

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

ROS ISRA

New Zealand & Pacific Islands Region

SUMMARY

Ros is located in the south of Pohnpei in the Federated States of Micronesia. The area is characterised by coral reef features and mangrove areas where productive waters are concentrated. It is influenced by high water flows dependent on tidal movements, moon phase, and wave height. Within this area there are: **threatened species, feeding areas, and undefined aggregations** (Reef Manta Rays *Mobula alfredi*).

CRITERIA

Criterion A - Vulnerability; Sub-criterion C2 - Feeding Areas; Sub-criterion C5 - Undefined Aggregations

FEDERATED STATES OF MICRONESIA

0-70 metres

7.80 km²





DESCRIPTION OF HABITAT

Ros is located in the south of Pohnpei in the Federated States of Micronesia. Pohnpei is surrounded by a discontinuous barrier reef surrounding a lagoon (Rowley et al. 2019). The area is a small reef channel with the reef line on either side of the channel acting as a funnel into the small channel and the lagoon. The area is characterised by coral reef features that serve as cleaning stations, and mangrove areas where productive waters are concentrated (J Hartup pers. obs. 2024). Pohnpei is a volcanic island with high elevation and dense vegetation, resulting in high annual precipitation levels (Rowley et al. 2019), with runoff influencing the surrounding reefs and lagoon. Ros is influenced by high water flows dependent on tidal movements, moon phase, and wave heights.

This Important Shark and Ray Area is benthic and pelagic and is delineated from inshore and surface waters (0 m) to 70 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 Vulnerable Reef Manta Ray (Marshall et al. 2022).

SUB-CRITERION C₂ – FEEDING AREAS

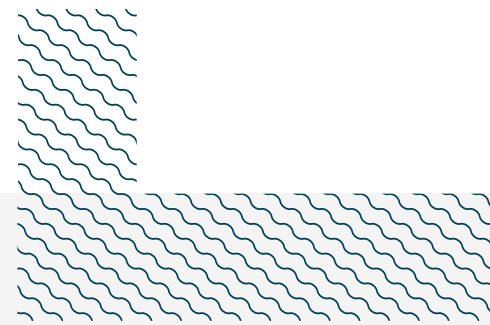
Ros is an important feeding area for one ray species.

Reef Manta Rays aggregate in this area to feed. Between 2013–2024, 188 scientific dive surveys were conducted around the island of Pohnpei (Micronesian Conservation Coalition [MCC] unpubl. data 2024). Of these surveys, 35 were undertaken in the area (18.6%; years 2014, 2015, 2016, 2017, 2023, and 2024). Reef Manta Rays were observed on 57% of surveys (n = 20; MCC unpubl. data 2024). In 30% of encounters (n = 6), Reef Manta Rays were observed feeding with observations of 3–5 individuals at a time. Feeding behaviours such as somersault, line, and vertical strategies have been recorded (Stevens 2016), depending on how the food is stratified through the water column (J Hartup pers. obs. 2024). Despite the low survey effort in the area, the proportion of feeding observations is similar to that of Mwand, in the northeast of Pohnpei, where survey effort is higher (n = 100) and where Reef Manta Rays are observed foraging in 30% of encounters. This demonstrates the relative importance of this area for fulfilling the foraging requirements of this species. Most observations during scientific surveys were made close to the cleaning station in the area, as this is where the scientific dive surveys are conducted (MCC unpubl. data 2024). Local ecological knowledge from fishers indicates that Reef Manta Ray aggregations have been observed in the area since the 1990's (J Opet & K Oplet pers. comm. 2024). Fishers observe Reef Manta Rays surface feeding close to the mangroves in the area where in-water surveys are not conducted; and these aggregations coincide with periods after rainfall when productivity is suspected to be higher (J Opet & K Oplet pers. comm. 2024).

SUB-CRITERION C₅ – UNDEFINED AGGREGATIONS

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

Reef Manta Rays are regularly observed engaged in cleaning behaviour in the area. Between 2013–2024, 188 scientific dive surveys were conducted around the island of Pohnpei (MCC unpubl. data 2024). Of these surveys, 35 were undertaken in the area (18.6%; years 2014, 2015, 2016, 2017, 2023, and 2024). Sightings of up to five individuals engaged in cleaning behaviour in the area at one time have been recorded (mean = 2–3 individuals; MCC unpubl. data 2024). Reef Manta Rays were observed on 57% of surveys (n = 20; MCC unpubl. data 2024). From these surveys, 36 Reef Manta Ray individuals have been recorded via photo-identification. Mwand is the only other documented aggregation site for Reef Manta Rays around the island of Pohnpei, highlighting the relative importance of this area for this species. During scientific dive surveys, two pregnant females were recorded with visibly extended abdomens, and early courtship behaviour such as nudging and trailing has been observed. There is also historical information which showcases the importance of this area for aggregations of Reef Manta Rays with tourism companies undertaking dives in the area specifically to observe the Reef Manta Rays (J Hartup pers. obs. 2024). Survey effort is limited in the area due to weather and distance from the boat dock, so it is difficult to determine if the aggregation has a seasonal component.



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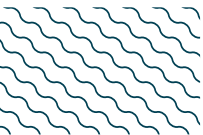
QUALIFYING SPECIES

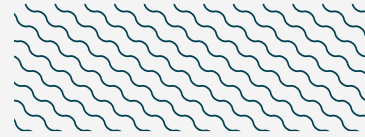
Scientific Name	Common Name	IUCN Red List Category	Global Depth Range (m)	ISRA Criteria/Sub-criteria Met									
				A	B	C1	C2	C3	C4	C5	D1	D2	
RAYS													
<i>Mobula alfredi</i>	Reef Manta Ray	VU	0-711	X			X			X			

SUPPORTING SPECIES

Scientific Name	Common Name	IUCN Red List Category
SHARKS		
<i>Carcharhinus amblyrhynchos</i>	Grey Reef Shark	EN
RAYS		
<i>Aetobatus ocellatus</i>	Spotted Eagle 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.





REFERENCES

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