

THREATENED, MOBILE AND MIGRATORY SPECIES IN THE PACIFIC



KEY POINTS

- Management, especially via protection and the establishment of [sanctuaries](#), can lead to species recovery, even from the brink of extirpation, as seen for humpback whales. Such management is vital in the context of multiple, compounding pressures from local and global sources.
- The Pacific leads the world in the establishment of large sanctuaries for sharks and whales, covering millions of square kilometres of SPREP Members' EEZs.
- A unified Pacific approach has greater global effect, as seen in the CITES listings of silky sharks, all three species of thresher sharks, and 9 species of mobula rays in 2016.
- Emerging threats include [climate change](#) and [marine debris](#), as well as established threats such as illegal take that are hard to monitor in such a vast marine area.
- Spatial management requires enforcement of protection from overfishing and other threats, using the most effective monitoring, control and surveillance techniques.
- Our knowledge of Pacific species is limited, particularly of deep species. Pacific EEZs have high proportions of deep sea (>1,000 m), giving great responsibility and potential.
- The long-term sustainability of Pacific ecotourism depends on coordinated commitments to species conservation and integrated ocean management.

HOW ISSUE LINKS TO/IMPACTS SDGs BEYOND **SDG14 LIFE BELOW WATER**

- SDG2: improved management of fishing bycatch will help ensure sustainable food production systems that help maintain ecosystems and genetic diversity of wild species.
- SDG8: [sustainable tourism](#) driven by the presence of healthy populations of marine species is a valuable economic activity in the Pacific.
- SDG12: [responsible consumption and production](#) is a key component of ecotourism and of any production dependent on natural populations. Establishing best international practice is vital.

BACKGROUND

1. **The Pacific islands region is home to many species**, with a great number of these species only found in this region. Other species migrate through the region, contributing to global cycles of elements such as carbon¹ and to multiple cultures, economies, and ecosystems. For example, a loggerhead turtle satellite-tagged in French Polynesia in 2013 swam 13,679 km in 531 days, passing through the EEZs of 12 Pacific islands. Such sea turtles will only attempt to nest on the same beach where they hatched decades ago. Long-term collaborative sustainable management is vital for the health of many [Pacific species](#) and the ecosystems on which they depend.
2. **Healthy, live animals bring value to the region**. In Palau, the lifetime value of a live shark to the tourism industry has been estimated at USD 1.9 million, with an estimated population observed by divers of around only 100 sharks supporting about USD 18 million worth of shark diving each year.² Globally, about 600,000 people spend over USD 300 million annually to watch sharks, supporting 10,000 jobs worldwide. Pacific birds are threatened by [invasive species](#), ecosystem degradation, bycatch mortality, and more, but can and do drive substantial birding tourism.
3. **Mobile species link and support ecosystem services**. For example, seabirds link native forests and manta rays, supporting tourism.³ Integrated effects demand integrated management.



4. **Recovery is possible.** The iconic humpback whale—the focus of a multi-million dollar whale-watching industry in many Pacific island countries—was hunted last century almost to the point of extinction, with perhaps as few as 200 remaining across the entire region when the slaughter finally stopped in 1978. Its recovery in the Pacific region to ~3,000 whales is one of the world’s most encouraging conservation success stories.
5. **New threats are emerging.** Pacific migratory marine species at risk include those targeted for food, caught as bycatch, at risk from human noise and light pollution, and affected by climate change. For example, the Pacific Ocean is home to over half of the world’s whale and dolphin species, as well as dugong. These marine mammals are facing new threats from climate change and noise from [shipping](#), [deep-sea mining exploration](#), and [coastal development](#). In 2050, under conservative projections of [ocean acidification](#), sounds could travel as much as 70% farther in some ocean areas.⁴ [Temperature](#) changes can alter prey populations and habitat suitability.
6. **Marine litter and pollution threaten species, ecosystems, and us.** Debris creates risks from entanglement and ingestion, as well as toxic pollutants. Many fishing vessels illegally dump non-biodegradable waste at sea⁵, adding to waste from land and from other regions. Over 60,000 fish-aggregating devices (FADs) are now drifting in the Pacific islands region, some actively used and some a new form of litter. Each FAD has a large amount of netting hanging in the water that attracts fish and other animals but can be a trap for turtles, which can become entangled by their claws. The proportions of turtles and sharks that come into contact with FADs and are able to swim away and those that become permanently entangled are currently unknown.
7. **Bycatch remains an issue for several species, such as sharks, turtles, and cetaceans**⁶. In 2015, an estimated 18,000 silky sharks were killed by purse seiners in the region, as were 26 false killer whales. Some long-liners are still finning sharks, and <5% of long-liners carry an observer. Long-line mortality of seabirds is also not trivial and includes several endangered species.
8. **Our knowledge of Pacific species is still limited.** Initiatives boosting the profile of [research and the scientific capacity](#) within the islands will serve the global community, support local and regional management, and promote Pacific leadership in science and management. For example, large proportions of the Pacific Exclusive Economic Zones are in deep water (mesopelagic and deeper), giving the Pacific islands great responsibility and great opportunity to sustainably manage these poorly understood, but diverse and valuable, deep-sea species and ecosystems.

- 1 Martin A. 2016. Fish poo and the climate challenge. *The Marine Biologist* April 2016: 20–23
- 2 Spalding et al. 2016. *Atlas of Ocean Wealth*. The Nature Conservancy
- 3 McCauley et al. 2012. From wing to wing: persistence of long ecological interaction chains in less-disturbed ecosystems. *Nature Sci Rep* 2:409
- 4 Ocean Acidification Reference User Group. 2009. *Ocean acidification: the facts. A special introductory guide for policy advisers and decision makers*. European Project on Ocean Acidification (EPOCA)
- 5 Richardson et al. 2016. Marine pollution originating from purse seine and longline fishing vessel operations in the Western and Central Pacific Ocean, 2003–2015. *Ambio* 45
- 6 WCPFC 2016. 8th annual report for the regional observer programme.