

## Banded Numbfish, *Narcinops westraliensis*

Report Card assessment	Sustainable		
IUCN Red List Australian Assessment	Least Concern (Endemic to Australia)	IUCN Red List Global Assessment	Least Concern
Global Assessors	Last, P.R. & McCord, M.E.		
Australian Assessors	Kyne, P.M., Heupel, M.R., White, W.T., Simpfendorfer, C.A. (Shark Action Plan) & Rigby, C.L.		
Report Card Remarks	Abundant, fishing pressure low, and significant spatial refuge across its range.		

### Summary

The Banded Numbfish is a small continental shelf species endemic to tropical and subtropical waters of Western Australia in a relatively restricted area from Eighty Mile Beach to Shark Bay. It is caught incidentally in fish and prawn trawls and released, as rays are prohibited from retention in all Western Australian commercial fisheries. However, post-release mortality is unknown. Bycatch

reduction devices have been mandatory in all the Western Australian trawl fisheries since the early-mid 2000s and have reduced ray catches. The effort in the northernmost trawl fisheries is limited and the fisheries overlap with only part of the species' range while within the area of the more southerly trawl fisheries, there is a high level of spatial protection. More than 90% of the Banded Numbfish's range within the 200 m isobath may never have been trawled due to a combination of trawl closures and marine parks. Overall, the species is abundant, fishing effort is very low across its range, and there is also significant spatial refuge. Therefore, the Banded Numbfish is assessed as Least Concern (IUCN) (Kyne et al. 2021) and Sustainable (SAFS).



### Distribution

The Banded Numbfish is endemic to Western Australia where it occurs in tropical and subtropical waters from Eighty Mile Beach to Shark Bay (Last and Steven 2009, Last et al. 2016).

### Stock structure and status

The species is considered abundant throughout its range although there is no information on population structure or trend for the species (Last and McCord 2015).

### Fisheries

The Banded Numbfish is incidentally caught by fish and prawn trawl fisheries and released, as rays have been prohibited from retention in West Australia commercial fisheries since 2006 (Evans and

Molony 2010). Post-release mortality is unknown. The Western Australian Pilbara Fish Trawl Fishery (PFTF) operates mainly at 50–110 m yet overlaps with only part of the species’ spatial and depth range. The use of bycatch reduction devices (BRDs) has been mandatory since 2006 and has been effective at reducing catches of rays (Wakefield et al. 2017). Further, there have been reductions in effort in the PFTF since 2009 (Gaughan and Santoro 2021). The species’ range overlaps partly with four state-managed prawn fisheries: Nickol Bay, Onslow, Exmouth Gulf, and Shark Bay. The first two operate in shallow, inshore waters but are both low effort fisheries that overlap with only part of species’ spatial range. BRDs have been mandatory since 2005 and hoppers are used which improve bycatch survival (Gaughan and Santoro 2021). In the latter two fisheries, BRDs have been mandatory since the early 2000s. More than 90% of the area within the 200 m isobath of state waters may never have been trawled due to a combination of spatial trawl closures and marine parks (Gaughan and Santoro 2021). The Commonwealth North West Slope Trawl Fishery, which has low effort, does not operate at depths less than 200 m and thus is unlikely to capture the Banded Numbfish (Patterson et al. 2022). The Commonwealth North-west Marine Parks Network came into effect in 2018 which includes zoning and gear restrictions and likely provides refuge for the species (Parks Australia 2023).

### Habitat and biology

The Banded Numbfish is demersal on the inner continental shelf at depths of 10–70 m (Last and Stevens 2009, Last et al. 2016). Maximum size is at least 29 cm total length (TL) and males mature at approximately 18 cm TL (Last et al. 2016). Little else is known of its biology.

Longevity and maximum size	Longevity: unknown Max size: at least 29 cm TL
Age and/or size at maturity (50%)	Males: ~18 cm TL Females: unknown

**CAAB Code:** 37 028005

**Link to IUCN Page:** <https://www.iucnredlist.org/species/161346/68635469>

**Link to page at Shark References:** <https://shark-references.com/species/view/Narcinops-westraliensis>

### References

- Evans, R. and Molony, B.W. 2010. *Ranked Risk Assessment for Bycatch in Multiple Fisheries: a Bioregional Risk Assessment Method*. Fisheries Research Report No. 212. Department of Fisheries, Western Australia.
- Gaughan, D.J. and Santoro, K. (eds). 2021. *Status Reports of the Fisheries and Aquatic Resources of Western Australia 2019/20: The State of the Fisheries*. Department of Primary Industries and Regional Development, Western Australia.
- Kyne, P.M., Heupel, M.R., White, W.T. and Simpfendorfer, C.A. 2021. *The Action Plan for Australian Sharks and Rays 2021*. National Environmental Science Program, Marine Biodiversity Hub, Hobart.
- Last, P.R. and Stevens, J.D. 2009. *Sharks and Rays of Australia*. Second Edition. CSIRO Publishing, Collingwood, Australia.
- Last, P., White, W., Carvalho, M.R. de, Séret, B., Stehmann, M. and Naylor, G.J.P. 2016. *Rays of the World*. CSIRO Publishing, Clayton, Victoria, Australia.
- Last, P.R. & McCord, M. 2015. *Narcine westraliensis*. *The IUCN Red List of Threatened Species* 2015: e.T161346A68635469.
- Parks Australia 2023. North-west Marine Parks Network. <https://parksaustralia.gov.au/marine/parks/north-west/>.
- Patterson, H., Bromhead, D., Galeano, D., Larcombe, J., Timmiss, T., Woodhams, J. and Curtotti, R. 2022. *Fishery status reports 2022*, Australian Bureau of Agricultural and Resource Economics and Sciences, Canberra.
- Wakefield, C.B., Santana-Garcon, J., Dorman, S.R., Blight, S., Denham, A., Wakeford, J., Molony, B.W. and Newman, S.J. 2017. Performance of bycatch reduction devices varies for chondrichthyan, reptile, and cetacean mitigation in demersal fish trawls: assimilating subsurface interactions and unaccounted mortality. *ICES Journal of Marine Science* 74(1), 343–358.