

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. Buffers for freshwater areas are determined based on hydroBASINS to capture watershed boundaries.

HAUGHTON RIVER ISRA

Australia and Southeast Indian Ocean Region

SUMMARY

Haughton River is located near Townsville, Queensland, on the east coast of Australia. It comprises the lower reaches of the Haughton River, from the river mouth to ~25 km upstream. The habitat is characterised by turbid water, soft substrate, and mangrove forests. It is influenced by a tropical climate with a wet season from November–April that seasonally increases river flow. Saltwater intrudes throughout this area during high tide, leading to a gradient of salinity levels. The area overlaps with a Ramsar Site and a Key Biodiversity Area. Within this area there are: **threatened species** and **reproductive areas** (Bull Shark *Carcharhinus leucas*).

CRITERIA

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

— AUSTRALIA —

— 0-10 metres —

— 11.80 km² —





DESCRIPTION OF HABITAT

Haughton River is located south of Townsville, Queensland, on the east coast of Australia. This area comprises the lower reaches of the 110 km long Haughton River, from the river mouth to ~25 km upstream at a weir past the town of Giru. The habitat is characterised by turbid water, soft substrate, and extensive mangrove forests.

The area is influenced by a tropical monsoonal climate with a dry season from May–October and a wet season from November–April. River flow is increased during the wet season, with ~80% of the annual flow volume discharged from January–March (Cook et al. 2004). Saltwater intrudes upstream as far as the Giru weir during high tide, leading to a gradient in salinity levels in this area (Cook et al. 2004).

This area partially overlaps with the Bowling Green Bay Ramsar Site (Wetland of International Importance; Ramsar 2025) and Bowling Green Bay National Park Key Biodiversity Area (KBA 2025).

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

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 Vulnerable Bull Shark (Rigby et al. 2021).

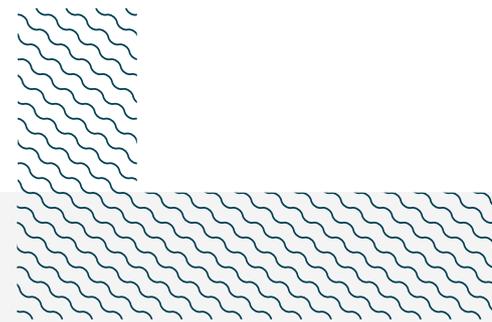
SUB-CRITERION C1 – REPRODUCTIVE AREAS

Haughton River is an important reproductive area for one shark species.

Neonate, young-of-the-year (YOY), and juvenile Bull Sharks are regularly observed in this area (Lubitz 2023; N Lubitz unpubl. data 2025). A research study captured and released 38 Bull Sharks in this area using rod-and-line during 14 fishing days in 2020–2022 and 2024–2025. Most individuals were captured between January–March (79%), with additional catches in June, July, August, and October. Multiple individuals were often captured on a single survey, with up to eight caught within 3.5 h. Total length (TL) was measured and the sex determined for 35 individuals, and the presence of the umbilical scar was opportunistically recorded.

The 38 Bull Sharks examined ranged in size from 77–150 cm total length (TL) (N Lubitz unpubl. data 2025). All individuals were either neonates, YOY, or small juveniles. A total of 13 individuals (37%) were neonates based on their size, ranging from 70–81 cm TL. Another 13 individuals (37%) were YOY, ranging 82–97 cm TL. Both groups had individuals for which the presence of an umbilical scar (open or semi-healed) was recorded. The size-at-birth for the species is 56–81 cm TL and YOY can be up to 99 cm TL (Pillans et al. 2020; Ebert et al. 2021). The remaining nine Bull Sharks were small juveniles ranging from 110–150 cm TL (N Lubitz unpubl. data 2025). Small Bull Sharks in eastern Australia remain in river and estuary habitats for up to five years (Werry et al. 2011), highlighting that juveniles, in addition to neonates and YOY, are still largely restricted to the area. Genetic analysis identified four sibling and half-sibling pairs across cohorts from different years, suggesting repeated natal philopatric movements by females to pup in the same river system over time (Tillet et al. 2012; Lubitz 2023; N Lubitz unpubl. data 2025). One large Bull Shark of 250 cm TL tagged outside the river was the father of a juvenile sampled inside the river four years later (N Lubitz unpubl. data 2025).

The natal philopatry observed in females means that multiple river systems along a coast can be important for the reproduction of Bull Sharks. Additionally, Bull Sharks are regularly reported on social media by recreational fishers operating in this area. Combined, this information shows that Houghton River is an important area for the early life-stage Bull Sharks.



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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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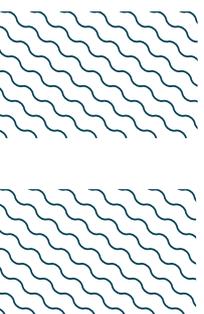
QUALIFYING SPECIES

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													
<i>Carcharhinus leucas</i>	Bull Shark	VU	0-256	X		X							

SUPPORTING SPECIES

Scientific Name	Common Name	IUCN Red List Category
SHARKS		
<i>Eusphyra blochii</i>	Winghead Shark	CR

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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