

Blue lines indicate the area meeting the ISRA Criteria; dashed lines indicate the suggested buffer for use in the development of appropriate place-based conservation measures

CONCEPTION ISLAND ISRA
Western Indian Ocean Region

SUMMARY

Conception Island is a small island located west of Mahé, Republic of Seychelles. This insular area is characterised by inshore habitats such as coral reefs and sandy substrates. Conception Island sits within Mahé, Alphonse and Amirantes Plateau Ecologically or Biologically Significant Marine Area. Within this area there are: **threatened species** and **undefined aggregations** (Spotted Eagle Ray *Aetobatus ocellatus*).

CRITERIA

Criterion A - Vulnerability; Sub-criterion C5 - Undefined Aggregations

— —
SEYCHELLES
 — —
0-10 metres
 — —
1.21 km²
 — —





DESCRIPTION OF HABITAT

Conception Island is a small island located 2 km west of Mahé, Seychelles. The major environmental conditions in this area are influenced by the monsoon seasons, trade winds, and currents that drive Seychelles' oceanography (Novozhilov et al. 1992). From May to September, the winds blow from the southeast and from December to March, they blow from the northwest. The transitional period in April and October/November usually features very calm seas and winds (Novozhilov et al. 1992). Sea conditions including sea surface temperature can be subject to positive Indian Ocean Dipole and El-Niño events (Burns & Subrahmanyam 2016). This insular area is primarily comprised of inshore habitats including rocky shorelines, granitic coral reefs around the island, and patchy sandy substrates.

The area sits within Mahé, Alphonse and Amirantes Plateau Ecologically or Biologically Significant Marine Area (EBSA) (CBD 2023).

This Important Shark and Ray Area is benthopelagic and is delineated from inshore and surface waters (0 m) to 10 m based on the observations of the Qualifying Species in the area.

ISRA CRITERIA

CRITERION A - VULNERABILITY

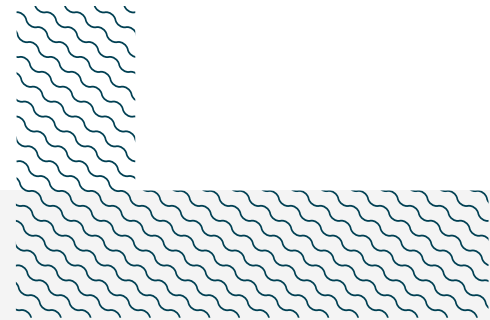
The one Qualifying Species within the area is considered threatened with extinction according to the IUCN Red List of Threatened Species™. The Spotted Eagle Ray is assessed as Endangered (Finucci et al. Submitted).

SUB-CRITERION C5 - UNDEFINED AGGREGATIONS

Conception Island is important for undefined aggregations of one ray species.

Marine megafauna is recorded as part of an 'incidental sightings' data collection program by Global Vision International (GVI) Seychelles. GVI conducts marine monitoring of fishes, corals, and invertebrates at 24 dive sites around northwest Mahé, of which two dive sites are at Conception Island. An incidental sighting is classified as any encounter with marine megafauna, whereby the diver encountering the animal records the species, number of individuals, estimated size, depth, and time. Incidental sightings are recorded during monitoring dives, training, or recreational dives conducted by GVI Seychelles. The monitoring dives alone consist of at least 34 dives per site per year.

Observation records from this area show regular and predictable observations of Spotted Eagle Ray aggregations, year-round, from 2006 to 2013 and from 2018 to 2022 (Global Vision International - Seychelles, unpubl. data 2023). Spotted Eagle Rays were recorded 80 times in total (including singular individuals and pairs). This included aggregations of more than four individuals observed on 17 occasions with a mean group size of 10 individuals (maximum = 30) and a mean estimated size of 65 cm disc width (min. = 30, max. = 150). The mean depth of these observations was 9 m (min. = 5, max. = 10). Further information is required on the nature and function of these aggregations.



Acknowledgments

Nico Fassbender (University of Western Australia), Robert W. Bullock (Save our Seas Foundation – D’Arros Research Centre) and Théophile L. Mouton (IUCN SSC Shark Specialists Group – ISRA Project) contributed and consolidated information included in this factsheet. We thank all participants of the 2023 ISRA Region 7 – Western Indian Ocean workshop for their contributions to this process.

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Suggested citation

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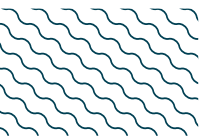
QUALIFYING SPECIES

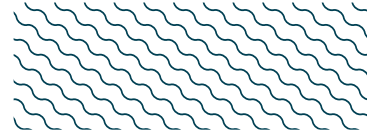
Scientific Name	Common Name	IUCN Red List Category	Global Depth Range (m)	ISRA Criteria/Sub-criteria Met									
				A	B	C1	C2	C3	C4	C5	D1	D2	
SHARKS													
<i>Aetobatus ocellatus</i>	Spotted Eagle Ray	EN	0-40	X							X		

SUPPORTING SPECIES

Scientific Name	Common Name	IUCN Red List Category
SHARKS		
<i>Carcharhinus amblyrhynchos</i>	Grey Reef Shark	EN
<i>Carcharhinus melanopterus</i>	Blacktip Reef Shark	VU
<i>Carcharhinus sorrah</i>	Spottail Shark	NT
<i>Galeocerdo cuvier</i>	Tiger Shark	NT
<i>Rhina ancylostomus</i>	Bowmouth Guitarfish	CR
<i>Rhynchobatus australiae</i>	Whitespotted Wedgefish	CR
<i>Sphyrna mokarran</i>	Great Hammerhead	CR
<i>Triaenodon obesus</i>	Whitetip Reef Shark	VU
RAYS		
<i>Mobula alfredi</i>	Reef Manta Ray	VU
<i>Pastinachus ater</i>	Broad Cowtail Ray	VU
<i>Taeniurops meyeri</i>	Blotched Fantail Ray	VU
<i>Urogymnus asperrimus</i>	Porcupine Ray	EN

IUCN Red List of Threatened Species Categories are available by searching species names at www.iucnredlist.org Abbreviations refer to: CR, Critically Endangered; EN, Endangered; VU, Vulnerable; NT, Near Threatened; LC, Least Concern; DD, Data Deficient.

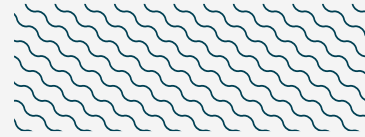




SUPPORTING INFORMATION

There are additional indications that this area might be important for undefined aggregations of Whale Sharks.

Scientific observations recorded in the Marine Conservation Society Seychelles (MCSS) database between 1996 and 2015 support the case for the Conception Channel (which is adjacent to the area) as an area important for undefined aggregations of Whale Sharks. Monitoring stopped in 2015 and was restarted in August 2023. Upwards of five individuals were seen in the area at the same time, and sharks were observed feeding on the surface but were also spotted by divers on the northwestern end of Conception Island. The Global Vision International (GVI) Seychelles incidental sightings database compliments the MCSS data with a further 24 individuals observed between 2007 and 2022. These sightings remain relatively low, and further information is required on the nature and function of these aggregations.



REFERENCES

Burns JM, Subrahmanyam B. 2016. Variability of the Seychelles–Chagos thermocline ridge dynamics in connection with ENSO and Indian Ocean Dipole. *IEEE Geoscience and Remote Sensing Letters* 13: 2019–2023. <https://doi.org/10.1109/LGRS.2016.2621353>

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Finucci B, Rigby C, Armstrong AO, Rezaie-Atagholipour M. Submitted. *Aetobatus ocellatus*. *The IUCN Red List of Threatened Species*.

Novozhilov AV, Chernova YN, Tsukurov IA, Denisov VA, Propp LN. 1992. Characteristics of oceanographic processes on reefs of the Seychelles Islands. *Atoll Research Bulletin* 366: 1–36.