

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

DANJUGAN ISLAND ISRA

Asia Region

SUMMARY

Danjugan Island is located ~2.4 km off southwestern Negros Island in the central Philippines. This area surrounds a small island (~0.43 km²) located in the eastern Sulu Sea. The area is very shallow and is characterised by mangrove forests, sandy beaches, seagrass beds, and coral reefs. Within this area there are: **threatened species** and **reproductive areas** (Blacktip Reef Shark *Carcharhinus melanopterus*).

CRITERIA

Criterion A - Vulnerability; Sub-criterion C1 - Reproductive Areas

PHILIPPINES

0-25 metres

1.61 km²





DESCRIPTION OF HABITAT

Danjugan Island is located ~2.4 km off southwestern Negros Island in the central Philippines. This area surrounds a small island (~0.43 km²) located in the eastern Sulu Sea. The area is very shallow (25 m deep) and is characterised by mangrove forests, sandy beaches, seagrass beds, and coral reefs.

The Sulu Sea has a tropical monsoonal climate with only two seasons each year: the dry (boreal winter) season that prevails from November to April, and the rainy (summer) season, extending from May to October (Wang et al. 2006). The surface wind of the Sulu Sea is strongly influenced by the East Asian Monsoon System: northeasterly in winter, southwesterly in summer, and highly variable during the transitional periods (Wyrski 1961). Vertical upwelling of cold, nutrient-rich waters is caused by the northeasterly winds (winter season) increasing marine productivity (i.e., phytoplankton blooms) (Wang et al. 2006).

This Important Shark and Ray Area is benthopelagic and is delineated from inshore and surface waters (0 m) to 25 m based on the depth range of Qualifying Species in the area.

ISRA CRITERIA

CRITERION A – VULNERABILITY

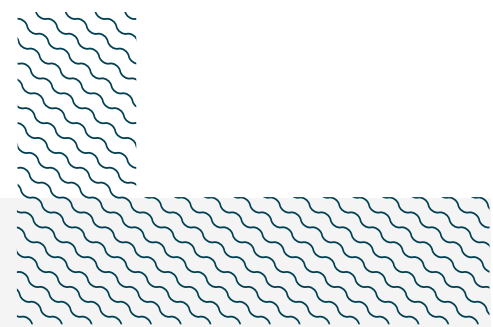
One Qualifying Species within the area is considered threatened with extinction according to the IUCN Red List of Threatened Species. The Blacktip Reef Shark is assessed as Vulnerable (Simpfendorfer et al. 2020).

SUB-CRITERION C₁ – REPRODUCTIVE AREAS

Danjungan Island is an important reproductive area for one shark species.

Juvenile and adult Blacktip Reef Sharks are observed year-around within the area (K Ledesma Trebol pers. obs. 2024). Records of neonates (visually estimated to be ~40 cm total length [TL]) in this area date back to 1991 with the largest aggregation recorded in 2010, when sharks started to be monitored, with 60–80 neonate Blacktip Reef Sharks. Since then, groups of 12 to 20 have been regularly seen in this area year-around with a peak between July and September, when they have been seen daily (K Ledesma Trebol pers. obs. 2024). Size-at-birth for this species is 30–52 cm TL (Ebert et al. 2021).

The home range of neonatal Blacktip Reef Sharks was determined in three areas in which sharks had body sizes similar to Danjugan Island: Moorea, French Polynesia (mean = 62.5 cm TL; Bouyoucos et al. 2020), Orpheus Island, Australia (mean = 68.3 cm TL; George et al. 2019), and Ningaloo Reef, Australia (mean = 63.9 cm TL; Oh et al. 2017). In these studies, neonates remained in very shallow areas with coral cover, sandflats, and/or mangroves. They avoided deeper lagoonal and slope habitats and deep channels (Bouyoucos et al. 2020). In Puerco Island (Philippines) neonate Blacktip Reef Sharks are recorded at a distance of 0–50 m from the shoreline (Utzurum 2022). These findings are consistent with the observations from Danjugan Island and provide support for the importance of the local habitat for neonate Blacktip Reef Sharks.



Acknowledgments

Arnel Yaptinchay (Marine Wildlife Watch of the Philippines), Kaila Ledesma Trebol (The Philippine Reef and Rainforest Conservation Foundation, Inc.), Ma. Theresa R Aquino (Marine Wildlife Watch of the Philippines), and Adriana Gonzalez Pestana (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.

This factsheet has undergone review by the ISRA Independent Review Panel prior to its publication.

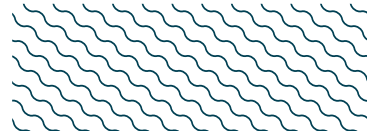
This project was funded by the Shark Conservation Fund, a philanthropic collaborative pooling expertise and resources to meet the threats facing the world's sharks and rays. The Shark Conservation Fund is a project of Rockefeller Philanthropy Advisors.

Suggested citation

IUCN SSC Shark Specialist Group. 2024. Danjungan Island ISRA Factsheet. Dubai: IUCN SSC Shark Specialist Group.

QUALIFYING SPECIES

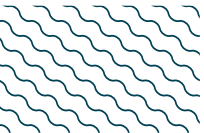
Scientific Name	Common Name	IUCN Red List Category	Global Depth Range (m)	ISRA Criteria/Sub-criteria Met									
				A	B	C1	C2	C3	C4	C5	D1	D2	
SHARKS													
<i>Carcharhinus melanopterus</i>	Blacktip Reef Shark	VU	0-75	X		X							



SUPPORTING SPECIES

Scientific Name	Common Name	IUCN Red List Category
SHARKS		
<i>Rhincodon typus</i>	Whale Shark	EN
<i>Triaenodon obesus</i>	Whitetip Reef Shark	VU
RAYS		
<i>Aetobatus ocellatus</i>	Spotted Eagle Ray	EN
<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.





REFERENCES

- Bouyoucos IA, Romain M, Azoulai L, Eustache K, Mourier J, Rummer JL, Planes S. 2020.** Home range of newborn blacktip reef sharks (*Carcharhinus melanopterus*), as estimated using mark-recapture and acoustic telemetry. *Coral Reefs* 39: 1209–1214. <https://doi.org/10.1007/s00338-020-01965-z>
- Ebert DA, Dando M, Fowler SL. 2021.** *Sharks of the world: A complete guide*. Princeton: Princeton University Press.
- George LW, Martins AP, Heupel MR, Simpfendorfer CA. 2019.** Fine-scale movements of juvenile blacktip reef sharks *Carcharhinus melanopterus* in a shallow nearshore nursery. *Marine Ecology Progress Series* 623: 85–97. <https://doi.org/10.3354/meps13010>
- Oh BZL, Thums M, Babcock RC, Meeuwig JJ, Pillans RD, Speed C, Meekan MG. 2017.** Contrasting patterns of residency and space use of coastal sharks within a communal shark nursery. *Marine and Freshwater Research* 68: 1501–1517. <http://dx.doi.org/10.1071/MF16131>
- Simpfendorfer C, Yuneni RR, Tanay D, Seyha L, Haque AB, Fahmi, Bin Ali A, D, Bineesh KK, Gautama DA, et al. 2020.** *Carcharhinus melanopterus*. *The IUCN Red List of Threatened Species* 2020: e.T39375A58303674. <https://dx.doi.org/10.2305/IUCN.UK.2020-3.RLTS.T39375A58303674.en>
- Utzurum JA. 2022.** Elasmobranch biodiversity survey of Banwa Private Island. Banwa: Marine Wildlife Watch of the Philippines.
- Wang J, Qi Y, Jones IS. 2006.** An analysis of the characteristics of chlorophyll in the Sulu Sea. *Journal of Marine Systems* 59: 111–119. <http://doi.org/10.1016/j.jmarsys.2005.09.004>
- Wyrtki K. 1961.** Physical oceanography of the South Asian water: Scientific results of marine investigations of the South China Sea and the Gulf of Thailand, NAGA Rep. 2. La Jolla: Scripps Institution of Oceanography.