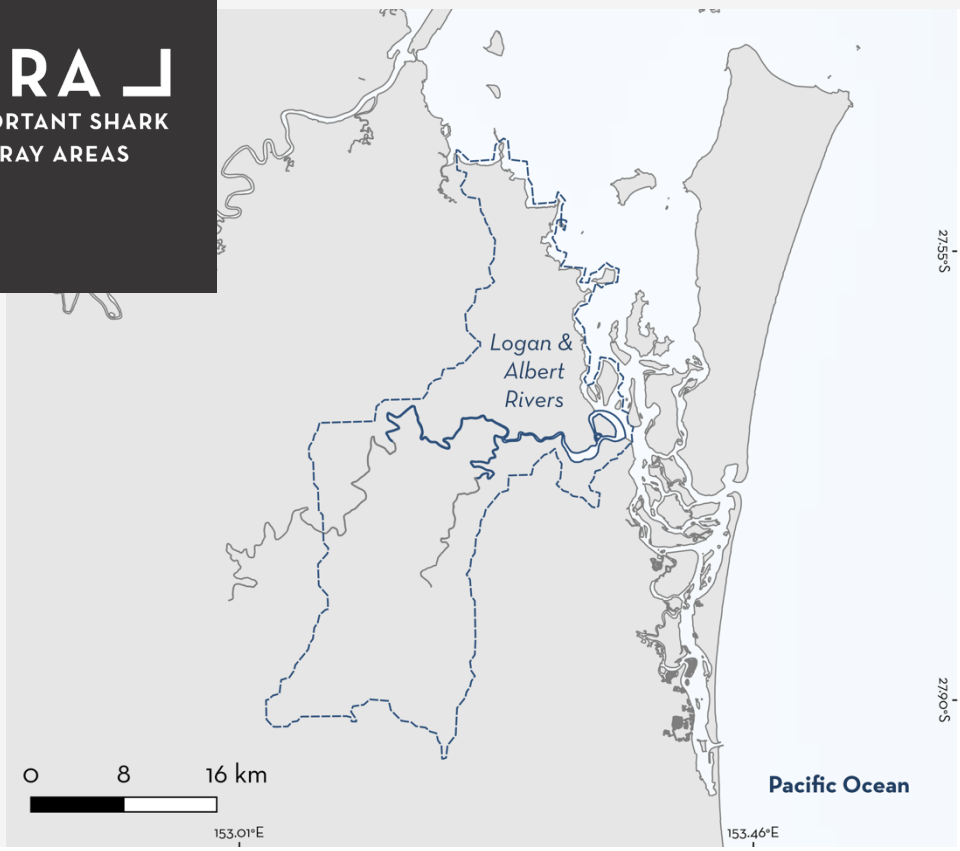
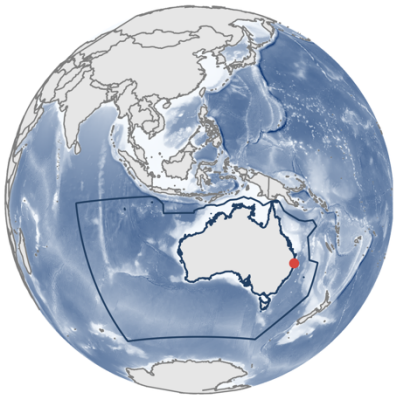
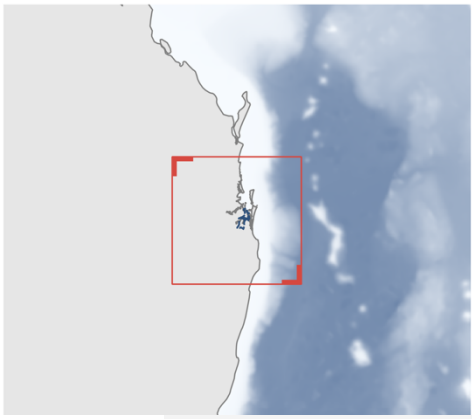
ISRA
IMPORTANT SHARK AND RAY AREAS







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

LOGAN & ALBERT RIVERS ISRA

Australia and Southeast Indian Ocean Region

AUSTRALIA

0–20 metres

9.06 km²

SUMMARY

Logan & Albert Rivers is located in southeast Queensland, Australia. This riverine and estuarine area comprises the lower reaches of the Logan and Albert rivers, up to 35 and 23 km upstream from the shared river mouth, respectively. The habitat is characterised by mangroves and muddy substrate. The area is influenced by tides and by water flow that can increase ~15 times during flood events. The area marginally overlaps with a marine protected area, a Key Biodiversity Area, and a Ramsar Site. Within this area there are: **threatened species** and **reproductive areas** (Bull Shark *Carcharhinus leucas*).

CRITERIA

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

DESCRIPTION OF HABITAT

Logan & Albert Rivers is located in southeast Queensland, Australia. This area comprises the estuarine parts of the 191 km long Logan River and of the 102 km long Albert River. The two rivers merge 14 km upstream from the river mouth in southern Moreton Bay (Pillans et al. 2020). The habitat is characterised by mangroves, turbid water, and muddy substrate.

Tides influence the rivers up to 60 km upstream, resulting in a gradient of salinity levels ranging from freshwater to saltwater (Pillans et al. 2020). River flow, measured 88 km upstream in the Logan River, is ~10 $m^3 s^{-1}$ but can reach >150 $m^3 s^{-1}$ during flood events. Water temperature seasonally fluctuates between 16–28°C (Pillans et al. 2020).

This area marginally overlaps with Moreton Bay Marine Park (Queensland Government 2019), Moreton Bay and Pumicestone Passage Key Biodiversity Area (KBA 2025), and Moreton Bay Ramsar Site (Wetland of International Importance; Ramsar 2025).

This Important Shark and Ray Area is benthic and pelagic and is delineated from inshore and surface waters (0 m) to 20 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

Logan & Albert Rivers is an important reproductive area for one shark species.

Neonate and young-of-the-year (YOY) Bull Sharks are regularly observed in this area (Pillans et al. 2020; N Lubitz unpubl. data 2025). A research survey captured small Bull Sharks ranging from 74–102 cm total length (TL) with rod-and-line at the junction of the Logan and Albert rivers between March 2012 and January 2014 (Pillans et al. 2020). Neonates and YOY were classified as animals with an umbilical scar and ranged 74–99 cm TL, while juveniles had no umbilical scars. The size-at-birth of the species is 56–81 cm TL (Ebert et al. 2021). A total of 36 neonate/YOY and one juvenile were tagged and tracked in a passive acoustic telemetry array with 17 receivers in the two rivers and 13 receivers in the adjacent southern Moreton Bay (Pillans et al. 2020). Over the 1,009 monitoring days, individuals were detected on an average of 205 days (range = 11–952 days). Detections ranged up to 52 km upstream in the Logan River (with additional receivers further upstream but recording no detections) and 30 km upstream in the Albert River. However, the bulk of the detections were made up to 35 km upstream in the Logan River and 23 km in the Albert River, in this area. Similarly, tagged Bull Sharks ventured into southern Moreton Bay, outside the area, but made few detections there. Neonates/YOY were detected in all months of the study. Movement within the river system was correlated to water flow and salinity levels, with sharks moving downstream in response to increasing flow and declining salinity, and upstream during low flow and increasing salinity. Tracked Bull Sharks remained within a narrow band of salinity levels (6–10 psu) throughout the tracking period despite a larger available range (0–32 psu) (Pillans et al. 2020). Additionally, research surveys captured seven neonates/YOY ranging 79–83 cm TL on a single day in May 2019, and one neonate of 80 cm TL in January 2025 in this area (N Lubitz et al. unpubl. data 2025). Further regular records from

recreational fishers on social media confirm the continued presence of neonate/YOY Bull Sharks in this area. Although no pregnant females have been captured in the research surveys in this area, combined, the data show that Logan & Albert Rivers is an important area for the early life stages of Bull Sharks.

Acknowledgments

Richard Pillans (CSIRO), Nicolas Lubitz (Biopixel Oceans Foundation; James Cook University), 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.

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

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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 leucas	Bull Shark	VU	0–256	X		X						

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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