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A status update of seabirds in the IOTC area

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Abstract
New data on the status of albatrosses and petrels, the seabird most at risk from bycatch in tuna longline fisheries, are presented. On the whole, downward population trends continue, giving cause for serious concerns and highlighting the need to continue and increase efforts from longline fleets to prevent seabird bycatch. New information on Tristan Albatross *Diomedea dabbenena* highlights the Indian Ocean as an important part of this Critically Endangered albatross's foraging range. Several species, notably Amsterdam Albatross *D. amsterdamensis* and Black-browed Albatross *Thalassarche melanophris* have undergone strong recoveries in recent years, possibly reflecting improved use of seabird bycatch mitigation measures.

Introduction

Seabirds, in particular albatrosses and petrels, are particularly at risk from longline fishing. The Indian Ocean Tuna Commission, along with other tuna RFMOs, has taken steps to ensure vessels operating under the Commission's remit adopt Best Practice measures to minimize those risks. The conservation status of seabirds is currently under review by BirdLife International, results of which will become available after 1 October 2016. However, the Agreement on the Conservation of Albatrosses and Petrels (ACAP) collates trend and other data from individual colonies of all albatrosses and petrels listed under the Agreement; these data are included in BirdLife's reviews, and are publicly available. Here we update information of seabirds of interest to IOTC fisheries that previously were considered in a Level 1 Ecological Risk Assessment (Baker and Wanless 2010), based on ACAP's most recent information.

Table 1. Update on the conservation status and global

trends of albatrosses and petrels at risk from tuna longline bycatch in the Indian Ocean

Common name	Scientific name	Number of sites[1]	Breeding site responsibility	Breeding Frequency[2]	Behavioural susceptibility to capture	Annual breeding pairs (latest census year)[1]	Current Trend 1993-2013[3] (trend confidence)	IUCN Status 2013[4]	Recent change in IUCN Status [4]	IUCN Status Justification[4]
Amsterdam Albatross [5]	*Diomedea amsterdamensis*	1	France	B	High	46 (2014)	↑ (High)	CR		Extremely small population, confined to a tiny area on one island. Although numbers have recently been increasing, a continuing decline is projected owing to the impact of a disease which is probably already causing chick mortality.
Tristan Albatross	*Diomedea dabbenena*	1	UK	B	High	1,922 (2012-2015)	↓ (High)	CR		Extremely small breeding range essentially restricted to Gough Island and a projected extremely rapid population decline over three generations (70 years). Modelled population declines are a consequence of very low adult survival owing to incidental mortality in longline fisheries, compounded by low fledging success caused by predation of chicks by introduced mice.
Northern royal Albatross	*Diomedea sanfordi*	5	NZ	B	High	5,781 (1995-2016)	?	EN		Restricted to a tiny breeding range in which severe storms in the 1980s resulted in a decrease in habitat quality, which led to poor breeding success. Based on this low breeding success, the population is estimated and projected to be undergoing a very rapid decline over three generations (1985-2069). Evidence suggests that the number of breeding pairs may have remained relatively stable, thus the species might qualify for downlisting in the near future.
Sooty Albatross [5]	*Phoebetria fusca*	15	France, South Africa, UK	B	High	12,103 (1974-2015)	↓ (Very Low)	EN		Very rapid decline over three generations (90 years), probably owing to interactions with fisheries. Since 1980, three sites (Crozet, Marion and Gough) have witnessed severe declines, although the population at Prince Edward may have increased between 2002-2009. However, high variability in population counts between years necessitates caution and further data are required before a change in status should be considered.
Atlantic yellow-nosed Albatross	*Thalassarche chlororhynchos*	6	UK	A	High	33,650 (1974-2011)	↔ (Low)	EN		Very small breeding range and is estimated to be undergoing a very rapid ongoing decline projected over three generations (72 years) owing to incidental mortality in longline fisheries.
Indian yellow-nosed Albatross	*Thalassarche carteri*	6	France, New Zealand, South Africa	A	High	39,319 (1984-2009)	↓ (Medium)	EN		Estimated very rapid ongoing decline over three generations (71 years), based on data from the population stronghold on Amsterdam Island. This decline is the result of adult mortality and poor recruitment owing to interactions with fisheries and disease.

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Black-browed Albatross	*Thalassarche melanophris*	65	Australia, Chile, Falkland Islands (Islas Malvinas)*, France, New Zealand	A	High	691,194 (1982-2016)	↑ (High)	EN	NT (2014)	Data from the Falkland Islands (Islas Malvinas)*, holding over 70% of the global population, showed population increases during the 2000s and possibly since the 1980s. However, there remains a considerable degree of uncertainty over population trends for a significant part of the global population, and trend estimates are heavily influenced by the extrapolation over 65 years of data from a ten-year period. In addition, high levels of mortality of this species are reported from longline and trawl fisheries in the South Atlantic. Moderately rapid ongoing declines over three generations since 1980 are precautionarily suspected until further data are forthcoming.
Antipodean Albatross	*Diomedea antipodensis*	6	NZ	B	High	8,274 (1995-2010)	↓ (Medium)	VU		Largely confined to three small islands when breeding and is therefore highly susceptible to stochastic effects and human impacts. Recent data (2005-2008) from the Auckland Islands indicate declines in adult survival, productivity and recruitment, which, if confirmed by further monitoring, could result in a reclassification of EN or CR.
Southern royal Albatross	*Diomedea epomophora*	4	NZ	B	High	7,929 (1989-2015)	↔ (Medium)	VU		Although current population trends are assumed to be stable, this species has a very small range, breeding on four islands, although largely confined to just one, therefore highly susceptible to stochastic effects and human impacts.
Wandering Albatross	*Diomedea exulans*	39	Australia, France, South Africa, South Georgia (Islas Georgias del Sur)*	B	High	8,176 (1981-2016)	↓ (High)	VU		Overall, past and predicted future declines amount to a rapid population reduction over a period of three generations. This species is undergoing a rapid decline in the South Atlantic, as well as on the Crozet and Kerguelen Islands. Longline fishing is believed to be a main cause of decline, causing reductions in adult survival and juvenile recruitment, and this threat is ongoing.
Grey-headed Albatross[5]	*Thalassarche chrysostoma*	29	Australia, Chile, France, New Zealand, South Africa, South Georgia (Islas Georgias del Sur)*	B	High	98,103 (1982-2016)	↓ (Medium)	VU	EN (2013)	Data from some major colonies, in particular South Georgia (Georgias del Sur)*, which holds around half the global population, suggest that overall declines are taking place at a very rapid rate over three generations (90 years), even if colonies lacking trend information are assumed to be stable. The major driver of declines is likely to be incidental mortality on longline fisheries.

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Campbell Albatross	*Thalassarche impavida*	2	NZ	A	High	21,648 (2012)	↔ (Low)	VU		Breeding is restricted to a single location, where it is susceptible to potential human impacts and stochastic events. Although numbers decreased steeply between the 1970s and 1980s owing to interactions with fisheries, the population is now thought to be increasing, although there has not been a census since 1996.
Salvin's Albatross	*Thalassarche salvini*	12	NZ	A	High	41,214 (2010-2014)	↓ (Low)	VU		May have undergone a rapid decline, but different census methods make a comparison of the available data potentially misleading. However, breeding is largely restricted to one tiny island group, where it is susceptible to stochastic events.
White-chinned Petrel	*Procellaria aequinoctialis*	73	Falkland Islands (Islas Malvinas)*, France, New Zealand, South Africa, South Georgia (Islas Georgias del Sur)*	A	High	1,202,568 (1984-2015)	↓ (Very Low)	VU		Suspected rapid declines, although almost no reliable estimates of historical populations exist. Very high rates of incidental mortality in longline fisheries have been recorded in recent years; the probability that these circumstances will continue and its susceptibility to predation and the degradation of breeding habitat indicate that a rapid and on-going population decline is likely.
Light-mantled Albatross	*Phoebetria palpebrata*	71	Australia, France, New Zealand, South Africa, South Georgia (Islas Georgias del Sur)*	B	Low	11,003 (1954-2015)	↔ (Very Low)	NT		May be declining at a moderately rapid rate, owing to bycatch on longline fisheries and perhaps the impacts of introduced predators. Threats and population status both remain poorly known.
Grey Petrel[5]	*Procellaria cinerea*	17	Australia, France, New Zealand, South Africa, UK	A	High	75,610 (1981-2015)	↓ (Very Low)	NT		Although there are no current trend data, this species is susceptible to introduced mammalian predators, and today it is the most commonly caught bycatch species in longline fisheries in New Zealand waters. Evidence from Gough Island, formerly thought to contain the largest population of this species, suggest that the species is likely to be subjected to considerable predation from introduced mice that are a major predator on other winter-breeding seabirds. The population on the Kerguelen Islands may also be in decline due to fishery bycatch. Based on these data a moderately rapid decline is suspected, but further data are urgently required in order to more accurately assess its population numbers and trends.

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Shy Albatross[5]	*Thalassarche cauta*	3	Australia	A	High	13,834 (2015-2016)	↓ (Low)	NT		Breeds on just three islands and may be susceptible to stochastic events and human activities, although one nesting site is moderately widely separated from the other two.
White-capped Albatross	*Thalassarche steadi*	5	NZ	?	High	95,917 (1995-2015)	?	NT		Trend of this species is poorly known. Given its longevity and slow productivity, and a high rate of mortality recorded in longline and trawl fisheries, it may be declining at a moderately rapid rate.
Southern giant Petrel	*Macronectes giganteus*	119	Antarctic Treaty, Argentina, Australia, Chile, Falkland Islands (Islas Malvinas)*, France, South Africa, South Georgia (Islas Georgias del Sur)*, UK	A	Low	47,7463 (1958-2016)	↑ (Medium)	LC		Recent analysis of trend data for the global population over the past three generations (64 years) gives a best case estimate of a 17 % increase and a worst case scenario of a 7.2 % decline (Chown *et al.* 2008 unpubl. report to SCAR).
Northern giant Petrel	*Macronectes halli*	50	Australia, France, New Zealand, South Africa, South Georgia (Islas Georgias del Sur)*	A	Low	10,608 (1973-2015)	↑ (Medium)	LC		Had been predicted to undergo a moderately rapid population decline in the near future but has instead shown a significant increase during the past two decades (probably owing to greater availability of carrion from expanding populations of fur seals, increased waste from commercial fishing operations, and the use of measures to reduce seabird bycatch around some breeding colonies).

*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 e Islas Sandwich del Sur) and the surrounding maritime areas.

[1] ***Site:*** *usually an entire, distinct island or islet, or rarely, section of a large island (>3,000km^2).* ACAP database. <data.acap.aq>. May 2016.

[2] ***Breeding Frequency:*** *A = Annual, B = Biennial*

[3] ***Trend:*** *↑ increasing, ↓declining, ↔ stable, ? unknown*

[4] ***IUCN Status:*** *CR = Critically Endangered, EN = Endangered, VU = Vulnerable, NT = Near Threatened, LC = Least Concern.* IUCN Red List of Threatened Species. Version 2016-1. <www.iucnredlist.org>

[5] Species is currently being considered for uplisitng or downlisitng (shaded in orange).

Discussion

The majority of albatross populations from species that occur in the Indian Ocean, are decreasing. The two Giant Petrel species are, however, no longer considered threatened and continue to show increasing populations. It is also worth noting that one of the Critically Endangered albatrosses, the Tristan Albatross *Diomedea dabbenena*, was previously not considered to be a regular visitor in significant numbers to the IOTC region. Tracking work on non-breeding Tristan Albatrosses (Reid et al. 2013) shows that adult, non-breeding individuals of this species regularly traverse the Indian Ocean and spend the austral summer off southern Australia, before migrating back to Gough Island in the South Atlantic Ocean. Furthermore, tracking of juvenile Tristan Albatrosses has revealed that they have a strong preference for the southwestern Indian Ocean (RMW, unpublished data). This species' population numbers continue to decrease strongly (Table 1). By contrast, the Indian Ocean-endemic Amsterdam Albatross *Diomedea amsterdamensis*, which is also Critically Endangered, continues to increase. However, that optimistic situation should be tempered by the fact that the latest count of breeding pairs (2014) showed a mere 46 pairs breeding (Table 1); this species is still extremely small and therefore bycatch events continue to pose a very significant risk. More optimism comes from the the Sooty Albatross *Phoebetria fusca*, which is currently listed as decreasing overall within the Indian Ocean. Recent evidence from Marion Island shows the population there is recovering well (Schoombie et al. 2016).

The improved status of Amsterdam, Sooty and Black-browed albatross *Thalassarche melanophris* population trends should be viewed as encouraging, as it possibly reflects improved use of seabird bycatch mitigation measures. However, despite the commendable efforts from RFMOs and many fishing nations, there remains much work to be done to prevent seabirds from being driven extinct by tuna longline fishing.

References

Baker, G. B., and R. M. Wanless. 2010. Level 1 Risk Assessment of Indian Ocean seabirds susceptible to bycatch in longline fishing operations. Presented to the 6th session of the Indian Ocean Tuna Commission's Working Party on Ecosystems and Bycatch, Victoria, Seychelles, 27-30 October 2010, IOTC-2010-WPEB-24.

Reid, T. A., R. M. Wanless, G. M. Hilton, R. A. Phillips, and P. G. Ryan. 2013. Foraging range and habitat associations of non‐breeding Tristan albatrosses: overlap with fisheries and implications for conservation. Endangered Species Research **22**:39-49.

Schoombie, S., R. Crawford, A. Makhado, B. Dyer, and P. Ryan. 2016. Recent population trends of sooty and light-mantled albatrosses breeding on Marion Island. African Journal of Marine Science **38**:119-127.