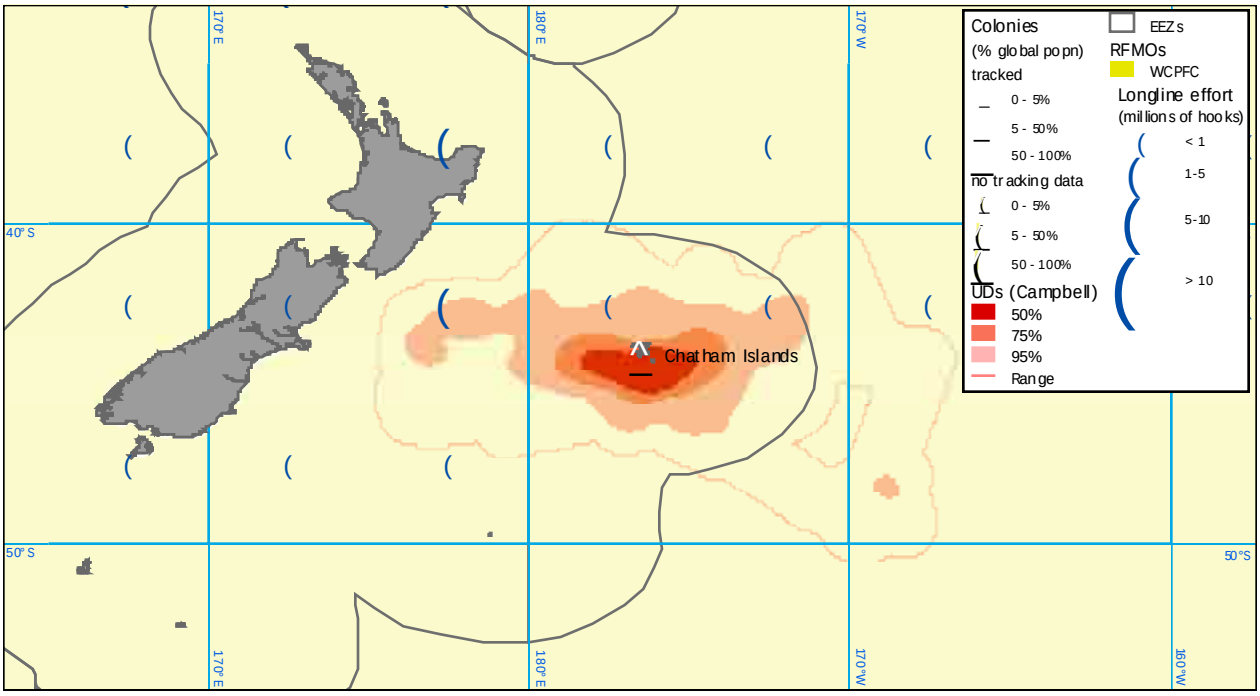
B. NON-BREEDING DISTRIBUTION

No tracking data available

Figure A6. Distribution of Chatham Albatross and overlap with the WCPFC Convention Area and WCPFC longline fishing effort from 2000-2003 (hooks per 5º grid square).

A. BREEDING DISTRIBUTION

Data from D.G. Nicholls, M.D. Murray and C.J.R. Robertson, Department of Conservation, New Zealand



B. NON-BREEDING DISTRIBUTION

Data from D.G. Nicholls, M.D. Murray and C.J.R. Robertson, Department of Conservation, New Zealand

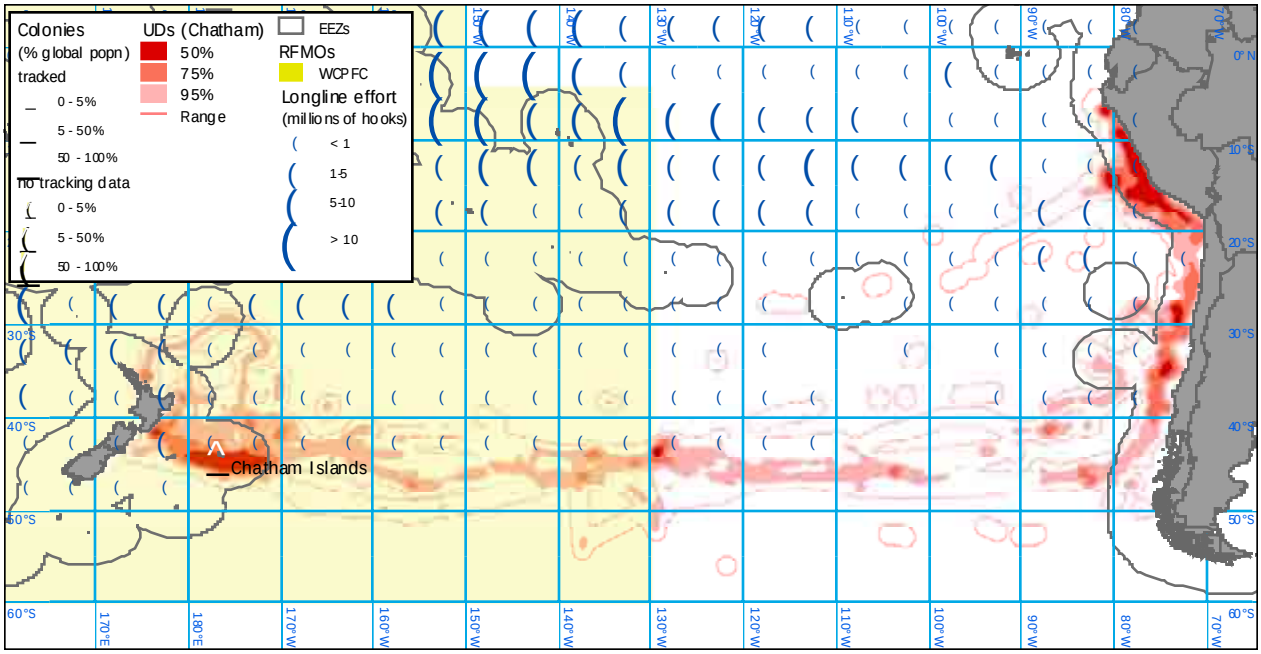
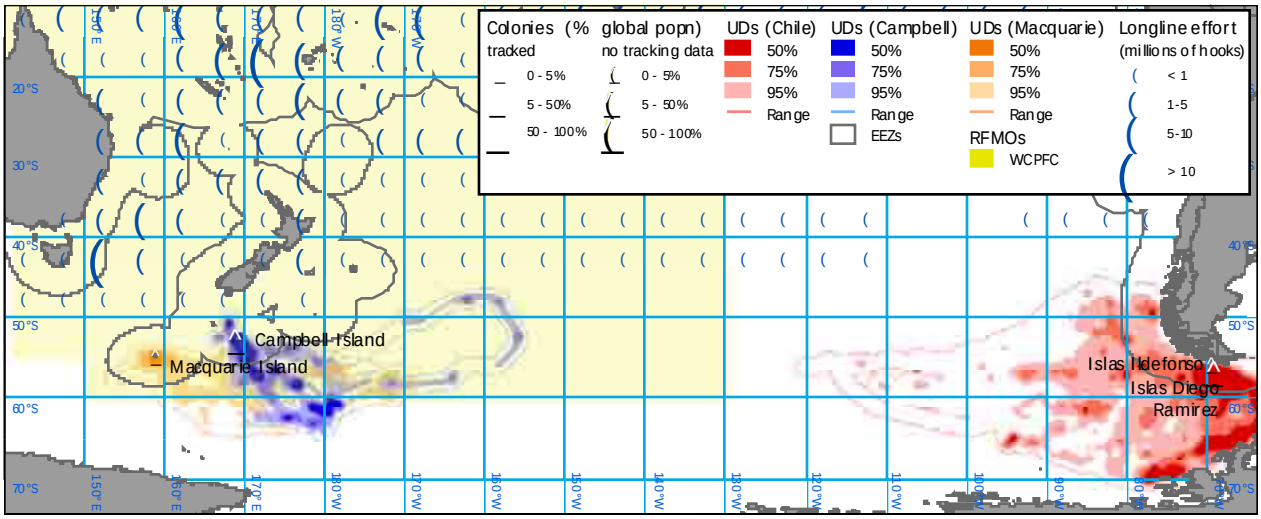


Figure A7. Distribution of Grey-headed Albatross and overlap with the WCPFC Convention Area and with WCPFC longline fishing effort from 2000-2003 (hooks per 5º grid square per year).

A. BREEDING DISTRIBUTION

Data from G. Robertson, Australian Antarctic Division; J. Arata, Universidad Austral de Chile; H. Weimerskirch, Centre d'Etudes Biologiques de Chizé, CNRS, France; N. Brothers, A. Hedd, R. Gales, A Terauds, DPIWE, Tasmania. Birds tracked from Macquarie Island, Campbell Island, and two Chilean islands, representing <1%, 7% and 18% of the global population, respectively.



B. NON-BREEDING DISTRIBUTION

Data from J. Croxall, R. Phillips, A. Wood, J. Silk, D. Briggs, British Antarctic Survey; G. Robertson, Australian Antarctic Division; J. Arata, Universidad Austral de Chile. Birds tracked from Chile and South Georgia, together representing 70% of the global population. No tracking data from Macquarie Island or Campbell Island, representing <1% and 7% of population, respectively.

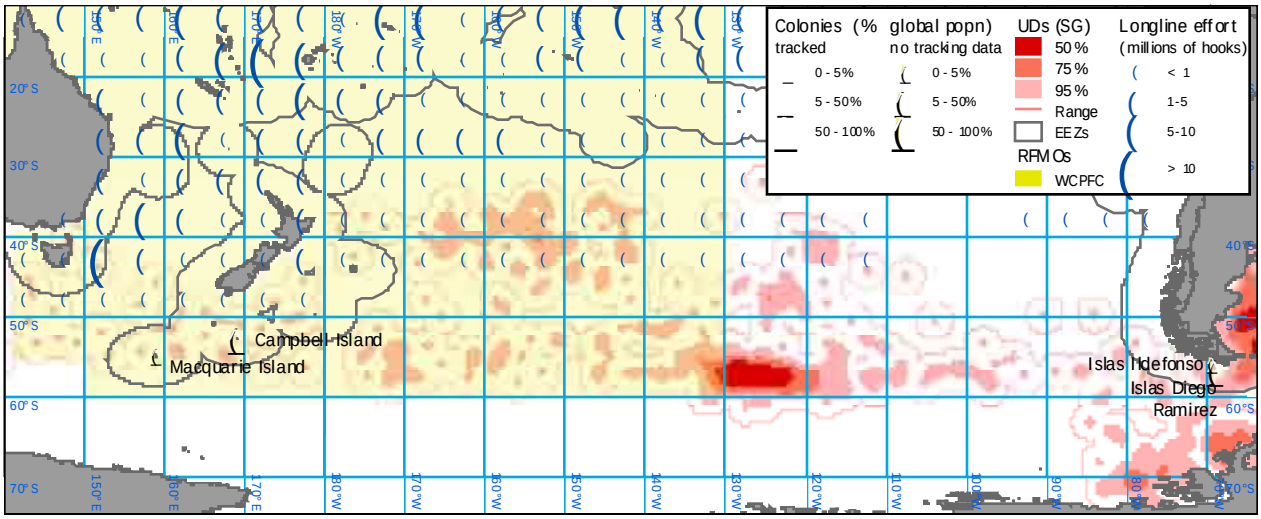
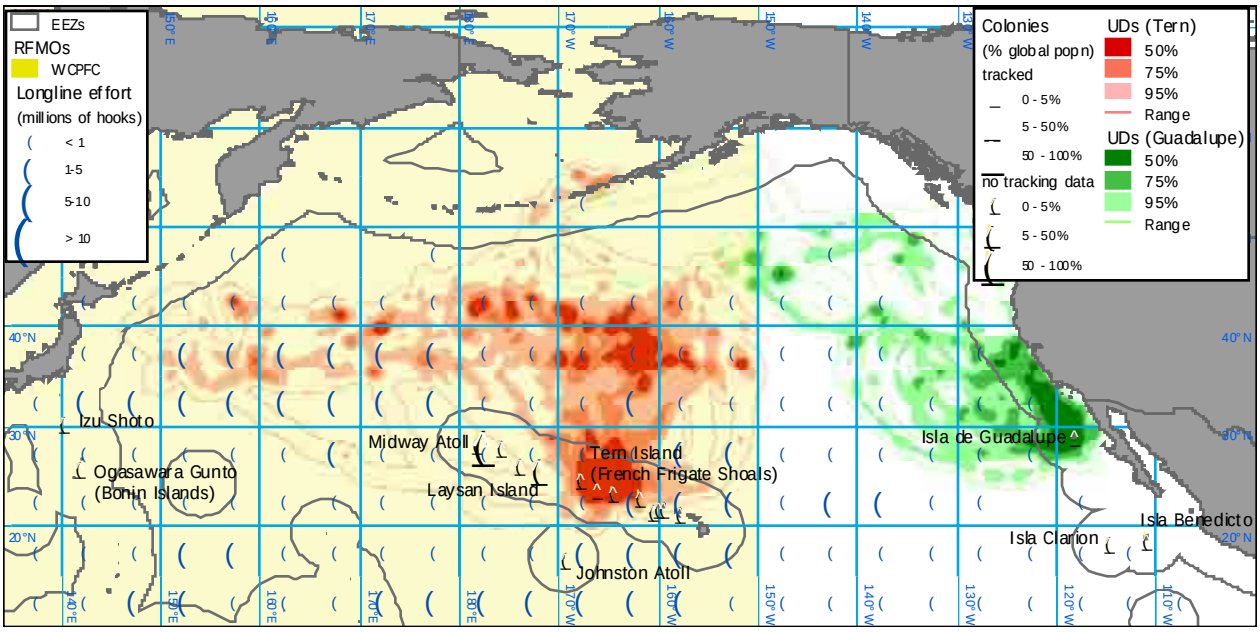


Figure A8. Distribution of Laysan Albatross and overlap with the WCPFC Convention Area and WCPFC longline fishing effort from 2000-2003 (hooks per 5º grid square per year).

A. BREEDING DISTRIBUTION

Data from S. Shaffer, Y. Tremblay, D.P. Costa, B. Henry, D.A. Croll, M. Antolos, University of California Santa Cruz; J. Awkerman, D. Anderson, Wake Forest University.



B. NON-BREEDING DISTRIBUTION

Data from Rob Suryan, Karen Fischer, Hatfield Marine Science Center; Greg Balogh, USFWS. Ten birds tracked after capture at sea near the Aleutian Islands (deployment locations shown with white stars).

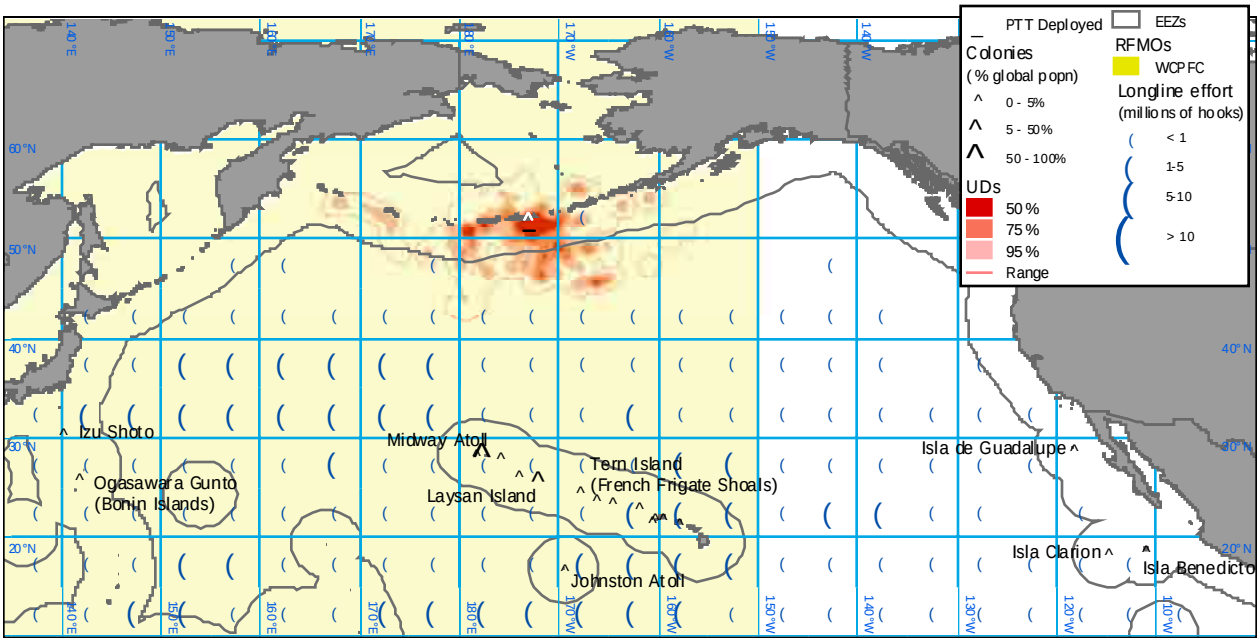
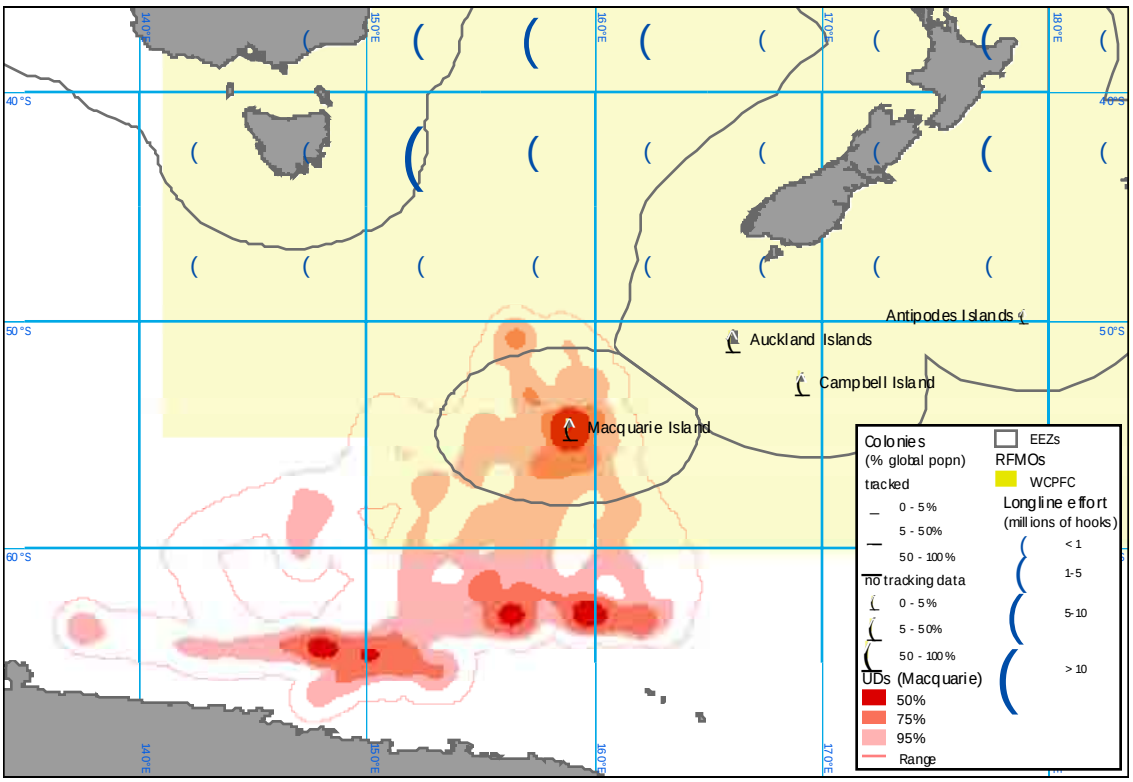


Figure A9. Distribution of Light-mantled Albatross and overlap with the WCPFC Convention Area and WCPFC longline fishing effort from 2000-2003 (hooks per 5º grid square per year).

A. BREEDING DISTRIBUTION

Data from N. Brothers, A. Hedd, R. Gales, A Terauds, DPIWE, Tasmania. Data from birds tracked from Macquarie Island (9% global population). No tracking data from Auckland Islands, Campbell Island, Antipodes Islands, representing 23%, 7% and 1% of the global population, respectively.



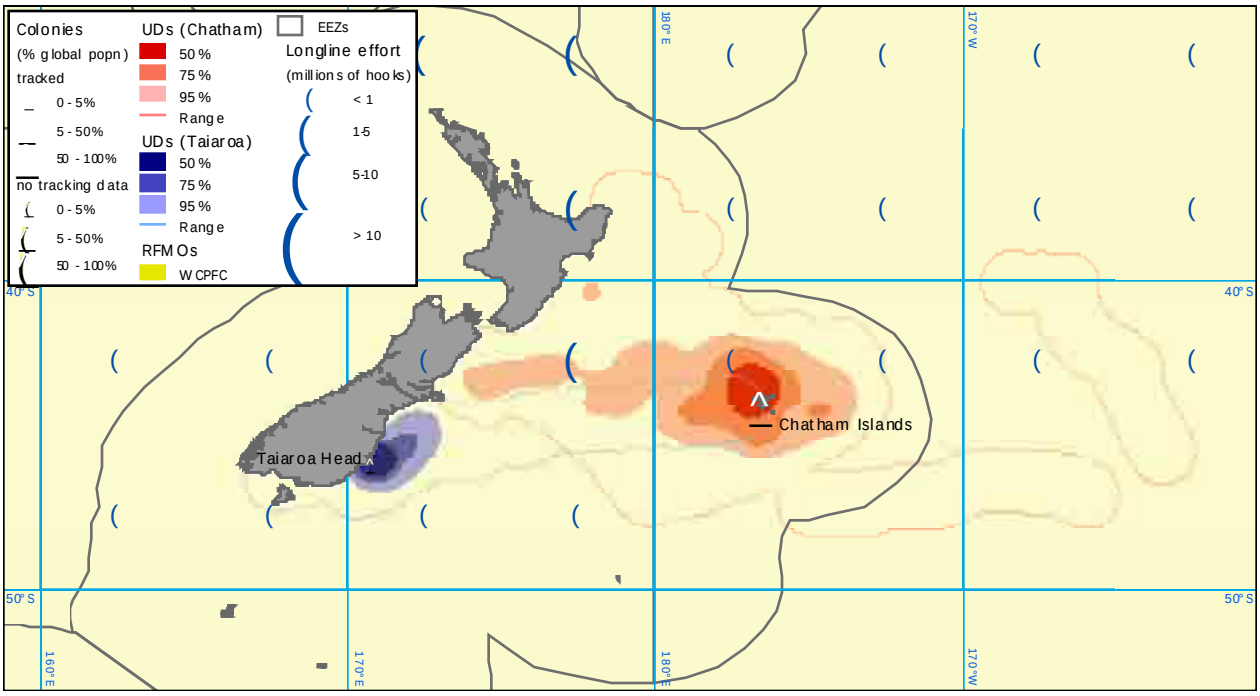
B. NON-BREEDING DISTRIBUTION

No tracking data available

Figure A10. Distribution of Northern Royal Albatross and overlap with the WCPFC Convention Area and WCPFC longline fishing effort from 2000-2003 (hooks per 5º grid square per year). The Chatham Islands and Taiaroa Head populations represent 99% and 1% of the global population, respectively.

A. BREEDING DISTRIBUTION

Data from C.J.R. Robertson, M.D. Murray and D.G. Nicholls, New Zealand.



B. NON-BREEDING DISTRIBUTION

Data from C.J.R. Robertson, D.G. Nicholls and M.D. Murray, New Zealand.

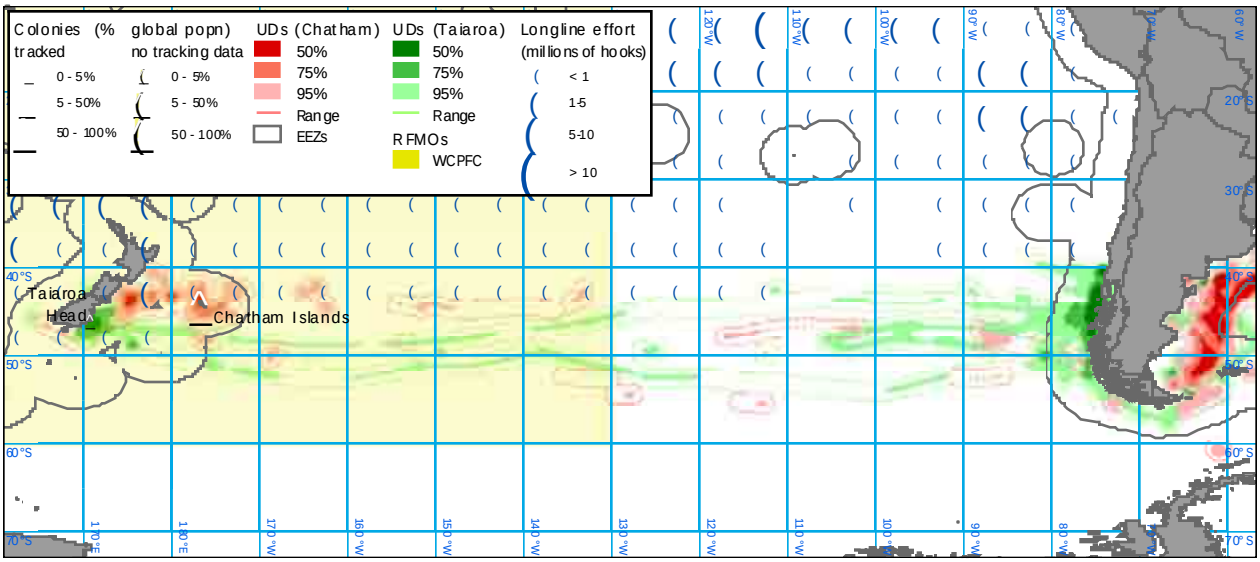
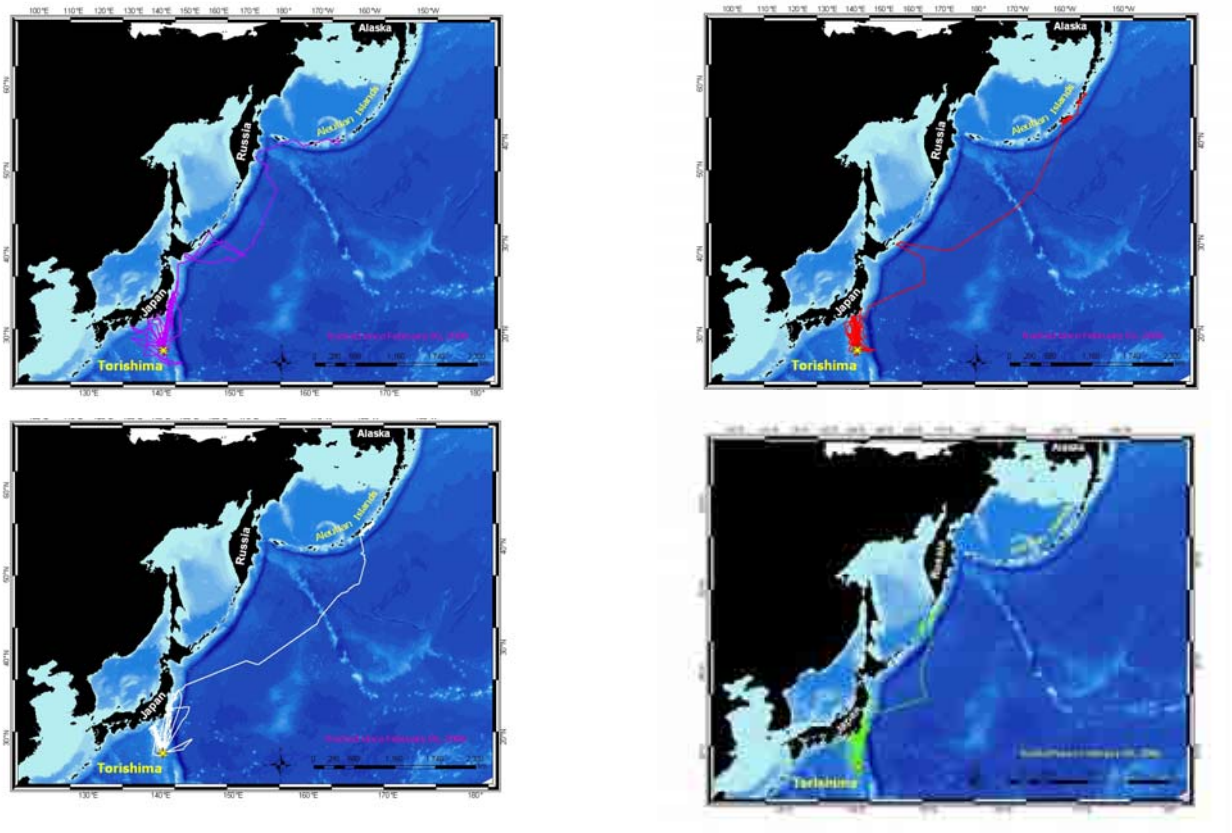


Figure A11. Distribution of Short-tailed Albatross in the WCPFC area.

A. BREEDING DISTRIBUTION

Four Short-tailed Albatross tracked from Izu Shoto (Torishima) by the Albatross Project, Wake Forest University (tracking still in progress). Maps reproduced with kind permission from the data holders: Rob Suryan, Greg Balogh, Paul Sievert and David Anderson. (http://www.wfu.edu/biology/albatross)



B. NON-BREEDING DISTRIBUTION

Data from R. Suryan, Hatfield Marine Science Center, G. Balogh, USFWS, K. Ozaki & F. Sato, Yamashina Institute, and S. Kanie, Ministry of Environment, Japan. Birds tracked from Izu Shoto. Map indicates overlap with WCPFC longline fishing effort from 2000-2003 (hooks per 5º grid square per year).

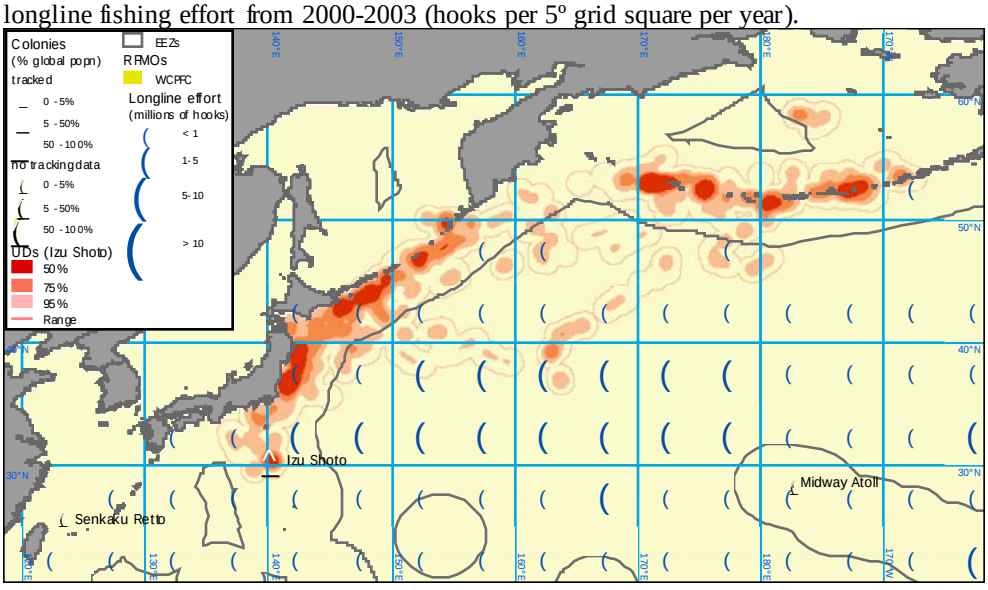
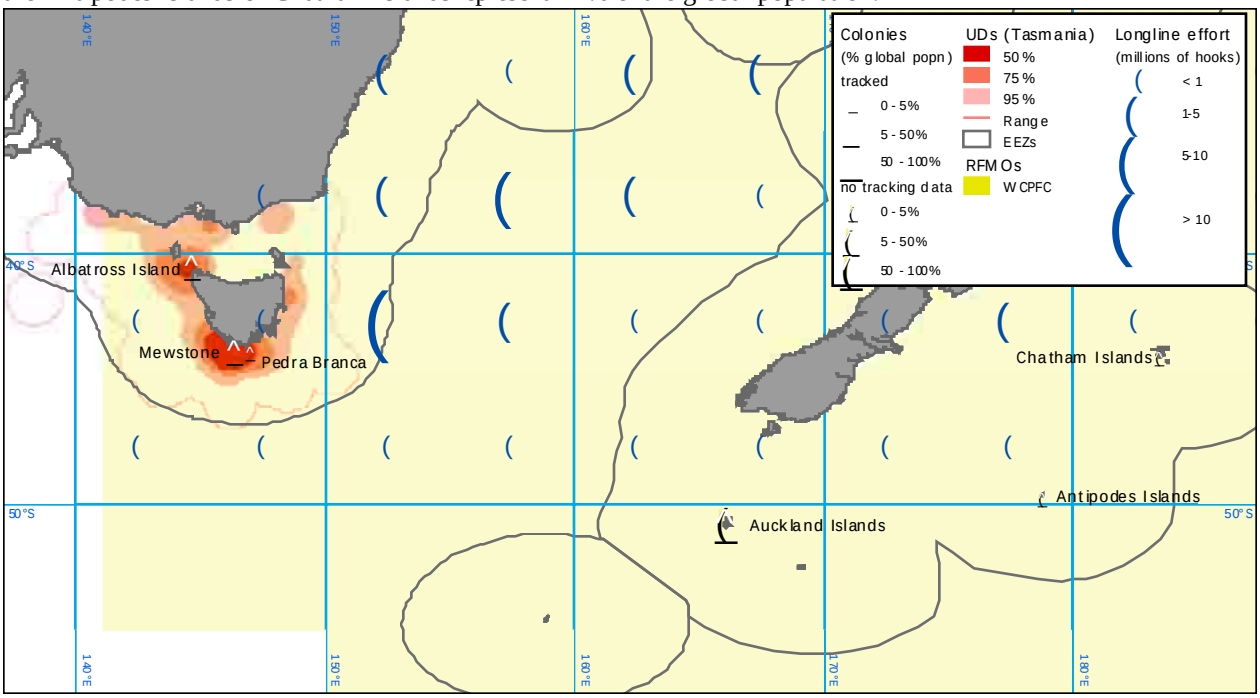


Figure A12. Distribution of Shy Albatross and overlap with the WCPFC Convention Area and with WCPFC longline fishing effort from 2000-2003 (hooks per 5º grid square per year).

A. BREEDING DISTRIBUTION

Data from N. Brothers, A. Hedd, R. Gales, A Terauds, DPIWE, Tasmania. No data available from the Auckland Islands (85% global population), which represents the White-capped Albatross sub-species. Populations breeding on the Antipodes Islands or Chatham Islands represent <1% of the global population.



B. NON-BREEDING DISTRIBUTION

Data from N. Brothers, A. Hedd, R. Gales, A Terauds, DPIWE, Tasmania. No data available from the Auckland Islands (85% global population), which represents the White-capped Albatross sub-species. Populations breeding on the Antipodes Islands or Chatham Islands represent <1% of the global population.

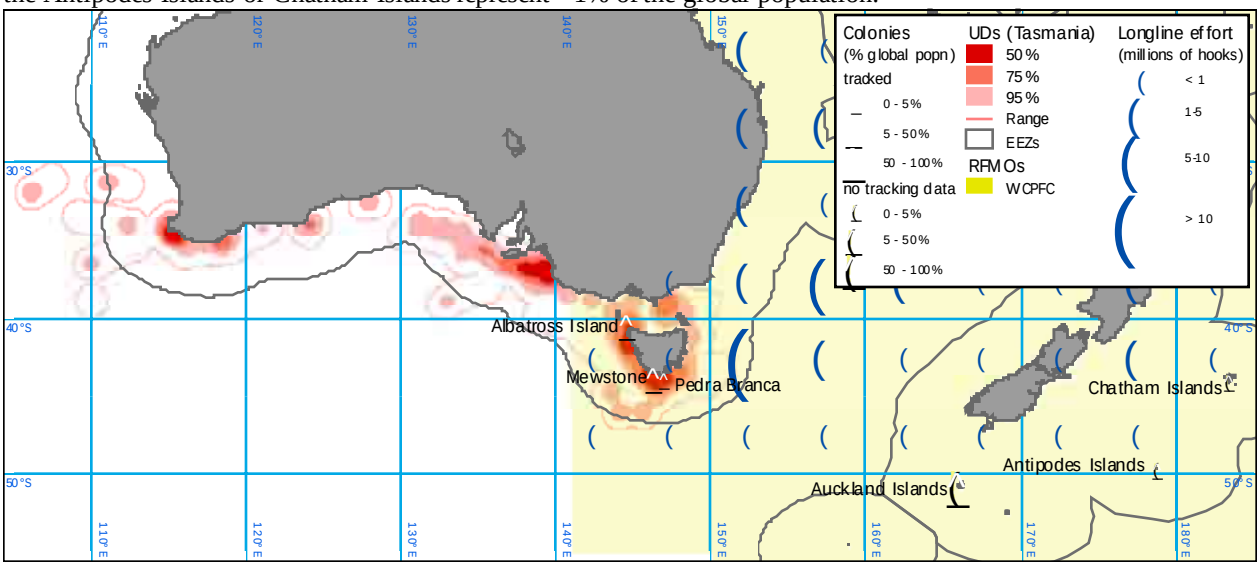
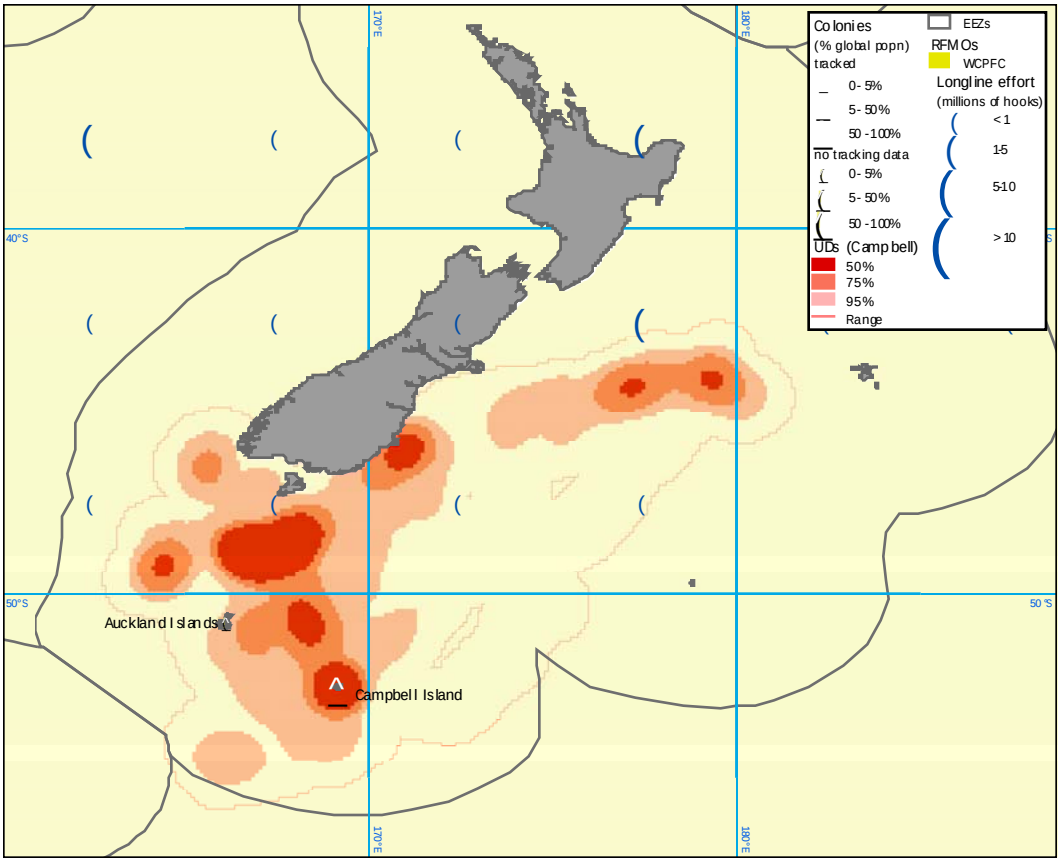


Figure A13. Distribution of Southern Royal Albatross and overlap with the WCPFC Convention Area and WCPFC longline fishing effort from 2000-2003 (hooks per 5º grid square per year).

A. BREEDING DISTRIBUTION

Data from H. Weimerskirch, Centre d'Etudes Biologiques de Chizé , CNRS, France.



B. NON-BREEDING DISTRIBUTION

No tracking data available

Figure A14. Distribution of Wandering Albatross and overlap with the WCPFC Convention Area, and WCPFC longline fishing effort from 2000-2003 (hooks per 5º grid square per year).

A. BREEDING DISTRIBUTION

No overlap with WCPFC area (although no tracking data available from Macquarie Island which represents <1% of the global Wandering Albatross population).

B. NON-BREEDING DISTRIBUTION

Data from J Croxall, R. Phillips, A. Wood, British Antarctic Survey; D. Nel, P. Ryan, University of Cape Town; D.G. Nicholls, M.D. Murray, E.C. Butcher, New Zealand. Birds tracked from Prince Edward Islands, Iles Crozet, South Georgia, representing 36%, 28% and 21% of the global population, respectively.

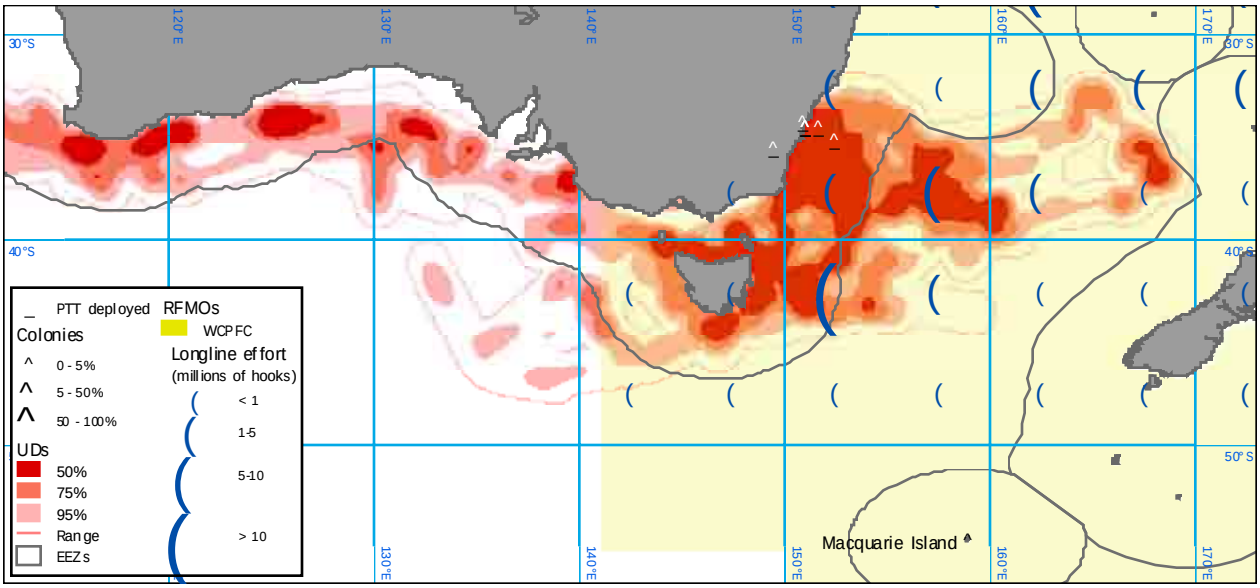
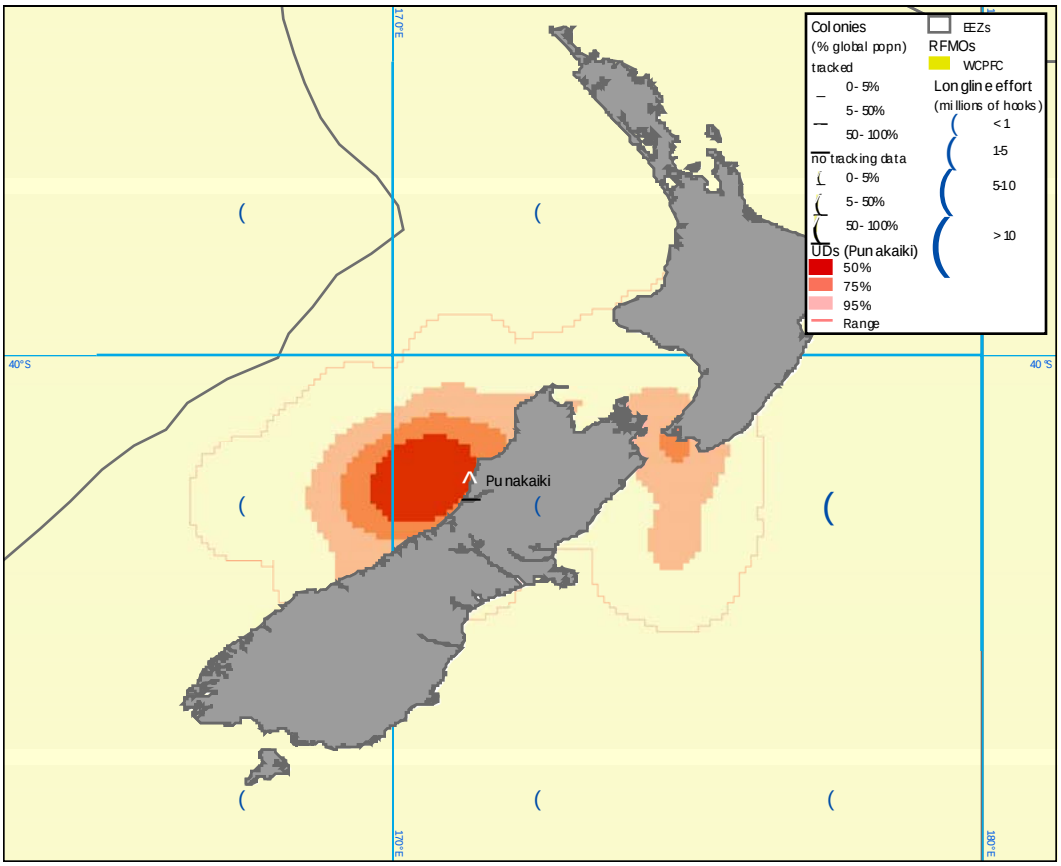


Figure A15. Distribution of Westland Petrels tracked from Punakaiki and overlap with the WCPFC Convention Area and with WCPFC longline fishing effort from 2000-2003 (hooks per 5° grid square per year).

A. BREEDING DISTRIBUTION

Data from A.Freeman, K-J Wilson, Lincoln University; J.A. Bartle Museum of New Zealand; D.G. Nicholls.



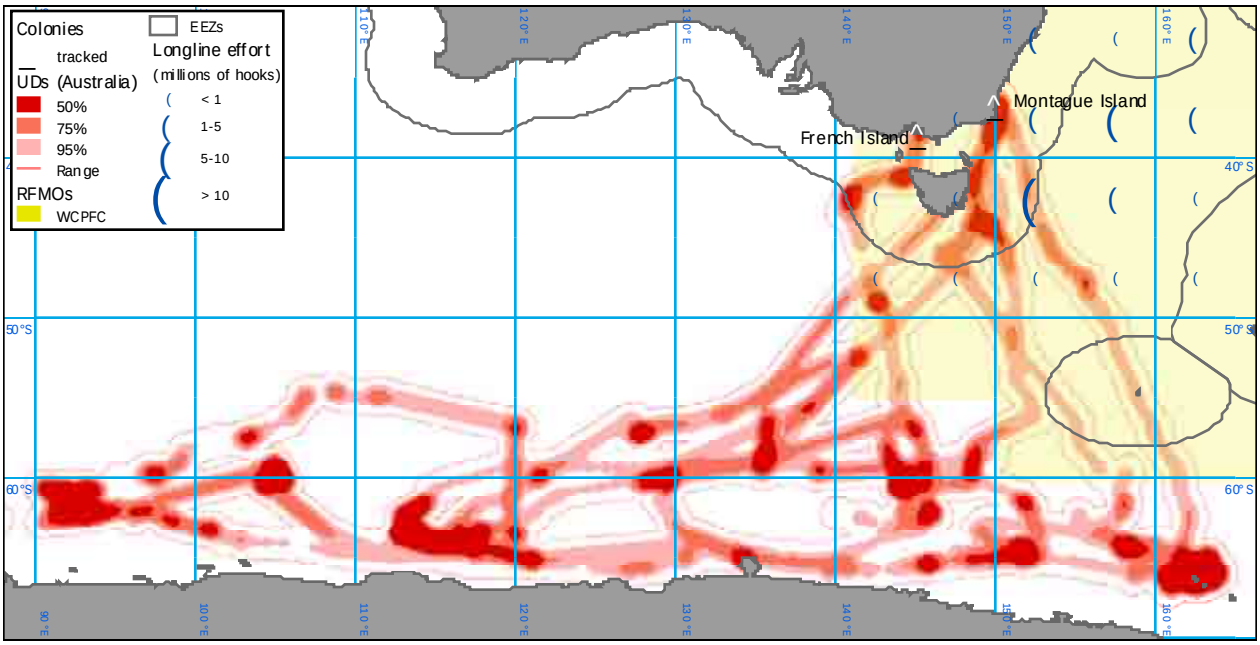
B. NON-BREEDING DISTRIBUTION

No tracking data available

Figure A16. Distribution of breeding Short-tailed Shearwaters tracked from Australia and overlap with the WCPFC Convention Area and WCPFC longline fishing effort from 2000-2003 (hooks per 5° grid square per year).

A. BREEDING DISTRIBUTION

Data from N. Klomp, M.Schultz, School of Environmental and Information Sciences, Charles Sturt University, Australia; D.G. Nicholls. Data from 2 of more than 160 colonies, representing <1% of the total global population.



B. NON-BREEDING DISTRIBUTION

No tracking data available