

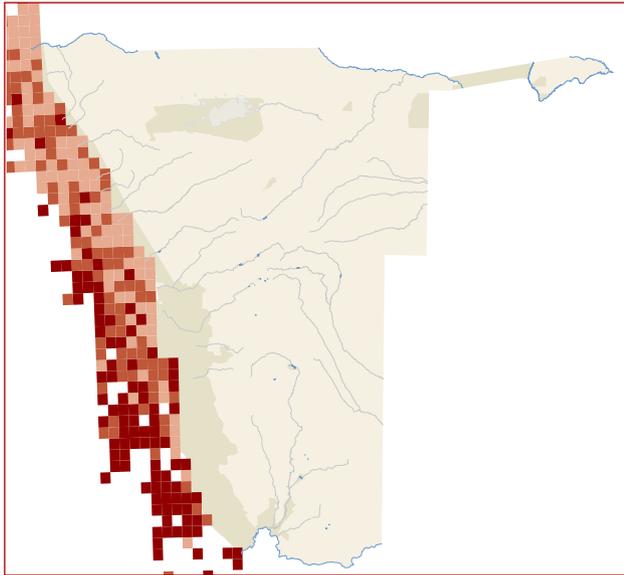
WHITE-CHINNED PETREL | *Procellaria aequinoctialis*

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Conservation Status:	Vulnerable
Southern African Range:	Waters off Namibia, South Africa, Mozambique
Area of Occupancy:	200,000 km ²
Population Estimate:	About 1.2 million breeding pairs globally
Population Trend:	Declining in all areas, including Namibian waters
Habitat:	Inshore waters to open ocean; most common on shelf and shelf edge
Threats:	Longlining, trawlers, direct mortality for food, plastic ingestion



DISTRIBUTION AND ABUNDANCE

This species is found throughout the southern oceans, from subtropical waters to the ice shelf of the Antarctic. It has a circumpolar sub-Antarctic breeding distribution (BirdLife International 2004). It occurs throughout southern African waters; in Namibia it is most commonly seen in shelf waters or on the shelf-break, but is also frequently seen close to the shore. It is by far the most commonly sighted seabird in Namibian shelf waters (Summerhayes *et al.* 1974, Boyer & Boyer 2005). The global population of this burrow-nesting species is difficult to assess accurately, but is roughly estimated at about 1.2 million pairs (or three million mature birds), and is thought to have decreased by 230,000 pairs since the 1980s (IUCN 2012a).

In southern African waters, breeding is limited to the Prince Edward Island group, where a total of 39,000 occupied nests are estimated (Ryan *et al.* 2012), making it the third most important breeding site after the South Georgia and Kerguelen island groups. In the mid 1980s, the number of birds frequenting Namibian waters was crudely estimated at 130,000 in winter and 10,000 in summer (Crawford *et al.* 1991). Birds tend to be more common in central and southern Namibian waters than in northern waters (Petersen *et al.* 2008c) and the area of occupancy, calculated from sightings, is roughly 200,000 km² (Boyer & Boyer 2005).



ECOLOGY

Breeding birds can roam over enormous areas during single foraging trips, and distances up to 9,500 km in a single foraging trip were recorded for breeding birds (Weimerskirch *et al.* 1999). Satellite tracking data and ring recoveries from birds originating from the Crozet Islands show that they spend the non-breeding season off the

coasts of South Africa and Namibia (Weimerskirch *et al.* 1999, C Barbraud *in litt.*); a one-year-old ringed individual killed in a trawl net in southern Namibia in 2008 came from the Crozet Islands (J Kemper pers. comm.).

The White-chinned Petrel forages during the day and at night (Barnes *et al.* 1997, Petersen *et al.* 2008c). It feeds on crustaceans, cephalopods and fish, often in association with cetaceans (Jackson 1988, Ryan 2005d). It feeds both by diving and by floating on the surface and dipping its head into the water (Huin 1994). In Namibian waters, it regularly feeds behind longline vessels or trawlers that discard offal (Ryan & Boix-Hinzen 1998, Petersen *et al.* 2008c).



THREATS

The White-chinned Petrel's attraction to trawlers and longline vessels fishing for hake and tuna species is its biggest threat, and it constitutes the majority of the recorded seabird bycatch in the southern ocean (Petersen *et al.* 2008c, Ryan *et al.* 2012). In Namibian waters, they make up about 80% of up to 37,000 seabirds that are killed by fishing activities every year (Paterson *et al.* in prep.). Moon phase appears to influence catch rates of this nocturnally active species. In November 2006, 63 individuals were killed on a demersal longline vessel during two trips in southern Namibia, at a time when the moon was nearly full (Petersen *et al.* 2008b). Similarly, 92 birds were killed by demersal longline activities on two trips in July 2012 that included a full moon period (Albatross Task Force unpubl. data). Significantly more male birds are being killed than female birds (Ryan & Boix-Hinzen 1999, Petersen *et al.* 2008b), exacerbating the impact on the population dynamics of this monogamous species (Petersen *et al.* 2008b). Some birds are also killed by trawlers, although the numbers are relatively small (J Paterson pers. comm.).

On breeding islands, predation of adults and young by cats and rats is the biggest mortality factor (van Aarde 1980, Berrow *et al.* 2000). As cats are removed and climate warming occurs, so mice populations increase, causing indirect mortality in some species and direct mortality in others (Huyser *et al.* 2000, R Wanless pers. comm.). Historically, birds were hunted for food by local people and this may still occur in Angolan waters, using baited hooks on fishing line (Roux *et al.* 2007). The comparatively high frequency of plastic fragment and pellet ingestion poses a further threat (Colabuono & Vooren 2007, Ryan 2008).



CONSERVATION STATUS

Although little reliable information on historical population size exists (IUCN 2012a), the species is suspected to have declined rapidly, mostly because of high mortality rates in



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longline fisheries, including in Namibian waters. The species is therefore classified as *Vulnerable* in Namibia. Numbers of White-chinned Petrels frequenting Namibia appear to have decreased. Boyer & Boyer (2005) recorded petrels in Namibian waters between 17°S and 26°S every year from 1989 to 2002; during that period the relative abundance of this species, in terms of its reporting rate, declined by 56% over 14 years, from 1989–1996 to 1997–2002.

The global classification is *Vulnerable* (IUCN 2012a) and that in South Africa has recently been uplisted from *Near Threatened* (Barnes 2000a) to *Vulnerable* (Taylor *et al.* in press). It is listed in Appendix II of the Convention for the Conservation of Migratory Species of Wild Animals (CMS), in Annex 1 of the Agreement on the Conservation of Albatrosses and Petrels (ACAP) and should be given *Specially Protected* status in Namibia.



ACTIONS

All the actions required for this species are the same as those required for the five albatross species that occur in Namibian waters. However, setting of lines at night is not an effective longline mitigation measure for this species (Petersen *et al.* 2008c). In 2008, the Albatross Task Force formally initiated a programme to assess the extent of fisheries-induced mortalities in Namibian waters. In addition, it has provided vital support in developing the National Plan of Action (NPOA) for seabirds, which advocates the implementation of compulsory mitigation measures to reduce seabird bycatch. The NPOA and accompanying regulations need to be ratified by the Namibian government. Strict enforcement of these regulations is thought to significantly reduce bycatch-

related mortalities. In addition to a trained observer accompanying every boat operating in Namibian waters to record seabird bycatch, the following mitigation measures, known to be effective elsewhere (Petersen *et al.* 2008c, Paterson *et al.* in prep.) need to be implemented:

- Reduced deck-lighting.
- Bird-scaring lines with fluttering streamers (tori line) next to the baited longline or trawl warps (the steel cables that tow nets).
- Appropriate and adequate weights to ensure a fast sink rate for the baited hooks.
- Offal discarding methods that do not pose an additional bycatch risk.
- Completely thawed bait to prevent baited hooks floating to the surface.
- A deck-delivery system, where possible, that feeds the baited line directly into the ocean without exposure to foraging birds.

All countries hosting White-chinned Petrels need to co-operate in an effort to ensure the survival of these long-distance fliers (Ryan & Boix-Hinzen 1998). The implementation of recommendations and obligations under international agreements to which Namibia is signatory, for example the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR), the Agreement on the Conservation of Albatrosses and Petrels (ACAP), to which Namibia is not signatory but a 'co-operating non-member', the International Commission for the Conservation of Atlantic Tuna (ICCAT) and the South East Atlantic Fisheries Organisation (SEAFO) is a priority. However, concrete seabird bycatch mitigation guidelines and associated legislation are lacking for some of these agreements.