

## Green Sawfish, *Pristis zijsron*

Report Card assessment	Depleted		
IUCN Red List Australian Assessment	Critically Endangered	IUCN Red List Global Assessment	Critically Endangered
Global Assessors	Harry, A.V., Everett, B., Faria, V., Fordham, S., Grant, M.I., Haque, A.B., Ho, H., Jabado, R.W., Jones, G.C.A., Lear, K.O., Morgan, D.L., Phillips, N.M., Spaet, J.L.Y., Tanna, A. & Wueringer, B.E.		
Australian Assessors	Kyne, P.M., Heupel, M.R., White, W.T., Simpfendorfer, C.A. (Shark Action Plan) & Rigby, C.L.		
Report Card Remarks	Significant historical population declines and now protected in Australia but ongoing fishing and habitat threats. Listed on EPBC Act (Vulnerable & Migratory), CITES Appendix I, CMS Appendix I & II.		

### Summary

The Green Sawfish is an estuarine, coastal and offshore large ray in tropical and subtropical parts of the Indo-West Pacific, including New Guinea and northern Australia. Historically, it occurred across much of the Indo-West Pacific; however, it is now possibly extinct and its presence is uncertain in most of its former range due to intense exploitation and habitat degradation. Its toothed rostrum makes it highly susceptible to capture and it is retained (outside of Australia) for its valuable fins and



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for its meat. In Australia, it was protected in all Australian Commonwealth waters under the EPBC Act in 2008 and a recovery plan is in place. It is also protected in state and Territory waters, yet it is still susceptible to capture in gillnet and trawl fisheries. This protection and management measures have reduced mortality over the past 10–20 years. In Western Australia (WA), populations appear to be recently improving and it is still common in WA, Northern Territory (NT), and the Gulf of Carpentaria. However, ongoing fishing pressure and habitat modifications threaten the species. Over the past three generations (50 years), population reductions are inferred to have occurred across all states and the NT with the greatest declines suspected in Queensland and New South Wales and the least declines in WA. The species is assessed globally as Critically Endangered (IUCN) and in Australia, based on population declines, a range contraction, and ongoing mortality, Kyne et al. (2021) assessed its status as Critically Endangered (IUCN). Based on the large declines in population size and range, this species it is assessed as Depleted (SAFS). The species is listed on CITES Appendix I and CMS Appendix I and II.

### Distribution

The Green Sawfish occurs in tropical to subtropical waters in parts of the Arabian Seas region, southeast Asia, and in New Guinea and Australia (Harry et al. 2022). Historically, it had a broad Indo-West Pacific distribution from South Africa to Australia, but it is now possibly extinct and its presence

is uncertain across much of this distribution. In Australia, it has a wide range from Mackay (Queensland) to Shark Bay (Western Australia) with a range contraction on the east coast where it is now possibly extinct in New South Wales and southeast Queensland (Harry et al. 2022).

### Stock structure and status

The Green Sawfish has undergone dramatic population declines, range contraction, and possible regional extinction in parts of the Indo-West Pacific (Harry et al. 2022). In Australia, significant historic population declines, although largely unquantified, occurred due to gillnet and trawl fisheries pressure and habitat modification (Kyne et al. 2021, Harry et al. 2022). Distinct genetic stocks of the Green Sawfish exist in the Gulf of Carpentaria and Western Australia (WA), and possibly on the east coast (Phillips et al. 2011, Phillips et al. 2017) which infer limited movements. In WA, the population appears to be recently improving with the species still common in WA, Northern Territory, and the Gulf of Carpentaria (Harry et al. 2022). Once relatively common on the east coast as far south as NSW, it is now very rare and only reported as far south as Mackay. NSW lists this species as Extinct in its waters. However, over the longer period of the past 50 years, population reductions are inferred to have occurred across all states/territories with the declines suspected to be greatest in Queensland and NSW, and the least severe in WA where fishing pressure is the lowest (Harry et al. 2022).

### Fisheries

The Green Sawfish is incidentally caught in fisheries, with its rostrum making it highly susceptible to entanglement in gillnet and trawl fisheries. Outside Australia, it is retained for its valuable fins and rostrum, and for its meat (Harry et al. 2022). In Australia, it is an incidental catch in gillnet and trawl fisheries, with gillnet fisheries that are likely, or known, to interact with Green Sawfish including the Queensland East Coast and Gulf of Carpentaria Inshore Fisheries (Peverell 2005, Harry et al. 2011), Northern Territory Barramundi Fishery and Offshore Net and Line Fishery (Field et al. 2013), and the Kimberley Gillnet and Barramundi Fishery (Braccini et al. 2021). Prawn trawl fisheries known, or suspected, to interact with Green Sawfish include the Queensland East Coast Trawl Fishery, Commonwealth Northern Prawn Fishery (NPF), and smaller prawn fisheries in Western Australia (WA). The species is also encountered in fish trawl fisheries in northern Australia such as the Northern Territory Demersal Fishery and Pilbara Fish Trawl Fishery (DPIR 2017, Braccini et al. 2021). Green Sawfish were also taken in shark control programs in NSW and Queensland (Qld), though this is now extremely rare (Giles et al. 2004). The Green Sawfish is assessed as at high risk in the NPF due to its life history, susceptibility to capture, and 100% post-capture mortality estimates (Sporcic et al. 2021a, b). It became a protected species in all Australian Commonwealth waters when it was listed as Vulnerable in 2008 and Migratory in 2015 under the *Environment Protection and Biodiversity Conservation Act 1999*, and a recovery plan is in place; it is also protected in state and Territory waters. Mortality may still be high however if they are caught, as they may be killed or have the rostrum removed for extraction from the fishing gear (Morgan et al. 2016). Despite this, protection and management have reduced mortality over the past 10–20 years (Kyne et al. 2021). However, fishing pressure is ongoing alongside habitat threats such as a range of coastal mining and resource developments in northern Australia that could cause juvenile habitat destruction and population fragmentation by hindering juvenile movements (Harry et al. 2022). This is of concern particular concern in Western Australia as it may be last global population stronghold for the Green Sawfish (Harry et al. 2022).

### Habitat and biology

The Green Sawfish is demersal on the continental shelf at depths of 0–100 m (Weigmann 2016). Neonates and juveniles use nearshore and estuarine areas, while adults occur in deeper offshore areas

(Giles et al. 2004). Maximum size is 730 cm total length (TL), though lengths over 600 cm TL are rare, and maximum age is estimated as 24 years (Peeverell 2009, Last et al. 2016). Both sexes are estimated to mature at 340–430 cm TL and 9 years (Peeverell 2009). Litter size is estimated to be up to 12 pups (Elhassan 2018).

Longevity and maximum size	Longevity: estimated 24 years Max size: 730 cm TL
Age and/or size at maturity (50%)	Both sexes: 9 years, 340–430 cm TL

**CAAB Code:** 37 025001

**Link to IUCN Page:** <https://www.iucnredlist.org/species/39393/58304631>

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

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