Largetooth Sawfish, *Pristis pristis*

Report Card assessment	**Depleted**		
IUCN Red List Australian Assessment	Critically Endangered	IUCN Red List Global Assessment	Critically Endangered
Global Assessors	Espinoza, M., Bonfil-Sanders, R., Carlson, J., Charvet, P., Chevis, M., Dulvy, N.K., Everett, B., Faria, V., Ferretti, F., Fordham, S., Grant, M.I., Haque, A.B., Harry, A.V., Jabado, R.W., Jones, G.C.A., Kelez, S., Lear, K.O., Morgan, D.L., Phillips, N.M. & 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 critical habitat threats. Listed on EPBC Act (Vulnerable & Migratory), CITES Appendix I, CMS Appendix I & II.		

Summary

The Largetooth Sawfish is a large euryhaline ray occurring in tropical freshwater, estuarine, and coastal waters across a wide circumtropical distribution. It now occurs patchily, is possibly extinct, and its presence is uncertain across much of its distribution 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 rostrum, and for its meat. In Australia, it was protected in all Australian waters under the EPBC Act in 2000 and a recovery plan is in place. In Western Australia (WA), populations appear to be recently improving and it is still common in WA, and fairly common in the Northern Territory (NT). Protection and management measures have reduced mortality, yet it is still susceptible to capture in gillnet and trawl fisheries and subject to critical habitat modification threats, such as alteration of river flows and climate change. Over the past three generations (66 years), population reductions are inferred to have occurred across all states and the NT. The species is assessed globally as Critically Endangered (IUCN) and in Australia, based on population declines and ongoing mortality, Kyne et al. (2021) assessed its status as Critically Endangered (IUCN). Based on declines in population size, this species is assessed as Depleted (SAFS). The species is listed on CITES Appendix I and CMS Appendix I and II.

Distribution

The Largetooth Sawfish has a wide circumtropical distribution (Espinoza et al. 2022). It is now patchy and is possibly extinct and its presence is uncertain across much of its distribution. In Australia, it has remained extant in a wide range from Lakefield National Park (Queensland) to the Kimberley region (Western Australia), and has occurred as a vagrant to southwestern Australia (Espinoza et al. 2022).

Stock structure and status

Globally the species comprises four distinct subpopulations: Eastern Atlantic, Western Atlantic, Eastern Pacific and Indo-West Pacific. All four subpopulations have undergone significant population declines, range contraction, and regional extinction in parts of its range. Within Australian waters females have complex stock structure related to natal philopatry to specific river systems, while male population structuring is less evident (Phillips et al. 2017). Significant historic population declines in Australia, although largely unquantified, have occurred due to gillnet and trawl fisheries (Kyne et al. 2021a, Espinoza et al. 2022). In Western Australia (WA), the population appears to be recently improving and likely has a high productivity in the Fitzroy River where the species is still common (Espinoza et al. 2022). It is also still fairly common further north in WA and in the Northern Territory (Espinoza et al. 2022). However, over the longer period of the past 66 years, population reductions are inferred to be have occurred across all states/territories (Espinoza et al. 2022).

Fisheries

The Largetooth Sawfish is incidentally caught in fisheries, with its rostrum making it highly susceptible to entanglement in gillnet and trawl fisheries and outside Australia, it is retained for its valuable fins and rostrum, and for its meat (Espinoza et al. 2022). In Australia, it is an incidental catch of the Commonwealth Northern Prawn Fishery and state and territory trawl and gillnet fisheries, with gillnet fisheries that are likely, or known, to interact with Largetooth Sawfish including the Gulf of Carpentaria Inshore Fishery (Peverell 2005) and the Northern Territory Barramundi Fishery. Prawn trawl fisheries known, or suspected, to interact with Largetooth Sawfish include the Commonwealth Northern Prawn Fishery (NPF) and smaller prawn fisheries in Western Australia (WA). The Largetooth Sawfish is assessed as at high risk in the NPF due to its life history and susceptibility to capture (Sporcic et al. 2021a, b). It became a protected species in all Australian waters when it was listed as Vulnerable in 2000 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/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). Protection and management have reduced mortality (Kyne et al. 2021a). However, fishing pressure is ongoing alongside habitat threats. Alterations to river courses and flows impact Largetooth Sawfish which migrate upstream in early life stages. These alterations include barrages and road crossings and water resource development that can alter river flows. Such river flow changes into the Gulf of Carpentaria for large-scale irrigated agriculture are predicted to cause further population decline or possibly crash local Largetooth Sawfish populations (Plagányi et al. 2022). These pressures are likely further exacerbated by climate change to which this species is exposed; recruitment depends on large flood events and in years of lesser floods, the species has markedly poorer body condition (Lear et al. 2021, Plagányi et al. 2022).

Habitat and biology

The Largetooth Sawfish is demersal and euryhaline at depths of 0–60 m with juveniles in freshwater and estuarine habitats and adults in estuarine and coastal waters (Weigmann 2016, Kyne et al. 2021b). Maximum size is 705 cm total length (TL) and maximum age estimated at 36 years (Peverell 2009, Kyne et al. 2021b). Males mature at 280–300 cm TL and females by 300 cm TL with age at maturity estimated at 8–10 years (Kyne et al. 2021b). The litter sizes are 1–20 pups (Kyne et al. 2021b).

Longevity and maximum size	Longevity: estimated 36 years Max size: 705 cm TL

Age and/or size at maturity (50%)	Males: 8–10 years, 280–300 cm TL Females: 8–10 years, 300 cm TL

CAAB Code: 37 025003

Link to IUCN Page: https://www.iucnredlist.org/species/18584848/58336780

Link to page at Shark References: https://shark-references.com/species/view/Pristis-pristis

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