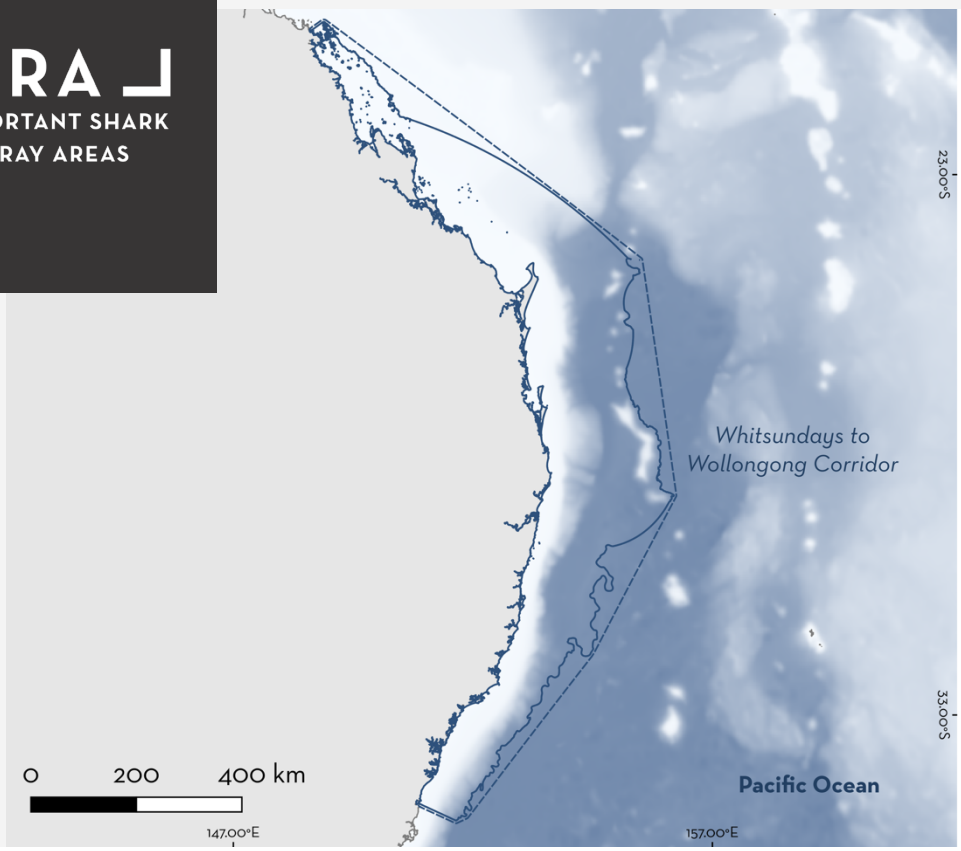
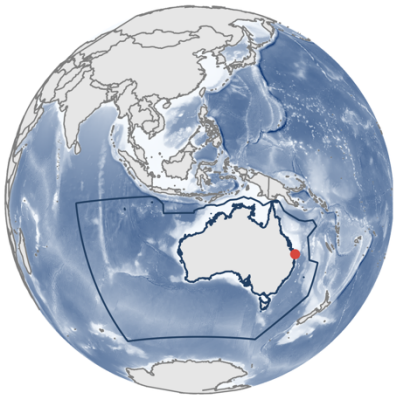
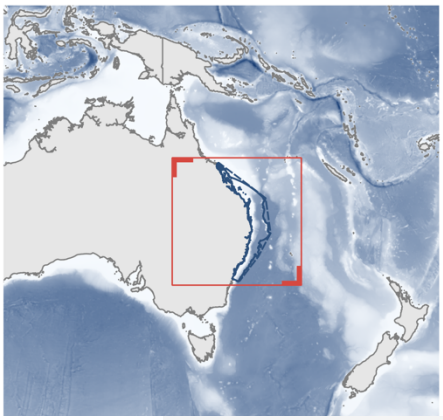
ISRA
IMPORTANT SHARK AND RAY AREAS







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

WHITSUNDAYS TO WOLLONGONG CORRIDOR ISRA

Australia and Southeast Indian Ocean Region

AUSTRALIA

0–1,275 metres

293,693 km²

SUMMARY

Whitsundays to Wollongong Corridor is located off eastern Australia. The area extends along the coast from the Whitsundays in Queensland to Wollongong in New South Wales, and offshore to some of the seamounts in the Tasmantid Range seamount chain. The habitat is characterised by offshore pelagic waters, seamounts, shelf waters, coral reefs, rocky reefs, and sandy and rocky substrates in coastal waters. It is influenced by the East Australian Current that carries warm water southwards along the east coast of Australia. Within this area there are: areas important for **movement** (Tiger Shark *Galeocerdo cuvier*).

CRITERIA

Sub-criterion C4 – Movement

DESCRIPTION OF HABITAT

Whitsundays to Wollongong Corridor is located off eastern Australia. The area extends from the Whitsundays (near Airlie Beach) in Queensland to Wollongong (south of Sydney) in New South Wales. The offshore extent includes some of the seamounts of the Tasmantid Range seamount chain. The habitat is characterised by offshore pelagic waters, seamounts, shelf waters, coral reefs, rocky reefs, and sandy and rocky substrates in coastal waters.

The area is influenced by the East Australian Current that carries warm water southward along Australia's east coast (Ridgway & Hill 2009). The East Australian Current is a dynamic western boundary current, with mesoscale eddies influencing current strength and direction. The flow is seasonally stronger in the austral summer, and the separation location, where the current turns eastward into the Tasman Sea, also moves seasonally (Ridgway & Hill 2009).

This Important Shark and Ray Area is pelagic and is delineated from inshore and surface waters (0 m) to 1,275 m based on the global depth range of Qualifying Species.

ISRA CRITERIA

SUB-CRITERION C4 – MOVEMENT

Whitsundays to Wollongong Corridor is an important movement area for one shark species.

Tiger Sharks seasonally migrate through this area (Fitzpatrick et al. 2012; Holmes et al. 2014; Lipscombe et al. 2020; Barnett et al. 2022; Ikpe 2025; A Ikpe et al. unpubl. data 2025). Between 2007–2024, 74 archival satellite tags and satellite-linked tags were deployed in this area on male and female Tiger Sharks for a combined tracking duration of 20.8 years (Fitzpatrick et al. 2012; Holmes et al. 2014; Lipscombe et al. 2020; Barnett et al. 2022; A Ikpe et al. unpubl. data 2025). A total of 55 sharks provided useable tracking data, and these were tagged in far north Queensland (n = 10), Whitsundays (n = 15), southeast Queensland (n = 5), and the New South Wales north coast (n = 12), central coast (n = 6), and south coast (n = 6). The tagging location of one shark was unclear. Tagged sharks spanned across a range of sizes from 105–386 cm total length (TL) but excluded small neonates or young-of-the-year. Within this tracking group of 55 individuals, 25 sharks tagged in tropical waters maintained localised movements in the Whitsundays, at the northern end of the area (n = 15; Barnett et al. 2022), and at Raine Island (n = 10; Fitzpatrick et al. 2012), outside the northern boundary. One of those moved from the Whitsundays to Papua New Guinea, all outside the area. By contrast, the other 30 individuals tagged in subtropical and temperate waters were tracked moving along the eastern Australian coastline. Their movement was related to seasonal temperature-linked migrations, moving northwards in cooler months and southwards in warmer months, with sharks consistently moving in a narrow 22–26°C surface water temperature range (Holmes et al. 2014; Lipscombe et al. 2020; A Ikpe et al. unpubl. data 2025). Catch data along Australia's east coast from government shark control programs (baited drumlines and nets) from 1950–2015 supported temperature as a key driver of Tiger Shark presence, with a peak in catch rates when water temperatures were ~22°C, regardless of latitude (Payne et al. 2018). Tiger Shark seasonal movements are also loosely tied to the seasonal movement of prey species, i.e., Humpback Whales *Megaptera novaeangliae*, marine turtles, and seabirds, as shown through prey distribution analyses (Niella et al. 2022) and dietary composition analyses (Heithaus 2001; A Ikpe et al. unpubl. data 2025).

Of the 30 tracked Tiger Sharks that used this movement corridor, four individuals (13% of total) used the entire movement corridor, and 11 individuals (37%) exhibited north-south movements that align with seasonal migrations within the corridor. A total of 25 individuals (83%) displayed partial use of

the corridor, which includes the seasonal migrators (Holmes et al. 2014; Lipscombe et al. 2020; A Ikpe et al. unpubl. data 2025). Of the 25 sharks displaying partial corridor use, 12 moved within the southern section from the New South Wales/Queensland border to Wollongong, with some continuing moving further south, four Tiger Sharks moved within the central region of the area, linking southern temperate waters with subtropical waters in Queensland, and nine individuals moved within the northern region from the New South Wales/Queensland border to the Whitsundays, with some continuing north past the northern extent of the area. These partial movements connected all sections and biogeographic regions of the area. Of the 30 tagged Tiger Sharks that moved extensively within the area, more than half (n = 17) used offshore seamounts in the Tasmantid Range in several years of tracking (Holmes et al. 2014; Lipscombe et al. 2020; A Ikpe et al. unpubl. data 2025), supporting a wide corridor that extends into offshore waters.

Additionally, catch records show occurrence of Tiger Sharks from Cairns in Queensland, north of the area (Holmes et al. 2012), to Pambula Beach in New South Wales, south of the area (A Ikpe unpubl. data 2025), and public observations verify occurrences even further south off Tasmania. While the species disperses further along the east coast, the hotspot for predictable movements is between the Whitsundays and Wollongong, i.e., this area. Fisheries catch records substantiate utilisation of coastal waters, as drumlines and nets in the bather protection programme are set only 500–1,000 m from the shore (Holmes et al. 2012; Lipscombe et al. 2020), while recreational fishing records support the use of pelagic, offshore waters (A Ikpe pers. obs. 2022–2024).

The range of movement captured by tracking, diet, and catch records supports annual seasonal movement along the eastern Australian coastline and highlights the corridor as an important movement area utilised by the species to stay within its optimal thermal range, and to potentially follow important prey resources. The longitudinal extent, and wide breadth of this corridor is reflective of the species' consistent utilisation of both coastal and pelagic waters.

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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	NT
Carcharhinus obscurus	Dusky Shark	EN
Carcharias taurus	Sand Tiger Shark (Grey Nurse Shark)	CR
Carcharodon carcharias	White Shark	VU
Stegostoma tigrinum	Indo-Pacific Leopard Shark	EN
RAYS		
Mobula alfredi	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.

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