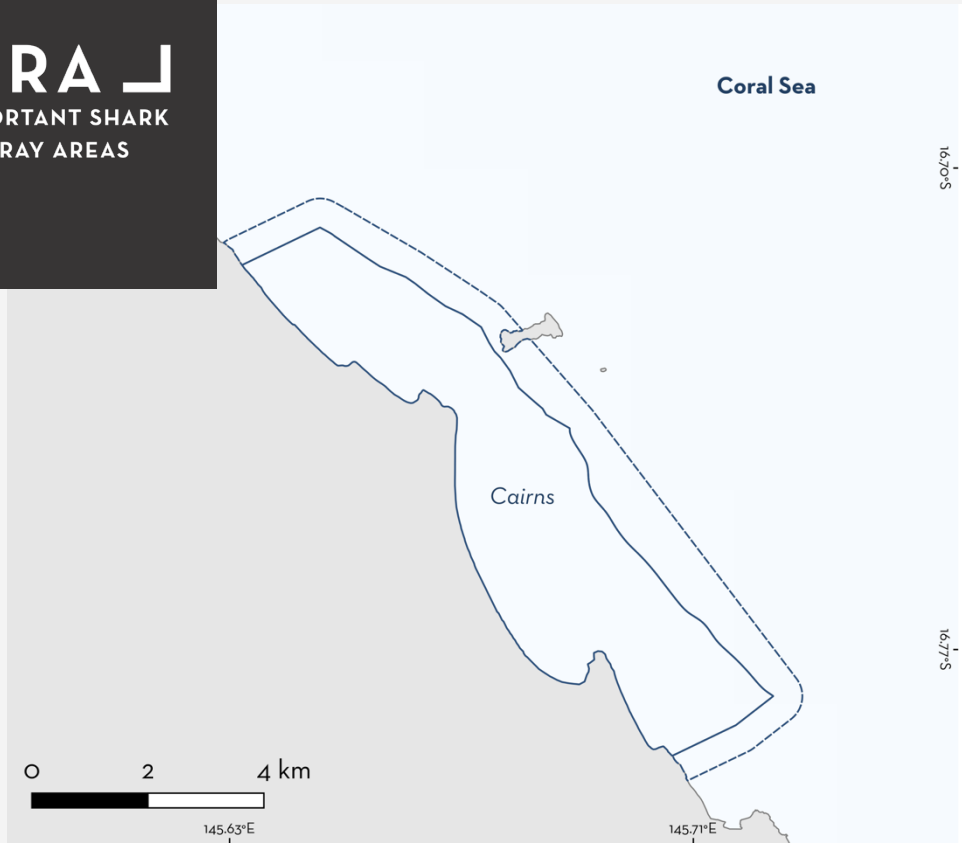
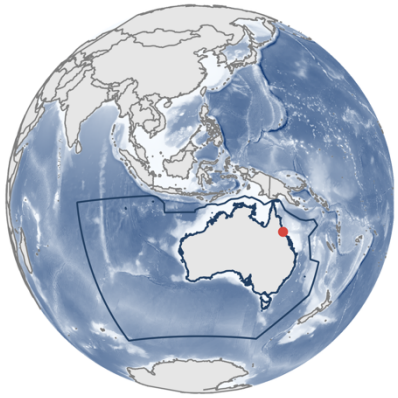
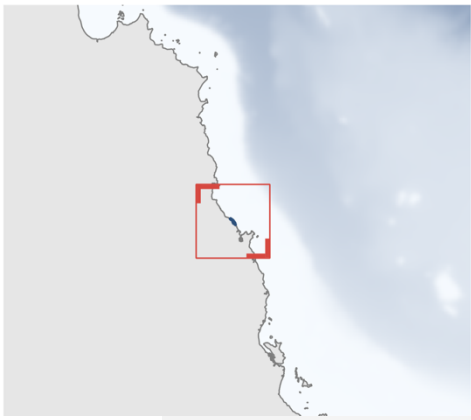
ISRA
IMPORTANT SHARK AND RAY AREAS







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

CAIRNS ISRA

Australia and Southeast Indian Ocean Region

AUSTRALIA

0–10 metres

22.59 km²

SUMMARY

Cairns is located in northeast Queensland, Australia. The area comprises coastal waters off several beaches from Ellis Beach in the north to Trinity Beach in the south. The habitat is characterised by muddy and sandy substrates and turbid waters. The area is influenced by southeasterly trade winds and swells and by seasonal cyclones. Within this area there are: **reproductive areas** (Tiger Shark *Galeocerdo cuvier*).

CRITERIA

Sub-criterion C1 – Reproductive Areas

DESCRIPTION OF HABITAT

Cairns is located in northeast Queensland, Australia. This coastal area encompasses several beaches stretching ~10 km from Ellis Beach in the north to Trinity Beach in the south. Two additional beaches (Yorkeys Knob and Holloways) up to ~6 km further south were also examined but are outside of the area. The habitat is characterised by muddy and sandy substrates and turbid waters. Immediately south of the area there are several rivers that input freshwater and sediment into the coastal waters of this area.

Cairns is influenced by a tropical monsoon climate, with a wet season from November–April and a dry season from May–October. Water temperature varies seasonally between ~24–29°C. Coastal waves are influenced by cyclones during the wet season and by year-round southeasterly trade winds (Cowley & Harris 2023).

This Important Shark and Ray Area is benthic and pelagic and is delineated from inshore and surface waters (0 m) to 10 m based on the bathymetry of the area.

ISRA CRITERIA

SUB-CRITERION C1 – REPRODUCTIVE AREAS

Cairns is an important reproductive area for one shark species.

Neonate and young-of-the-year (YOY) Tiger Sharks are regularly observed in this area (QLD DAF 2020; QFish unpubl. data 2025). The Queensland Shark Control Program deployed drumlines and nets in 14 regions along the Queensland coast, including in this area. The first dataset reported detailed size information to examine the proportion of neonates and YOY in broad regions of the Queensland coast (QLD DAF 2020), while the second dataset reported broad size categories, but detailed spatial information to inform the boundary (QFish unpubl. data 2025). Between 2001–2018, there were 489 Tiger Sharks captured in the larger Cairns region spanning ~16 km from Ellis Beach to Holloways Beach, with a catch-per-unit-effort (CPUE) of 0.93 per drumline per year and higher catches during April–July (QLD DAF 2020). Almost one third of these (31%; ~150 individuals) were neonates or YOY measuring 60–130 cm total length (TL), with a CPUE of ~0.29 (QLD DAF 2020). The size-at-birth for the species is 51–76 cm TL and initial fast growth suggests a size-at-one-year of ~130 cm TL (Holmes et al. 2015; Ebert et al. 2021). While Tiger Sharks were captured in all regions in Queensland, with higher numbers in northern sites (including in Cairns), neonates and YOY Tiger Sharks measuring <130 cm TL were less frequently captured outside of this area and with a lower CPUE. For example, the proportion of neonates and YOY of the total catch ranged from 3% in Mackay (~630 km south of the area; CPUE = 0.03) to 20% off Townsville (~280 km south; CPUE ~0.15), with the only other hotspot located off Noosa on the Sunshine Coast ~1,400 km south of Cairns where neonates and YOY also comprised a significant percentage of the total catch, albeit with a much smaller CPUE of 0.07 per drumline per year compared to Cairns (QLD DAF 2020; QFish unpubl. data 2025).

Within the larger Cairns region, 645 Tiger Sharks were reported between 2001–2025, and 300 of these (47%) were in the <200 cm TL category, indicating they were neonate, YOY, or small juveniles (QFish unpubl. data 2025). Of these 300 immature Tiger Sharks, the vast majority (n = 262; 87%) were captured within this area stretching ~10 km along the coast, while few were captured on the southern beaches of the larger Cairns region. These southern beaches stretch an additional 6 km along the coast and were excluded from the boundary (QFish unpubl. data 2025). Small Tiger Sharks <200 cm TL were captured in every year from 2001–2025 in this area, with annual numbers ranging 1–27

individuals (QFish unpubl. data 2025). Combined, these data show that Cairns is an important area for the early life-stage Tiger Sharks.

Acknowledgments

Sasha Faul (James Cook University), Christine L Dudgeon (Biopixel Oceans 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 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												
Galeocerdo cuvier	Tiger Shark	NT	0–1,275			X						

SUPPORTING SPECIES

Scientific Name	Common Name	IUCN Red List Category
SHARKS		
Carcharhinus leucas	Bull Shark	VU
Carcharhinus melanopterus	Blacktip Reef Shark	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.

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