

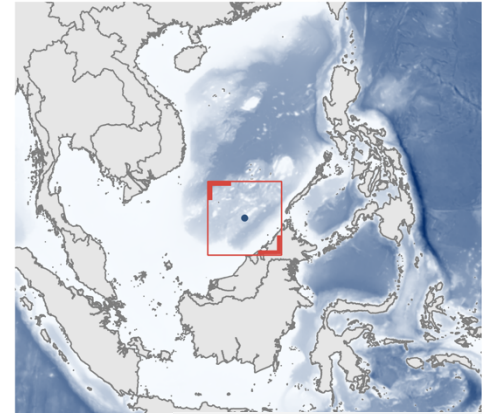
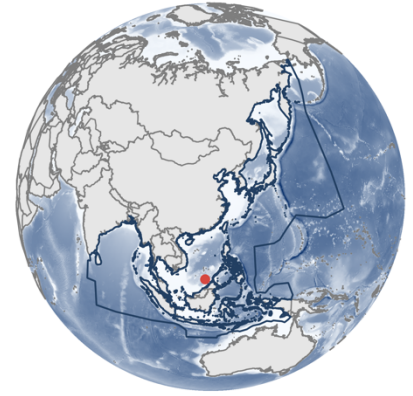
0 1.5 3 km

113.80°E

113.85°E

74°N

736°N



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

LAYANG LAYANG ISRA

Asia Region

SUMMARY

Layang Layang is a remote coral atoll of the Spratly Islands, located ~300 km off the coast of Borneo in the South China Sea. The atoll comprises an island that is mostly reclaimed, and a large central lagoon that is connected to the open ocean by two main channels. The area is characterised by steep coral reef walls dropping to >2,000 m and includes pelagic waters, shallow coral reefs, seagrass, coral rubble, and sandy substrates. Within this area there are **threatened species** and **undefined aggregations** (Scalloped Hammerhead *Sphyrna lewini*).

CRITERIA

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

MALAYSIA

0-1,043 metres

17.1 km²





DESCRIPTION OF HABITAT

Layang Layang is a remote coral atoll of the Spratly Islands located in the South China Sea, ~300 km off the northwest coast of Sabah, Malaysia. The area is also known as Swallow Reef. The island part of the atoll is largely the result of reclamation work, which built up the land to an area of 1.2 x 0.2 km (Musa et al. 2006). The reef is ~7 x 2 km with a large, central lagoon connected to the open ocean by two main channels (Musa et al. 2006). The reef steeply drops to >2,000 m depth. The area is characterised by steep coral reef walls with small ledges and caves and pelagic waters. In the shallow zone of the area there are also shallow reefs, seagrass beds, coral rubble, and sandy substrates (Asner et al. 2017).

This Important Shark and Ray Area is benthopelagic and is delineated from inshore and surface waters (0 m) to 1,043 m based on the bathymetry of the area and the global depth range of the Qualifying Species.

ISRA CRITERIA

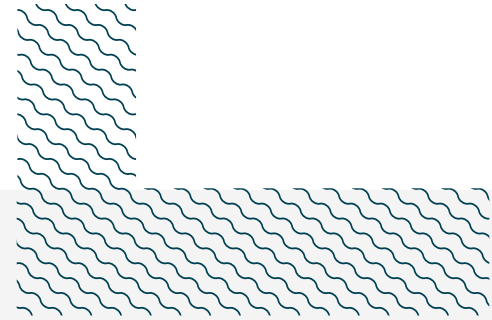
CRITERION A - VULNERABILITY

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

SUB-CRITERION C5 - UNDEFINED AGGREGATIONS

Layang Layang is an important area for undefined aggregations of one shark species.

This area is famous among scuba divers for the regular and predictable presence of Scalloped Hammerhead schools (Musa et al. 2006) with many contemporary videos (2009–2020) by citizen scientists confirming that aggregations of Scalloped Hammerheads are still regularly seen at this site. Up to 40 individuals are usually seen aggregating, with an average of ~20 individuals. The season for Scalloped Hammerhead sightings is March–September (Musa et al. 2006), with a peak during March–May. Contemporary videos confirm this seasonality for Scalloped Hammerhead aggregations at Layang Layang. The individuals within the school usually swim slowly and sometimes at an angle on their side. It is likely that they rest at the reef during the day before foraging at night, but further information is required to understand the nature and function of these aggregations.



Acknowledgments

Serena Adam (WWF-Malaysia), Ho Kooi Chee (Marine Research Foundation), and Christoph A Rohner (IUCN SSC Shark Specialist Group – ISRA Project) contributed and consolidated information included in this factsheet. We thank all participants of the 2024 ISRA Region 9 – Asia workshop for their contributions to this process.

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Suggested citation

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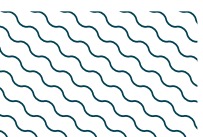
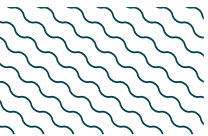
QUALIFYING SPECIES

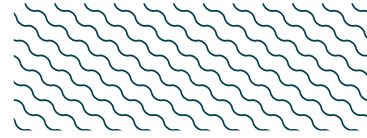
Scientific Name	Common Name	IUCN Red List Category	Global Depth Range (m)	ISRA Criteria/Sub-criteria Met									
				A	B	C1	C2	C3	C4	C5	D1	D2	
SHARKS													
<i>Sphyrna lewini</i>	Scalloped Hammerhead	CR	0-1,043	X							X		

SUPPORTING SPECIES

Scientific Name	Common Name	IUCN Red List Category
SHARKS		
<i>Stegostoma tigrinum</i>	Indo-Pacific Leopard Shark	EN
<i>Triaenodon obesus</i>	Whitetip Reef Shark	VU
RAYS		
<i>Mobula alfredi</i>	Reef Manta Ray	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.



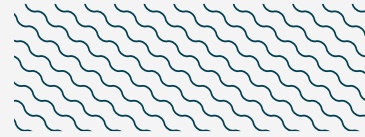


SUPPORTING INFORMATION

There are additional indications that Layang Layang is an important area for aggregations and resting for two shark and one ray species.

Whitetip Reef Sharks have been reported to aggregate and Indo-Pacific Leopard Sharks seen resting on ledges. However, further information is required to confirm the regularity of these behaviours.

Contemporary videos by divers (2016–2020) show Reef Manta Rays cleaning on the reefs of Layang Layang. However, there is not enough information available yet to understand the regularity of this behaviour.



REFERENCES

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Musa G, Kadir SFSA, Lee L. 2006. Layang Layang: An empirical study on scuba divers' satisfaction. *Tourism in Marine Environments* 2(2): 89-102. <https://doi.org/10.3727/154427306779436273>

Rigby CL, Dulvy NK, Barreto R, Carlson J, Fernando D, Fordham S, Francis MP, Herman K, Jabado RW, Liu KM, et al. 2019. *Sphyrna lewini*. *The IUCN Red List of Threatened Species* 2019: e.T39385A2918526.