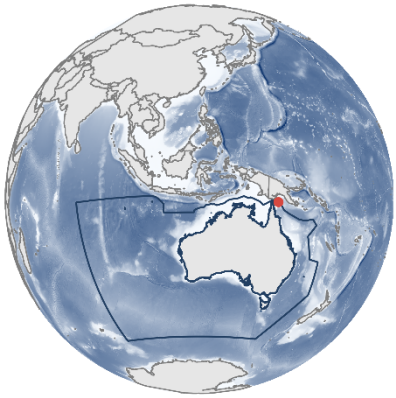
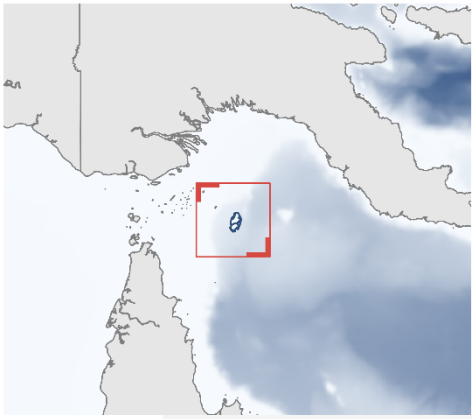
ISRA
IMPORTANT SHARK AND RAY AREAS





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

ASHMORE-CORAL SEA ISRA

Australia and Southeast Indian Ocean Region

AUSTRALIA

0–40 metres

294.1 km²

SUMMARY

Ashmore-Coral Sea is located in the northwest Coral Sea, off Queensland, Australia. It encompasses the southern part of a reef lagoon and sections of outer reef. The area is situated on top of an extinct underwater volcano and is characterised by an extensive and deep reef lagoon, coral reefs, and steep outer walls. It is influenced by its shelf-edge geomorphology, strong tidal currents, seasonal wind regimes, and the Hiri Current. The area overlaps with the Coral Sea Marine Park. Within this area there are: **threatened species** and **undefined aggregations** (Grey Reef Shark *Carcharhinus amblyrhynchos*).

CRITERIA

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

DESCRIPTION OF HABITAT

Ashmore-Coral Sea is located in the northwest Coral Sea, off Queensland, Australia. It encompasses the southern part of the reef lagoon and part of the eastern and western outer reefs. The area is situated on top of an extinct underwater volcano, ~46 km east of the outer reefs of Torres Strait. It is characterised by an extensive and deep reef lagoon, coral reefs, and steep outer walls, dropping to >500 m depth within a few hundred metres (Galbraith et al. 2022; Hoey et al. 2024).

The area is influenced by its shelf-edge geomorphology, strong tidal currents, seasonal wind regimes, and the Hiri Current, which branches north from the South Equatorial Current to form a slow clockwise gyre in the Gulf of Papua. North-westerly monsoon winds in the austral summer and south-easterly trade winds in winter drive low-frequency circulation (Church et al. 1988). The area benefits from seasonal upwelling when the poleward boundary current along the shelf is weakened or reversed by eddies forming in the Gulf of Papua (Condie & Dunn 2006).

Ashmore-Coral Sea overlaps with the Coral Sea Marine Park – National Park Zone (Parks Australia 2025).

This Important Shark and Ray Area is benthic and pelagic and is delineated from 0–40 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 Endangered Grey Reef Shark (Simpfendorfer et al. 2020).

SUB-CRITERION C5 – UNDEFINED AGGREGATIONS

Ashmore-Coral Sea is an important aggregation area for one shark species.

Grey Reef Sharks have been observed aggregating in the area. In 2018, 2021, and 2023, diver-based underwater visual census (UVC) surveys were conducted in the area and other reefs outside of this area in the Coral Sea (Galbraith et al. 2022; Hoey et al. 2024). Diver-based surveys were conducted at 12 shallow reef sites across Ashmore (>130 diver hours). At each site, three replicate 50 m transects were run parallel to the depth contour, with up to 10 m between successive transects (Hoey et al. 2024). Grey Reef Sharks were regularly observed at Ashmore-Coral Sea, with a total estimation of 20 sharks per hectare. Sharks were generally more abundant on the exposed eastern side of the reefs, compared to the lagoon or sheltered western reefs (outside the area). Grey Reef Sharks were juveniles and adults, measuring between 110–180 cm total length (TL) obtained through visual estimation (A Hoey & E McClure unpubl. data 2025). Size-at-birth for the species is 45–64 cm TL and size-at-maturity is 160–200 cm TL (Ebert et al. 2021).

Additionally, between 2023–2025, 2–4 dive trips per year (12–20 dives per trip) were conducted in the area during April and November (P Cogollos unpubl. data 2025). Aggregations of 3–6 Grey Reef Sharks were observed on 100% of the dives (~24–80 dives per year) within the area by dive guides collecting opportunistic data during SCUBA dives (P Cogollos unpubl. data 2025). These Grey Reef Sharks were between neonatal and adult life-stages, measuring between 50–200 cm TL (P Cogollos unpubl. data 2025).

Grey Reef Sharks have shown high residency and site fidelity to similar reefs in the Coral Sea and the Great Barrier Reef, highlighting the individual importance of reefs such as this area (Espinoza et al. 2015). Due to the remoteness of the area, observations are opportunistic, but the large numbers of individuals and predictability of aggregations reported across different years highlight the importance of this area. Further information is required to understand the nature and function of these aggregations.

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Pablo Cogollos (Mike Ball Dive Expeditions), Andrew Hoey (James Cook University), Eva McClure (James Cook University), and Marta D Palacios (IUCN SSC Shark Specialist Group – ISRA Project) contributed and consolidated information included in this factsheet. We thank all participants of the 2025 ISRA Region 08 – Australia and Southeast Indian Ocean workshop for their contributions to this process.

We acknowledge the Traditional Owners of Country throughout Australia and recognise the continuing connection to land, waters, and culture. We pay our respects to Elders past, present, and emerging.

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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												
Carcharhinus amblyrhynchos	Grey Reef Shark	EN	0–280	X						X		

SUPPORTING SPECIES

Scientific Name	Common Name	IUCN Red List Category
SHARKS		
Carcharhinus albimarginatus	Silvertip Shark	VU
Triaenodon obesus	Whitetip Reef Shark	VU
RAYS		
Taeniura lymma	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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