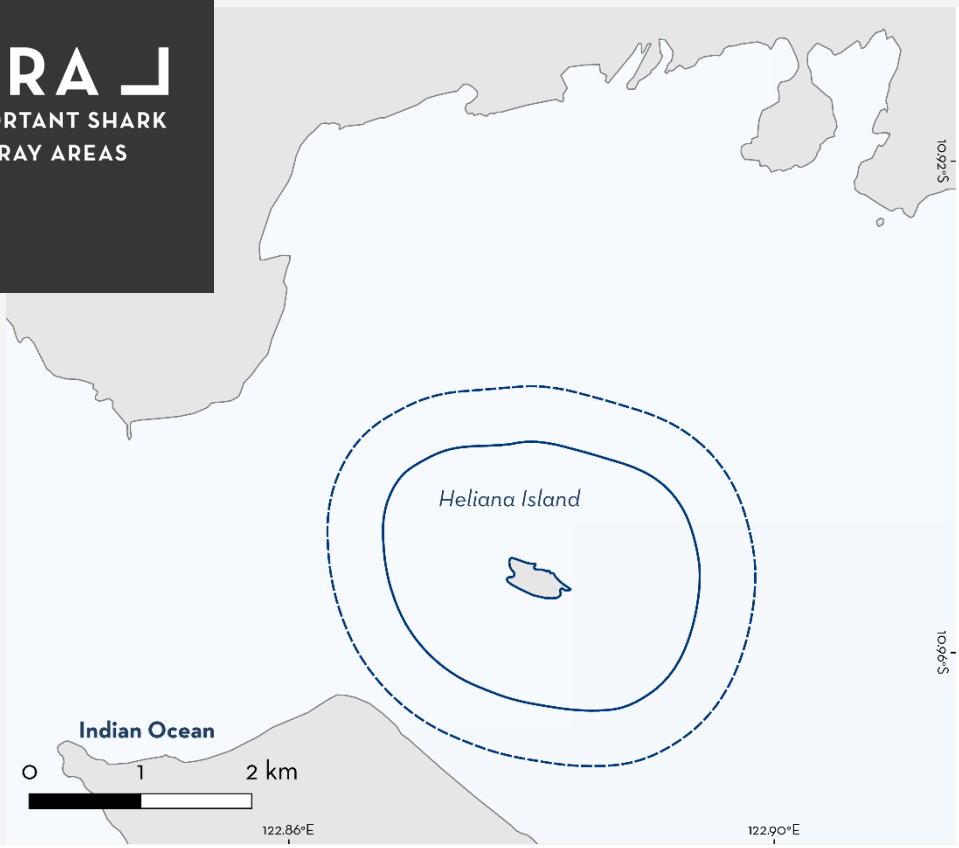
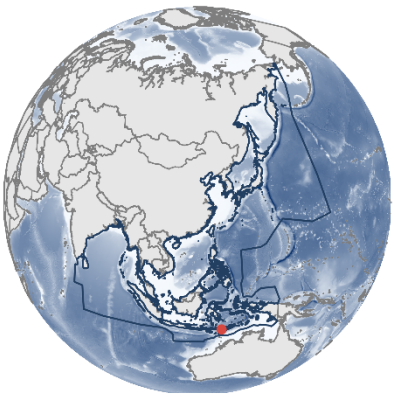
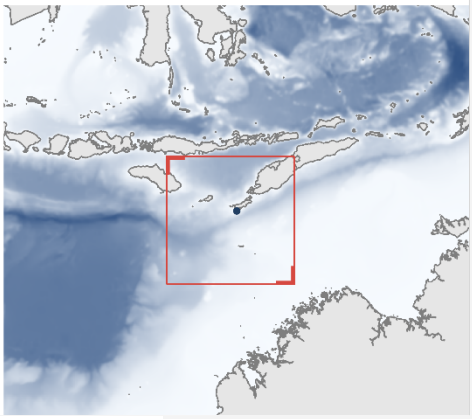
ISRA
IMPORTANT SHARK AND RAY AREAS







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

HELIANA ISLAND ISRA

Asia Region

INDONESIA

0–60 metres

5.46 km²

SUMMARY

Heliana Island is one of the southernmost islands in Indonesia. It is located off Rote Island in the Rote Ndao Regency, East Nusa Tenggara Province. The area is characterised by mangrove forests, coral reefs, and sand and mud substrates. It is influenced by monsoons. This area overlaps with the Rote Barat Daya Key Biodiversity Area. Within this area there are: **threatened species** and **undefined aggregations** (Oceanic Manta Ray *Mobula birostris*).

CRITERIA

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

DESCRIPTION OF HABITAT

Heliana Island is one of the southernmost islands in Indonesia. It is located off Rote Island in the Rote Ndao Regency, East Nusa Tenggara Province. Heliana Island is situated in the Heliana-Bo'a channel, between Rote Island and Ndana Island. It is characterised by mangrove forests, coral reefs, and muddy and sandy substrates (Widiatmaka et al. 2016). The area is influenced by monsoons: the southeast monsoon (from April to November) has low precipitation, and the northwest monsoon (from December to March) has high precipitation (Verbelen et al. 2017).

This area overlaps with the Rote Barat Daya Key Biodiversity Area (KBA 2024).

This Important Shark and Ray Area is benthopelagic and delineated from inshore and surface waters (0 m) to 60 m based on the depth range of Qualifying Species in the area.

ISRA CRITERIA

CRITERION A – VULNERABILITY

One Qualifying Species within the area is considered threatened with extinction according to the IUCN Red List of Threatened Species. The Oceanic Manta Ray is assessed as Endangered (Marshall et al. 2022).

SUB-CRITERION C5 – UNDEFINED AGGREGATIONS

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

Oceanic Manta Rays were observed engaging in cleaning behaviour during four recreational dives between September and November 2023 (Thrive Conservation unpubl. data. 2024). Based on extensive surveys, Heliana Island is the first-choice cleaning station within surrounding waters (N Ichida pers. obs. 2024). The cleaning station is particularly small, and as Oceanic Mantas here are large-bodied, there is no space for more than a couple of individuals to be present around the bommie at any one time. Smaller bommies in adjacent waters are used as an 'overflow' for when the cleaning station at Heliana Island is being used simultaneously by too many individuals (S Lewis pers. obs. 2024). Oceanic Manta behaviour here and elsewhere is such that they 'take turns' at the cleaning station. Whilst one Oceanic Manta is using the cleaning station, other individuals circle the station from a distance or use the 'overflow' until they come back to this bommie. However, up to six individuals have been observed using the cleaning station within a single day (Thrive Conservation unpubl. data. 2024).

At Heliana Island, Oceanic Manta Rays are cleaned by Bluestreak Cleaner Wrasse *Labroides dimidiatus*, Moon Wrasse (genus *Thalassoma*), and False Moorish Idol *Heniochus diphreutes* (Thrive Conservation unpubl. data. 2024). Cleaning behaviour of Oceanic Manta Rays was recorded in 26% of 119 dive surveys undertaken between April 2017 and October 2019 (Thrive Conservation unpubl. data. 2024). Remote GoPro cameras (camera traps) were placed at the cleaning station opportunistically 82 times, and recreational dive observations were conducted 37 times. Oceanic Manta Rays were present on 46 occasions (39%) with 1–6 individuals (mean = 2) being observed (of which 80% were male). A total of 28 Oceanic Manta Rays were photo-identified with at least two recurring individuals. Heliana Island is the only known Oceanic Manta Ray cleaning station in the greater Savu Sea region (Thrive Conservation unpubl. data. 2024), and outside of Raja Ampat and Fakfak (MV Erdmann pers. obs. 2024; S Lewis pers. obs. 2024).

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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
RAYS												
Mobula birostris	Oceanic Manta Ray	EN	0–1,246	X						X		

SUPPORTING SPECIES

Scientific Name	Common Name	IUCN Red List Category
RAYS		
Mobula alfredi	Reef Manta Ray	VU
Mobula kuhlii	Shorthorned Pygmy Devil Ray	EN
Mobula mobular	Spinetail Devil 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

Heliana Island may be an important feeding area for three ray species.

Three Oceanic Manta Rays have been observed and/or reported feeding on numerous occasions by local dive operators and tourists (e.g., between April and September 2017). The exact environmental conditions and oceanographic features driving local plankton abundances in this area remain relatively unknown.

Aggregations of Shorthorned Pygmy Devil Ray and Spinetail Devil Ray have been observed in the waters between Nemberala and Heliana, West Rote and the surrounding small islands (notably Do'o). Observations have been commonly reported by local fishers between the months of July and September. Reports have been annual and are consistent with fisheries landing data in 2019 and 2023 (when active surveys were conducted). Fisher reports suggest that these aggregations occur during the sardine fishing season, a potential food source driving these aggregations. Spinetail Devil Ray aggregations can reach up to ~40 individuals, as recorded in the Heliana-Bo'a channel, West Rote in 2016. Fishery landing data shows that juveniles, males, and female Shorthorned Pygmy Devil Ray are caught around the area, however, confirmation is required on the catch location. Further information is required to show the size, regularity, and predictability of these aggregations.

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