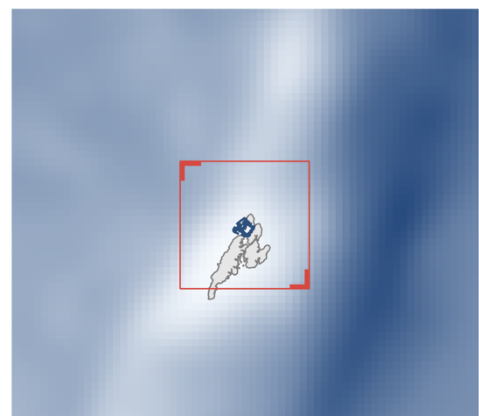
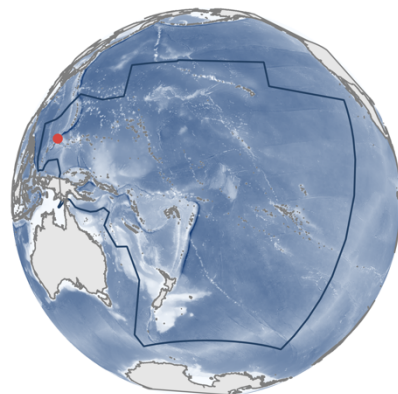
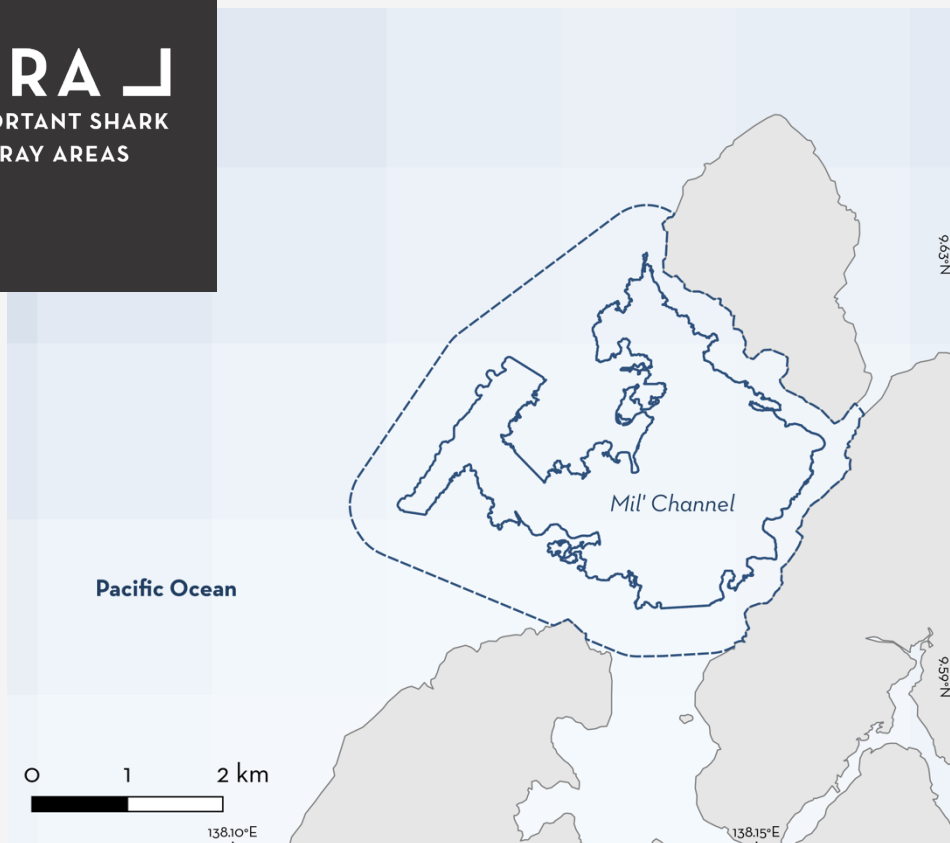




Blue lines indicate the area meeting the ISRA Criteria; dashed lines indicate the suggested buffer for use in the development of appropriate place-based conservation measures

MIL' CHANNEL ISRA

New Zealand & Pacific Islands Region

SUMMARY

Mil' Channel is located in the northwest of Yap in the Federated States of Micronesia. The channel feeds water into the large lagoon system around the island with an intricate network of coral mounds, reefs, and mangroves. Within this area there are: **threatened species** (e.g., Reef Manta Ray *Mobula alfredi*); **reproductive areas** (Reef Manta Ray); and **undefined aggregations** (e.g., Grey Reef Shark *Carcharhinus amblyrhynchos*).

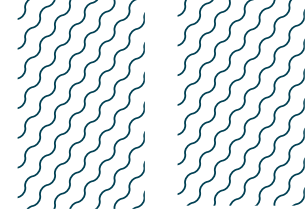
CRITERIA

Criterion A - Vulnerability; Sub-criterion C1 - Reproductive Areas; Sub-criterion C5 - Undefined Aggregations

FEDERATED
STATES OF
MICRONESIA

0-64 metres

6.48 km²



DESCRIPTION OF HABITAT

Mil' Channel is located in the northwest of Yap in the Federated States of Micronesia. The channel splinters between the four islands that make up Yap (Rumung, Tamil-Gagil and Maap, and Yap [Marbaaq]), feeding water into the large lagoon system with an intricate network of coral mounds, reefs, and mangroves. Mil' Channel is ~64 m deep at the opening and an outcropping formation splits the channel in two creating a bowl-like effect on the east side, and with a ridge on the west side (J Hartup pers. obs. 2024). During high tidal movements and swells, the topography of the area creates high currents.

This Important Shark and Ray Area is benthic and pelagic and is delineated from inshore and surface waters (0 m) to 64 m based on the bathymetry of the area.

ISRA CRITERIA

CRITERION A – VULNERABILITY

Two Qualifying Species considered threatened with extinction according to the IUCN Red List of Threatened Species regularly occur in the area. These are the Endangered Grey Reef Shark (Simpfendorfer et al. 2020) and the Vulnerable Reef Manta Ray (Marshall et al. 2022).

SUB-CRITERION C₁ – REPRODUCTIVE AREAS

Mil' Channel is an important reproductive area for one ray species.

Mil' Channel is visited by recreational divers because of the regular and predictable presence of Reef Manta Rays in the area (J Hartup pers. obs. 2024). Between 2008–2024, there were 183 scientific dive surveys conducted in Mil' Channel across all months of the year. There have been 531 sightings of Reef Manta Rays documented in the area, with 62 individuals identified via photographic identification (Micronesia Conservation Coalition [MCC] unpubl. data 2024). This comprises 96.9% of all individuals identified around Yap (n = 64). Seven pregnant Reef Manta Rays have been recorded in this area, determined visually by extended abdomens (Marshall & Bennett 2010). Of the 62 individuals identified in the area, eight of them were classified as young-of-the-year or juvenile (12.9%) based on size and clasper development (Marshall & Bennett 2010). Most sightings in this area are of cleaning station attendance (73.3%, n = 389). However, cleaning behaviour is frequently substituted by courtship when multiple Reef Manta Rays are present. Courtship trains have been regularly observed in the area (n = 138), with most comprising one male following one female (MCC unpubl. data 2024). However, 30 observations (21.7%) consisted of more than three Reef Manta Rays engaged in courtship activity, with a maximum of 10 individuals during one observation.

SUB-CRITERION C₅ – UNDEFINED AGGREGATIONS

Mil' Channel is an important area for undefined aggregations of one shark and one ray species.

Between 2008–2024, there were 183 scientific dive surveys conducted in Mil' Channel across all months of the year. During late boreal summer into fall, aggregations of 10–30 Grey Reef Sharks are observed on almost every dive (average >20 individuals; J Hartup unpubl. data 2024). The sharks are adults and display courtship behaviour with evidence of mating scars recorded. At other times of year, Grey Reef Sharks are observed in the area in smaller numbers (2–3 individuals) on a fraction of

dives (~25%). The predictable seasonality and behaviour observed in the area indicate its potential importance for reproduction for this species, however, more information is required to determine the nature and function of this aggregation.

Between 2008–2024, scientific surveys have documented 835 sighting records of Reef Manta Rays around the island of Yap (MCC unpubl. data 2024). Of these sightings, 531 (63.6%) were recorded in Mil' Channel, with 73.3% of sightings recorded engaged in cleaning behaviour (n = 389). Reef Manta Rays were observed solitary and in aggregations of up to 10 individuals. There is a seasonal peak in sighting numbers between November–April when an average of 5–10 individuals are observed per survey. There are fewer recorded sightings between May–October when an average of 1–3 Reef Manta Rays are observed per survey. There are two main cleaning stations in the area: a deep site (~19.5 m) and a shallow site (~3 m depth). Since 2011, the shallow site (known as 'Stammtisch') has become the most used site for cleaning activity by Reef Manta Rays (J Hartup pers. obs. 2024).

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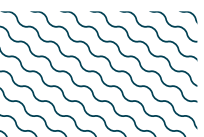
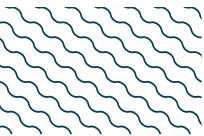
QUALIFYING SPECIES

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
SHARKS												
<i>Carcharhinus amblyrhynchos</i>	Grey Reef Shark	EN	0-280	X						X		
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>Triaenodon obesus</i>	Whitetip Reef Shark	VU
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.





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