

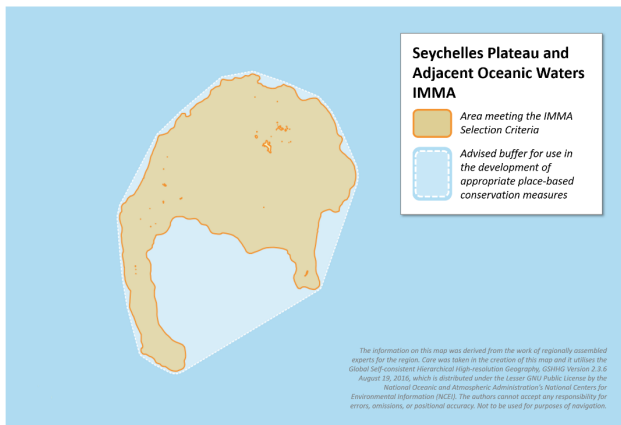
Seychelles Plateau and Adjacent Oceanic Waters IMMA

Summary

The Seychelles Plateau includes the islands of Mahé, Alphonse, and the Amirantes groups of islands. These mid-ocean shallow banks and islands surrounded by deep waters are highly productive, providing important habitat for fish, seabirds, sea turtles and manta rays, as well as a high diversity of marine mammals. A 2010 large-scale aerial survey revealed that this area had the second-highest levels of cetacean density and diversity of all the areas surveyed in the southwest Indian Ocean. The most abundant species observed in the area are small delphinids (*Stenella spp.*, likely to be spinner and spotted dolphins). However, larger species such as short-finned pilot whales (*Globicephala macrorhynchus*), Risso's dolphins (*Grampus griseus*), sperm whales (*Physeter macrocephalus*) and pygmy or dwarf sperm whales (*Kogia spp.*) are also abundant in the area. Endangered Antarctic blue whales (*Balaenoptera musculus intermedia*) are also encountered seasonally and pygmy blue whales (*B. m. breviceuda*) are expected to transit the area on migration.

Description

This IMMA is located over the shelf of the Seychelles, around the Mahé, Alphonse, and Amirantes groups of islands. The richer waters of the Seychelles Plateau contrast with the low nutrient subtropical waters in the Mascarene Islands in the south (New et al., 2005), where enhanced productivity is associated to mid-ocean shallow banks (Longhurst 2007). The area north of the Seychelles also shows bimodal seasonality in primary productivity, with peaks in both monsoon seasons (Anderson et al, 2012). The localized enhanced productivity makes the Seychelles plateau an important feeding site for many other marine species, including pelagic fish, especially tuna and shark species. Coral reefs and mangroves are characteristic of the coast in this area, providing important sites for fish spawning and



Area Size

158,283 km²

Qualifying Species and Criteria

Spinner dolphin – *Stenella longirostris*

Criterion B2

Sperm whale – *Physeter macrocephalus*

Criterion A

Blue whale – *Balaenoptera musculus*

Criterion A

Common bottlenose dolphin – *Tursiops truncatus*

Criterion B2

Indo-Pacific bottlenose dolphin –

Tursiops aduncus

Criterion B2

Marine Mammal Diversity (D2)

Balaenoptera musculus, *Globicephala macrorhynchus*, *Grampus griseus*, *Kogia breviceps*, *Kogia sima*, *Megaptera novaeangliae*, *Mesoplodon densirostris*, *Orcinus orca*, *Peponocephala electra*, *Physeter macrocephalus*, *Pseudorca crassidens*, *Stenella attenuata*, *Stenella coeruleoalba*, *Stenella longirostris*, *Tursiops aduncus*, *Tursiops truncatus*, *Ziphius cavirostris*

nurseries. High densities of seabirds, sea turtles and manta rays were encountered in the Mozambique Channel (Laran et al., 2017a).

Criterion A: Species or Population Vulnerability

The sperm whale, listed as Vulnerable on the IUCN Red List, is encountered in the area of Amirantes. The area could be important for calves as a relatively high calving rate compared to other areas such as the Galapagos or Ecuador was reported (Kahn et al., 1993). Endangered pygmy blue whales (*Balaenoptera musculus brevicauda*) are also found in the area (Mikhalev, 2000); however, except for the south of Sri Lanka, no abundance estimates in the Northern Indian Ocean are available for this species (Cooke 2018). Foetuses found in individuals taken by Soviet whalers north of the Seychelles Plateau could also indicate that the species may give birth in the area (Mikhalev 2000). The Critically Endangered Antarctic blue whale (*Balaenoptera musculus intermedia*) is known to occur in the area during the austral summer (Anderson et al, 2012). Considering their abundance in the southern hemisphere (<3000 individuals, Cooke 2018), the Seychelles likely represents an important area for the subspecies.

Criterion B: Distribution and Abundance Sub-Criterion B2: Aggregations

According to the aerial REMMOA survey, small and medium-sized delphinids (spinner dolphins, pantropical spotted dolphins, false killer whales and short-finned pilot whales) were most abundant and aggregate in high numbers in the IMMA. In addition, land and sea-based visual monitoring confirmed that common bottlenose dolphins and Indo-Pacific bottlenose dolphins congregate year-round around Alphonse and Desroches islands (pers. com. P-A. Adam, Island Conservation Society).

Criterion D: Special Attributes Sub-Criterion D2: Diversity

The Seychelles Plateau supports an important diversity of marine mammals. More than 17 species have been encountered in the area (Van Canneyt et al, 2010; Kiszka 2015; Webster and Rowat, 2016). Following a large aerial survey of the southwestern Indian Ocean, the highest diversity was encountered in the Seychelles blocks and the

North Mozambique Channel, suggesting hotspots of taxonomic richness in both areas (Laran et al, 2017a). This represents more than half of the 28 species of marine mammal that have been recorded within the entire Seychelles waters (Hermans and Pistorius, 2008). Species encountered in the area are common bottlenose dolphin (*Tursiops truncatus*), Indo-Pacific bottlenose dolphin (*Tursiops aduncus*), false killer whale (*Pseudorca crassidens*), Cuvier's beaked whale (*Ziphius cavirostris*), Blainville's beaked whale (*Mesoplodon densirostris*), striped dolphin (*Stenella coeruleoalba*), Fraser's dolphin (*Lagenodelphis hosei*), rough-toothed dolphin (*Steno bredanensis*), pygmy killer whale (*Feresa attenuata*) and killer whale (*Orcinus orca*) occasionally.

Supporting Information

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**MARINE MAMMAL
PROTECTED AREAS
TASK FORCE**



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