

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

AITUTAKI ISRA

New Zealand & Pacific Islands Region

SUMMARY

Aitutaki is located in the Cook Islands. The area encompasses the western side of Aitutaki Island. It is characterised by a barrier and coastal coral reef, which faces the inner lagoon on the southern side. The area connects the reef area to the inner lagoon system. It is characterised by relatively steep canyons. This area is influenced by semi-diurnal tides with small amplitude, and eastern winds year-round. Within this area there are: **threatened species** and **undefined aggregations** (Spotted Eagle Ray *Aetobatus ocellatus*).

CRITERIA

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

—	—
COOK ISLANDS	—
—	—
0-40 metres	—
—	—
7.47 km²	—
—	—





DESCRIPTION OF HABITAT

Aitutaki is located in the Cook Islands. It is the fifth largest island of this jurisdiction and is situated within an encircling atoll of 15 islets and a lagoon. It forms the summit of a volcanic mass, located 225 km north of Rarotonga (Stoddart & Gibbs 1975) - the largest of the Cook Islands. The area encompasses the western side of Aitutaki Island and includes the respective area of the barrier coral reef. The area covers Arutanga Passage which is characterised by a coral reef which includes the barrier reef off the northwestern coast of Aitutaki, with the more coastal reef on the southwestern side. It is influenced by northeastern, eastern, and southeastern winds year-round (Stoddart & Gibbs 1975). The rainy season occurs between December–March. The dry season is most marked to occur between June–September. The area is also influenced by tides that are semi-diurnal with small amplitudes (Stoddart & Gibbs 1975).

This Important Shark and Ray Area is delineated from surface waters (0 m) to 40 m based on the bathymetry of the area.

ISRA CRITERIA

CRITERION A - VULNERABILITY

One Qualifying Species considered threatened with extinction according to the IUCN Red List of Threatened Species regularly occurs in the area. This is the Endangered Spotted Eagle Ray (Finucci et al. 2024).

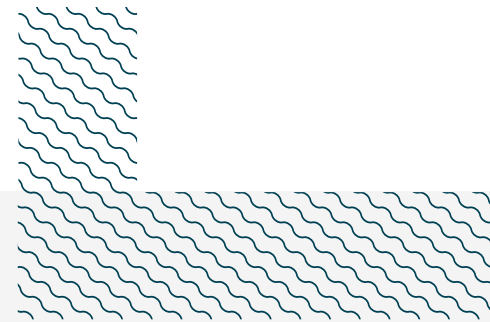
SUB-CRITERION C5 - UNDEFINED AGGREGATIONS

Aitutaki is an important area for undefined aggregations of one ray species.

Spotted Eagle Rays are present year-round in this area. Aggregations have been recorded during scientific surveys and by recreational divers. Between 2010–2018, data from 5,647 baited remote underwater video station (BRUVS) surveys were analysed (of 85% of BRUVS deployed) from 58 sites across 18 nations (Cramp 2021). In this area, there were 24 sightings of Spotted Eagle Rays including five aggregations. The maximum number of Spotted Eagle Rays observed in one frame was 20 - the highest across all sites in the 14 nations where the species was observed (Cramp 2021). Aitutaki is also popular with recreational divers, who are attracted to this area for the regular and predictable presence of Spotted Eagle Ray aggregations (J Cramp & V Udaywer pers. obs. 2024; Tripadvisor 2024).

Recreational dives are regularly undertaken, and Spotted Eagle Ray aggregations are predictably observed on almost every dive. Snorkelers and divers undertake dedicated trips to this area which includes two hotspot sites for Spotted Eagle Ray aggregations: 'Eagle Ray Alley' and 'Arutanga Passage'. The local dive operator regularly observes these aggregations (J Cramp & V Udaywer pers. obs. 2024), and tourists share observations of Spotted Eagle Ray aggregations online. From contemporary online citizen science data with photographic evidence, between 2019-2023 there were at least six observations of Spotted Eagle Ray aggregations ranging between at least 3-53 individuals (mean = ~23 individuals). These observations were photographed or video recorded by recreational divers/anglers in 2019 (n = 3 individuals on two occasions), 2021 (n = 53, 40, and 22 individuals), and 2023 (n = 16 individuals). Reports from recreational divers have been made between June–August, but further temporal information is required to determine seasonality. Mating

behaviour was also recorded in 2019 along with feeding behaviour in 2023. Further information is required to determine the nature and function of these aggregations.



Acknowledgments

Jessica Cramp (Sharks Pacific), Vinay Udyawer (Sharks Pacific), and Ryan Charles (IUCN SSC Shark Specialist Group - ISRA Project) contributed and consolidated information included in this factsheet. We thank all participants of the 2024 ISRA Region 10 - New Zealand and Pacific Islands workshop for their contributions to this process.

This factsheet has undergone review by the ISRA Independent Review Panel prior to its publication.

This project was funded by the Shark Conservation Fund, a philanthropic collaborative pooling expertise and resources to meet the threats facing the world's sharks and rays. The Shark Conservation Fund is a project of Rockefeller Philanthropy Advisors.

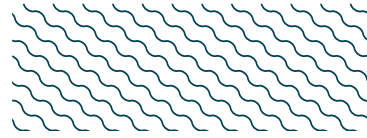
Suggested citation

IUCN SSC Shark Specialist Group. 2024. Aitutaki ISRA Factsheet. Dubai: IUCN SSC Shark Specialist Group.

QUALIFYING SPECIES

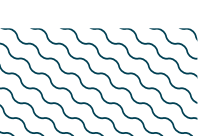
Scientific Name	Common Name	IUCN Red List Category	Global Depth Range (m)	ISRA Criteria/Sub-criteria Met								
				A	B	C1	C2	C3	C4	C5	D1	D2
SHARKS												
<i>Aetobatus ocellatus</i>	Spotted Eagle Ray	EN	0-40	X						X		

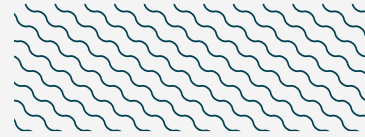
SUPPORTING SPECIES



Scientific Name	Common Name	IUCN Red List Category
SHARKS		
<i>Triaenodon obesus</i>	Whitetip Reef Shark	VU

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.





REFERENCES

Cramp JE. 2021. Evaluating the effectiveness of large-scale marine reserves on wide-ranging sharks: a case study of the Cook Islands Shark Sanctuary. Unpublished PhD Thesis, James Cook University, Townsville.

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Stoddart DR, Gibbs PE. 1975. Almost-atoll of Aitutaki – Reef Studies in the Cook Islands, South Pacific. *Atoll Research Bulletin* 190: 1-158.

Tripadvisor. 2024. Bubbles below. Available at: https://www.tripadvisor.co.uk/Attraction_Review-g309706-d1734551-Reviews-Bubbles_Below-Aitutaki_Southern_Cook_Islands.html Accessed September 2024.