

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

WEST TIOMAN ISRA

Asia Region

SUMMARY

West Tioman is located off Tioman Island in southeast Peninsular Malaysia. The area is characterised by shallow coral reefs, sandy substrates, and seagrass beds. It is influenced by the monsoon season, with the southwest monsoon from late May–September bringing calm water, dry weather, and a northward coastal flow. West Tioman overlaps with the Tioman Marine Park Ecologically or Biologically Significant Marine Area and partly overlaps with the Pulau Tioman Marine Park. Within the area there are: **threatened species** and **undefined aggregations** (Bottlenose Wedgefish *Rhynchobatus australiae*).

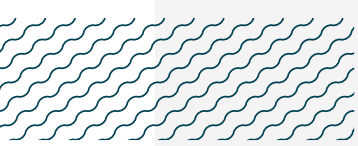
CRITERIA

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

MALAYSIA

0-60 metres

172.22 km²





DESCRIPTION OF HABITAT

West Tioman is located off Tioman Island which lies off the southeast coast of Peninsular Malaysia. The area is located on the calmer, western side of Tioman Island. The area is characterised by shallow coral reefs, sandy substrates, and seagrass beds (Shahbudin et al. 2017). It is influenced by the monsoon, with the northeast monsoon from November–March bringing high rainfall, rougher seas, and a southward flowing current, while the southwest monsoon from late May–September brings drier and calmer weather and a northward coastal current (Nakajima et al. 2015).

West Tioman overlaps with the Tioman Marine Park Ecologically or Biologically Significant Marine Area (EBSA; CBD 2024) and partly overlaps with the Pulau Tioman Marine Park.

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

ISRA CRITERIA

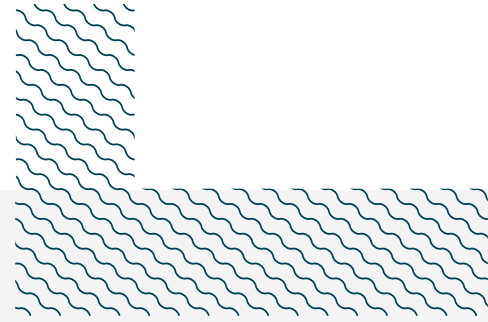
CRITERION A – VULNERABILITY

One Qualifying Species within the area is considered threatened with extinction according to the IUCN Red List of Threatened Species. The Bottlenose Wedgefish is assessed as Critically Endangered (Kyne et al. 2019).

SUB-CRITERION C5 – UNDEFINED AGGREGATIONS

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

Aggregations of Bottlenose Wedgefish (2–8 individuals) have been regularly observed by divers in West Tioman since 2017 (J Pippin pers. obs. 2024; S Adam unpubl. data 2024). Citizen science divers have recorded footage showing groups of adults (size estimates, 120–200 cm total length [TL]) or groups of one adult and several juveniles (50–70 cm TL) together. The size-at-maturity for the species is 124 cm TL (Last et al. 2016). Most aggregations are encountered from the end of June to August and rarely outside this period. During the season, they are seen on ~25% of dives at four of the reef sites, with ~30 dives recorded at these sites per season over the last three years (J Pippin pers. obs. 2024). Additional encounters are reported through citizen science in May and up to October. Bottlenose Wedgefish aggregations are seen on several reefs but only on the calmer western side of the island (S Adam pers. obs. 2024). The species has also been seen in this area at least since 2017 when it was recorded at three dive sites on Baited Remote Underwater Video Surveys (BRUVS) (MacNeil et al. 2020). There are no other known sites in Malaysia where this species is observed in aggregations, which underlines the regional importance of West Tioman for Bottlenose Wedgefish. Further studies are required to understand the nature and function of these aggregations.



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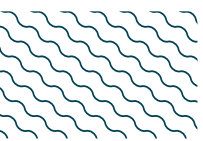
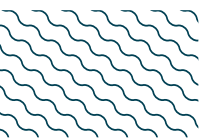
QUALIFYING SPECIES

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>Rhynchobatus australiae</i>	Bottlenose Wedgefish	CR	0-60	X							X		

SUPPORTING SPECIES

Scientific Name	Common Name	IUCN Red List Category
SHARKS		
<i>Carcharhinus melanopterus</i>	Blacktip Reef Shark	VU
<i>Rhincodon typus</i>	Whale Shark	EN
RAYS		
<i>Taeniura lymma</i>	Bluespotted Lagoon Ray	LC

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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