

Green Sawfish, *Pristis zijsron*

Report Card assessment	Depleted		
IUCN Red List Australian Assessment	Refer to Global Assessment	IUCN Red List Global Assessment	Critically Endangered
Assessors	Simpfendorfer, C.		
Report Card Remarks	Listed as Vulnerable on EPBC, CITES Appendix I, CMS Appendix II, protected in all states in Australian range		

Summary

The Green Sawfish is a very large ray species that historically occurred throughout coastal areas of the Indo-West Pacific. Green Sawfish population size and historic abundance is poorly known, however the species is believed to have substantially declined throughout its range. Data from northern Australia indicated that Green Sawfish has low rates of population increase. Therefore, the species is naturally highly sensitive to fishing pressure and will likely be slow to recover from population depletion. Its toothed rostrum and use of habitat near the sea floor means the Green Sawfish is extremely susceptible to capture in gillnets and demersal trawl nets. As a result, Green Sawfish has been negatively affected by inshore net and trawl fisheries. Globally, Green Sawfish populations are suspected to decline more than 80% over three generations (approximately 44 years), and there have likely already been localised extinctions in a number of areas due to intensive fishing. Australia has some of the last remaining viable populations of Green Sawfish in the world, however its Australian range has also significantly decreased. Therefore, it is assessed as Critically Endangered (IUCN) and in Australia, Overfished (SAFS). Listed on Appendix I of CITES and Appendix I and II of CMS.



Distribution

Green Sawfish have a broad Indo-West Pacific distribution, from South Africa, north along the east coast of Africa, through the Red Sea, Persian (Arabian) Gulf, southern Asia, Indo-Australian archipelago, and eastern Asia as far north as Taiwan and southern China (Fowler 1941, Blegvad and Løppenthin 1944, Smith 1945, Misra 1969, Compagno 2002a, b, Last and Stevens 2009). Its current occurrence in much of this range is uncertain due to a lack of reliable data, but it is presumed to have been extirpated from much of this area because of intensive inshore gillnet and trawl fisheries. In Australia, the Green Sawfish is most abundant in the tropics, but has historically been found in New South Wales (NSW), However, it is likely now extinct in NSW with southern extent of Green Sawfish

on the east coast contracted from Sydney, NSW, to the Whitsunday region of Queensland (Johnson 1999, NSW DPI 2007, Harry et al. 2011).

Stock structure and status

There are limited data available on Green Sawfish populations. Extensive surveys of fish landing sites throughout Indonesia have not observed the species since 2001 (W. White pers. comm. 2012), suggesting that its occurrence in this region is now questionable. In Australian waters, all sawfish species have undergone significant declines. The lack of data from surveys and fisheries in much of its range suggests that Green Sawfish abundance has significantly declined in most, if not all, areas. A population decline of more than 80% is suspected across its global range over the last three generations.

Fisheries

Globally, the primary threat to the Green Sawfish is fishing. Its large size, low biological productivity, propensity for entanglement, and high value all contribute to this vulnerability (Salini et al. 2007, Tobin et al. 2010). Inshore gillnet and trawl fisheries, which are common and intensive throughout much of its global range, are the greatest threat. Although sawfishes are rarely targeted in these fisheries, they are regularly retained bycatch because of the value of their fins, rostrum and meat. Other threats to Green Sawfish include habitat loss (particularly loss of intertidal areas and coastal development), pollution, loss of genetic diversity, and climate change. However, relative to fishing, these threats are unlikely to substantially affect global status.

This species is protected under both federal (EPBC) and state legislation, and a recovery plan is in place. Data on sawfish in fisheries are sparse, and rarely species specific, making conclusions about the extent of threats difficult to determine. Data for northern Australia shows that gillnets were responsible for approximately 80% of records of sawfish captures (Stevens et al. 2005). The gillnet fisheries in northern Australia that are likely, or known, to interact with Green Sawfish include the Queensland East Coast Inshore Finfish Fishery (Harry et al. 2011), Gulf of Carpentaria Inshore Gillnet Fishery (Peverell 2005), Gulf of Carpentaria Offshore Gillnet Fishery (Peverell 2005), Northern Territory Barramundi Fishery (Field et al. 2008), Northern Territory Offshore Net and Line Fishery (Field et al. 2008), and the Kimberley Gillnet and Barramundi Fishery. Prawn trawl fisheries known, or suspected, to interact with Green Sawfish include the Northern Prawn Fishery, Queensland East Coast Trawl Fishery, and smaller prawn fisheries in Western Australia and NSW. The species is also encountered in fish trawl fisheries in northern Australia. The capture of Green Sawfish in recreational line fisheries likely occurs at low levels. Green Sawfish were also taken in shark control programs in NSW and Queensland (Giles et al. 2004). The capture of Green Sawfish in these programs is now non-existent (NSW) or extremely rare (Queensland). Ecological risk assessments of fisheries in northern Australia that interact with Green Sawfish have demonstrated that the species is one of the most at-risk elasmobranch species within the region. Trawl data from Australia's Northern Prawn Fishery indicated that the recent level of take was close to the sustainable limit (Zhou and Griffiths 2008), and when combined with the gillnet take in the same area, it undoubtedly exceeds the sustainable take. As such, even in Australian waters, threats to the species are ongoing and populations are likely to continue to decline without additional conservation measures. Its international trade is restricted by an CITES Appendix I listing. It is listed on Appendix I and II of the Convention on Migratory Species.

Habitat and biology

Green Sawfish are most common in shallow coastal and estuarine areas, but occur at depths of over 70 m (Stevens et al. 2005). The young are known to use nearshore and estuarine areas as nurseries. Adults occur more broadly and will use deeper areas (Stephenson and Chidlow 2003). Green Sawfish may be the largest of the sawfishes, with reports of individuals in excess of 700 cm total length (TL). However, most reports suggest lengths over 600 cm TL are currently rare.

Longevity and maximum size	Longevity: unknown Max size: 600-700 cm TL
Age and/or size at maturity (50%)	Both sexes: estimated 300 cm TL

Link to IUCN Page: <http://www.iucnredlist.org/details/39393/0>

Link to Species page at Shark References: <http://shark-references.com/species/view/Pristis-zijnsron>

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