

Seabirds

Ecological Knowledge and Importance

- Seabirds are long-lived species with low natural adult mortality. They are late to mature and slow to reproduce, often producing only one egg every year or two. Some species do not breed before they are ten years old. This means that even small increases in adult mortality can result in population declines.
- Seabirds are regarded as good indicators of the health of marine ecosystems and play a key role in the environment with an overall consumption of biomass of the same order of magnitude as global fisheries landings.¹

Threats (at sea)

- Bycatch and overfishing of prey species impact 28% and 15% of all seabird species, respectively.¹
- Bycatch occurs as seabirds become hooked on baited hooks, trapped in nets or collide with warp cables when scavenging for food on the sea surface and may, ultimately, drown.

- Each year, longline fisheries are responsible for around 160,000-320,000 seabird deaths,² while gillnets kill around 400,000.³
- Seabird-fishery food competition has intensified by 48% globally between 1970-1989 and 1990-2010.⁴

Status and Trends

- Seabirds are among the most threatened of all groups of birds, with 42% of all seabird species listed by the IUCN as globally threatened or nearthreatened. Almost half of all species (47%) have declining population trends.¹
- Bycatch in longline and trawl fisheries was the primary cause of the 40-60% albatross population declines observed over the last 35 years in the South Atlantic.⁵
- The Endangered Antipodean albatross (Diomedea antipodensis) is predicted to be functionally extinct within 30 years, due to bycatch.⁶



Figure 1: Threats to some of the most threatened groups of seabirds. Values represent the percent of the species in each group affected. Adapted from Dias et al. (2019)¹

Management Landscape

- Bycatch has been recognized as a threat to seabirds for over 35 years and best practice mitigation measures have been developed that can reduce bycatch in longline and trawl fisheries by over 90%.⁷ Mitigation measures for gillnet fisheries are still under development.
- The International Plan of Action for Reducing Incidental Catch of Seabirds in Longline Fisheries (IPOA-Seabirds) was developed by the FAO in 1998. To date 14 States have developed a National Plan of Action for Seabirds.
- All five tuna-RFMOs have Conservation Management Measures (CMMs) requiring use of seabird mitigation measures in areas overlapping with seabirds, and several countries have domestic legislation requiring seabird mitigation.
- Despite requirements having been in place for seabirds for over a decade, seabird populations are not recovering. This is likely due to low compliance with these measures, and RFMOs not requiring best practice mitigation use as described in the Agreement on Conservation of Albatrosses and Petrels (ACAP).
- While some fleets are reporting low compliance and high bycatch rates, data collection on seabird mortality remains limited across the RFMOs due to low observer coverage rates (<5% on average).⁸



Figure 2: Black-browed albatrosses (Thalassarche melanophris) drowned as bycatch during a pelagic longline fishing trip. Credit: Birdlife International.

 A lack of corrective action or penalties for noncompliance with seabird measures leads to no incentive to comply with seabird bycatch mitigation regulations.

References

- 1. Dias, et al. "Threats to seabirds: a global assessment." Biological Conservation (2019).
- 2. Anderson, et al. "Global seabird bycatch in longline fisheries." Endangered Species Research (2011).
- 3. Žydelis, et al. "The incidental catch of seabirds in gillnet fisheries: a global review". Biological Conservation (2013).
- 4. Grémillet, et al. "Persisting worldwide seabird-fishery competition despite seabird community decline." Current Biology (2018).
- 5. Pardo, et al. "Additive effects of climate and fisheries drive ongoing declines in multiple albatross species." Proceedings of the National Academy of Sciences (2017).
- 6. Yvan, R. "Integrated population model of Antipodean albatross for simulating management scenarios" Technical report prepared for Department of Conservation (2021).
- 7. Agreement for the Conservation of Albatrosses and Petrels (ACAP) Bycatch Mitigation Fact Sheets <u>https://www.acap.aq/bycatch-mitigation/</u> <u>bycatch-mitigation-fact-sheets</u>
- 8. Allain, et al. "International workshop on opportunities for ecosystem approaches to fisheries management in the Pacific Ocean tuna fisheries." *Reviews in Fish Biology and Fisheries* (2012).

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