

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

## RAPA ITI ISRA

### New Zealand & Pacific Islands Region

#### SUMMARY

Rapa Iti is located in the Austral Islands at the southernmost extent of French Polynesia. This is a remote and isolated island with a benthic structure composed mainly of a fringing reef exposed to the ocean. Due to the isolation of these islands, this area has a high rate of endemism. This area overlaps with the Rapa Marine Key Biodiversity Area. Within this area there are: **undefined aggregations** (*Galapagos Shark Carcharhinus galapagensis*).

#### CRITERIA

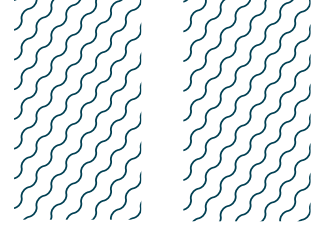
##### Sub-criterion C5 - Undefined Aggregations

FRENCH  
 POLYNESIA

0-200 metres

101.3 km<sup>2</sup>





## DESCRIPTION OF HABITAT

Rapa Iti is a remote and isolated island in the South Pacific Ocean, located in the Austral Islands, the southernmost islands in French Polynesia. Rapa Iti Island is the largest and the only inhabited island of the Bass Islands in French Polynesia, with an area of 38.5 km<sup>2</sup>. The area is an open caldera, with jagged peaks, the highest being Mount Perau (650 m) (Anderson et al. 2012). Rapa Iti consists of a fringing reef exposed to the ocean, followed by a fringing reef exposed to the inland sea (12%) (Friedlander et al. 2015). Due to its isolation, this area has a high rate of endemism, making it a biodiversity 'hotspot' (Tröndlé & Boutet 2009). The composition of Rapa Iti reef fishes corresponds to the fish population of the Polynesian region (Plessis 1986; Kulbicki et al. 2013), with a composition similar to that of Hawaii and Easter Island containing many species with subtropical distributions (Randall 1998).

Rapa Iti is influenced by the South Equatorial Current which flows from east to west across the South Pacific, moving warm waters. This area is also influenced by the southeast trade winds, which are more consistent and stronger during the dry season (May–October). Within this area, the depth increases drastically from 25 m to 1,000 m.

This area overlaps with the Rapa Marine Key Biodiversity Area (KBA 2024).

This Important Shark and Ray Area is benthic and pelagic and is delineated from inshore and surface waters (0 m) to 200 m based on the species distribution in this area.

## ISRA CRITERIA

### SUB-CRITERION C5 – UNDEFINED AGGREGATIONS

Rapa Iti is an important area for undefined aggregations of one shark species.

Historically, in 1968 and 1984, Galapagos Sharks were reported to occur in great abundances at Rapa Iti (Plessis 1986). Evidenced by two studies using mid-water baited remote underwater video stations (BRUVS) conducted between 2012–2015 and diving surveys in 2014, aggregations still occur regularly and predictably in the area year-round.

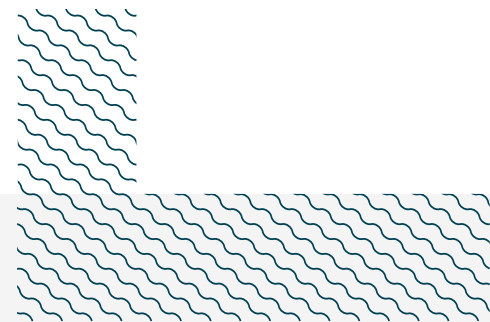
In 2014, a total of 38 mid-water BRUVS survey were deployed in this area (Friedlander et al. 2015). Sampling was conducted at different depths (<50, 50 to 200, >200 m) and orientation (e.g., east and west) around Rapa Iti. The relative abundance of sharks was estimated as the maximum number of individuals observed in a single frame (MaxN) (Friedlander et al. 2015). Sharks were seen in 66% of surveys around Rapa Iti, but they appeared to avoid areas close to shore. All sharks observed were Galapagos Sharks, except for two Tiger Sharks, both observed on the west side of Rapa Iti. Around Rapa Iti Island the average MaxN was 3.7 ( $\sigma = \pm 6.3$ ) (Friedlander et al. 2015). Between depths of 50–200 m, average MaxN was 13 on the eastern side and two on the western side, suggesting a higher abundance along the east side of Rapa Iti. Galapagos Sharks were present in large numbers in front of almost all the BRUVS, sometimes with more than fifteen individuals appearing in the frame. Individuals with sizes <1 m in total length (TL) have been reported on Rapa Iti (Mourier & Planes 2015; Friedlander et al. 2015). Considering the size-at-birth of this species (57–81 cm TL; Ebert et al. 2021), this area could be important for early life-stages.

In October 2014, diving surveys (n = 132) were carried out at 10 and 20 m depth, for a total of 44 study sites (Friedlander et al. 2015). At each survey, divers counted all sharks encountered along three fixed-length (25 m) corridor transects. Galapagos Shark were recorded at an average of 1.5 ( $\sigma = \pm 12$ ) individuals per 0.01 km<sup>2</sup>. In two surveys, 100 individuals per 0.01 km<sup>2</sup> were recorded (Pristine Seas

unpubl. data 2015). Two Galapagos Sharks measured 80 and 100 cm TL, representing neonates and young-of-the-year (YOY), suggesting that Rapa Iti could function as a reproductive area for this species.

Between April 2012 and January 2015, 1,041 mid-water stereo-BRUVS were deployed across the Indo-Pacific region, including Rapa Iti, for two hours each to survey sharks during daylight hours (Letessier et al. 2019). Shark abundance was calculated as the sum of MaxN across all shark species for each deployment. Twenty-eight species of sharks were recorded in this study, where the Galapagos Shark was the most observed as this species had the highest sum of MaxN (Galapagos Shark = 280; shark total = 861). The Galapagos Shark was recorded at depths between 1–286 m. Among the nine locations surveyed across the Pacific Ocean, Rapa Iti had the highest median MaxN value (4.045). Most of the sharks recorded on BRUVS in this area were Galapagos Sharks (Friedlander et al 2015).

Although mainly restricted in its distribution and confined to a few isolated oceanic around the globe, the Galapagos Shark can be the most common shark species in some locations, especially around remote offshore islands, seamounts, and atolls where other shark species are absent or infrequent (P Gausmann unpubl. data 2024). Remote locations function as critical habitat and nursery areas for this species (P Gausmann unpubl. data 2024). This area might function as a reproductive and nursery area due to its remoteness. However, further information is needed to understand the nature and function of Galapagos Shark aggregations in the area.



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## Suggested citation

**IUCN SSC Shark Specialist Group. 2024.** Rapa Iti ISRA Factsheet. Dubai: IUCN SSC Shark Specialist Group.

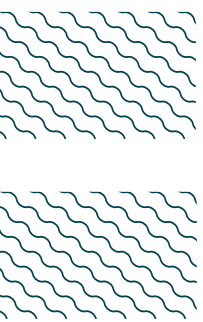
## QUALIFYING SPECIES

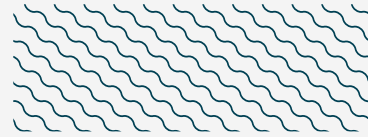
Scientific Name	Common Name	IUCN Red List Category	Global Depth Range (m)	ISRA Criteria/Sub-criteria Met									
				A	B	C1	C2	C3	C4	C5	D1	D2	
<b>SHARKS</b>													
<i>Carcharhinus galapagensis</i>	Galapagos Shark	LC	0-528								X		

## SUPPORTING SPECIES

Scientific Name	Common Name	IUCN Red List Category
<b>SHARKS</b>		
<i>Galeocerdo cuvier</i>	Tiger Shark	NT
<i>Isurus oxyrinchus</i>	Shortfin Mako	EN
<i>Pseudotriakis microdon</i>	False Catshark	LC
<b>RAYS</b>		
<i>Mobula birostris</i>	Oceanic Manta Ray	EN

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





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