

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

GOGLEYS LAGOON ISRA

Australia and Southeast Indian Ocean Region

SUMMARY

Gogleys Lagoon is located on the mid north coast of New South Wales, Australia. It is a shallow, tidally fed lagoon comprised of sandy sediments. The lagoon is largely intertidal and is lined with mangroves around much of its perimeter. The area is subject to semi-diurnal tides and tidal currents resulting from the narrow entrances to the lagoon. Within this area there are: **threatened species** and **feeding areas** (Estuary Stingray *Hemirhynchus fluviorum*).

CRITERIA

Criterion A - Vulnerability; Sub-criterion C2 - Feeding Areas

— AUSTRALIA —

— 0-2 metres —

— 0.97 km² —





DESCRIPTION OF HABITAT

Gogleys Lagoon is located on the mid north coast of New South Wales, Australia. It is a shallow, tidally fed lagoon with water depths of 0–2 m. The lagoon is comprised of sandy sediments, which are largely intertidal, and is lined with mangroves around much of its perimeter (Lucieer et al. 2025). There are oyster leases through much of the subtidal areas in the south and east of the area. The area is subject to semi-diurnal tides and tidal currents can result in silt plumes from the flow of water through the narrow entrances to the lagoon (J Pini-Fitsimmons pers. obs. 2025).

This Important Shark and Ray Area is benthic and is delineated from inshore and surface waters (0 m) to 2 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 Estuary Stingray (Hyde et al. 2025).

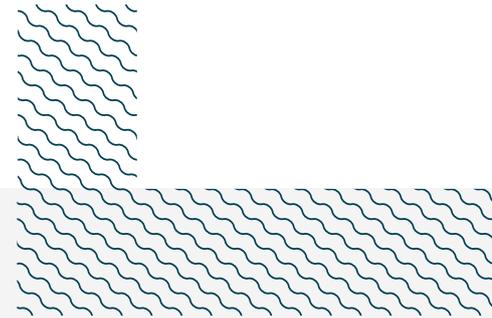
SUB-CRITERION C2 – FEEDING AREAS

Gogleys Lagoon is an important feeding area for one ray species.

Estuary Stingrays are abundant in Gogleys Lagoon and commonly observed on intertidal sandflats, where they create feeding pits throughout the lagoon (J Pini-Fitzsimmons pers. obs. 2025). Evidence of feeding include stingray feeding pits, which indicate recent feeding activity (days to weeks old) and silt trails indicating active or very recent feeding (within minutes; J Pini-Fitzsimmons pers. obs. 2025). These silt plumes flow with tidal currents, which are moderate within the lagoon due to its tidal influence and narrow entrances. Remote aerial imagery of the area has been taken on random days between August 2010 and September 2025 and is available on an online repository (average 3.1 days per year; n = 48 total days; Nearmap 2025). Extensive feeding pits, both subtidal and on exposed sand flats depending on tide, were seen on almost all days imaged in the area (97.9%; n = 47; Nearmap 2025). The one day where feeding pits were not observed was during a high tide with very turbid water and wind resulting in no visibility beneath the water's surface. Active or very recent feeding was observed on 54.2% of days imaged (n = 26 out of 48 total; Nearmap 2025). While available aerial imagery is not at fine enough resolution to confirm species identification, there are multiple instances where a stingray can be seen at the front of silt plumes confirming active feeding (Nearmap 2025).

Further, opportunistic drone surveys in the area between 2019–2022 regularly encountered Estuary Stingrays (J Pini-Fitzsimmons unpubl. data 2025). The only species of shark or ray sighted on all drone surveys was the Estuary Stingray. A total of 25 rays were recorded across all surveys (average 2.5 per survey; J Pini-Fitzsimmons unpubl. data 2025). Species identification, presence of feeding pits, and active feeding has also been confirmed from opportunistic drone surveys of the area conducted in 2019, 2020, 2021, and 2022 (n = 10 total surveys, up to 25 minutes duration; J Pini-Fitzsimmons unpubl. data 2025). At least two Estuary Stingrays were sighted on all surveys, and all observations were of either active foraging (i.e., frequently stopping and conducting short excavations of sediment in search of food; n = 15 rays) or active feeding (extractive feeding creating silt plumes; n = 10) (J Pini-Fitzsimmons unpubl. data 2025). There is minimal evidence of Estuary Stingrays or active foraging by this species from aerial imagery or drone surveys in adjacent areas, and the greatest concentration

of this species is found in the lagoon area. Collectively, these data support the importance of this area for Estuary Stingray feeding.



Acknowledgments

Joni Pini-Fitzsimmons (Charles Darwin University; School of Natural Sciences, Macquarie University), Ciaran A Hyde (University of the Sunshine Coast), and Asia O Armstrong (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.

This project was funded by the Shark Conservation Fund, a philanthropic collaborative pooling expertise and resources to meet the threats facing the world's sharks and rays. The Shark Conservation Fund is a project of Rockefeller Philanthropy Advisors.

Suggested citation

IUCN SSC Shark Specialist Group. 2025. Gogleys Lagoon ISRA Factsheet. Dubai: IUCN SSC Shark Specialist Group.

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	
RAYS													
<i>Hemitrygon fluviorum</i>	Estuary Stingray	VU	0-40	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.



REFERENCES

Hyde CA, Rigby CL, Armstrong AO. 2025. *Hemistrygon fluviorum*. *The IUCN Red List of Threatened Species* 2025: e.T41797A248153151.

Lucieer V, Walsh P, Monk J, Flukes E. 2025. Seemap Australia National Benthic Habitat Layer (NBHL) 2025. Hobart: Institute for Marine and Antarctic Studies (IMAS), University of Tasmania (UTAS).

Nearmap. 2025. Nearmap MapBrowser Web Application. Available at: <https://apps.nearmap.com/maps/> Accessed October 2025.