

## Whitespotted Guitarfish, *Rhynchobatus australiae*

Report Card assessment	Sustainable		
IUCN Red List Australian Assessment	Near Threatened	IUCN Red List Global Assessment	Vulnerable
Assessors	White, W.T., McAuley, R.B. & Rigby, C.L.		
Report Card Remarks	Relatively low levels of catch in Australia, but threatened in other parts of its range		

### Summary

The Whitespotted Guitarfish is taken by artisanal, recreational and commercial fisheries throughout its range. The fins from large animals fetch high prices and it is inferred that numbers globally have been reduced by fishing. In Australia, it is caught in well managed trawl and net fisheries. In Southeast Asia and more widely in the Indian Ocean, there is ongoing population reduction



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and continued very high level of exploitation. Therefore, globally the species is assessed as Vulnerable (IUCN). In Australia, management measures over the last decade will have reduced fishing mortality in Australian waters. In Australia, it is assessed as Near Threatened (IUCN) and Sustainable (SAFS) because fishing threats within Australia are managed and likely to be minor.

### Distribution

Recent taxonomic studies have increased the global range of the species; it now occurs widely in the Indo-West Pacific from eastern Africa to New Caledonia (P. Last, CSIRO, pers. comm., 2015). In Australia, the Whitespotted Guitarfish occurs from Fremantle (Western Australia) north through Northern Territory and Queensland to Crowdy Head (New South Wales) (Last and Stevens 2009).

### Stock structure and status

Recent taxonomic revision of the genus makes it difficult to discern population trends. Declines of the Whitespotted Guitarfish in Southeast Asia and elsewhere in the Indo-West Pacific are inferred given the widespread historical and continuing declines of demersal fisheries in this region (Stobutzki et al. 2006). There is little data from Australian waters on the population status, but fishing mortality in the Northern Prawn Fishery are sufficiently low to ensure sustainability (Zhou and Griffiths 2008).

### Fisheries

The primary threat to the species is fishing and habitat destruction. In Australia, it is caught in trawl fisheries and gillnet fisheries. The introduction of compulsory use of turtle exclusion devices in northern Australian trawl fisheries has reduced the bycatch of larger sharks and rays (>1 m) (Brewer et al. 2006). There is a ban on retention of shark products in the Northern Prawn Fishery (Bensley et

al. 2009). The fishing threats to the Whitespotted Guitarfish within Australian waters are managed and likely to be minor. The introduction of shark finning bans in all Australian waters over the last decade may have affected finning in Australian waters but are unlikely to have reduced international demand. Very large gillnet catches of rhynchobatids in Indonesia have been observed (White and Dharmadi 2007). There is also evidence that fishers from Indonesia occasionally fish in northern Australian waters (Chen 1996, Field *et al.* 2009) and while there has been a decline since 2006 in this illegal, unreported and unregulated fishing (IUU) in northern Australian waters (Field *et al.* 2009, Haward and Bergin 2016), it is still likely to occur. The extensive loss of coastal mangroves is also a threat to the Whitespotted Guitarfish; Southeast Asia has seen an estimated 30% reduction in mangrove area since 1980 (FAO 2007, Polidoro *et al.* 2010).

### Habitat and biology

The Whitespotted Guitarfish occurs inshore on the continental shelves down to a depth of 100 m (Last and Stevens 2009, P. Last, CSIRO, pers. comm., 2015). The maximum size is 300 cm total length (TL) (from Thailand) (White and Dharmadi 2007). Maximum age is unknown but it is estimated that female age at maturity may be greater than 12 years (White *et al.* 2014).

Longevity and maximum size	Longevity: unknown Max size: 300 cm TL
Age and/or size at maturity (50%)	Males: 4-5 years, 110-131 cm TL Females: estimated > 12 years, 280-300 cm TL

**Link to IUCN Page:** <http://www.iucnredlist.org/details/41853/0>

**Link to page at Shark References:** <http://shark-references.com/species/view/Rhynchobatus-australiae>

### References

- Bensley, N., Woodhams, J., Patterson, H.M., Rodgers, M., McLoughlin, K., Stobutzki, I., and Begg, G.A. 2009. Shark Assessment Report for the Australian National Plan of Action for the Conservation and Management of Sharks, final report to the Department of Agriculture, Fisheries and Forestry, Bureau of Rural Sciences, Canberra.
- Brewer, D., Heales, D., Milton, D., Dell, Q., Fry, G., Venables, B. and Jones, P. 2006. The impact of turtle excluder devices and bycatch reduction devices on diverse tropical marine communities in Australia's northern prawn trawl fishery. *Fisheries Research* 81: 176-188.
- Chen, H.K. (ed.) 1996. Shark Fisheries and the Trade in Sharks and Shark Products in Southeast Asia. TRAFFIC Southeast Asia Report, Petaling Jaya, Selangor, Malaysia
- FAO. 2007. The World's Mangroves 1980-2005. FAO Forestry Paper 153. Forestry Department, Food and Agriculture Organization of the United Nations (FAO), Rome.
- Field, I.C., Meekan, M.G., Buckworth, R.C. and Bradshaw, J.A. 2009. Protein mining the world's oceans. Australasia as an example of illegal expansion-and-displacement fishing. *Fish and Fisheries* 10: 323-328.
- Haward, M. and Bergin, A. 2016. Net worth: Australia's regional fisheries engagement. Australian Strategic Policy Unit, Canberra.
- Last, P.R. and Stevens, J.D. 2009. Sharks and Rays of Australia. Second Edition. CSIRO Publishing, Collingwood.
- Polidoro, B.A., Carpenter, K.E., Collins, L., Duke, N.C., Ellison, A.M., Ellison, J.C., Farnsworth, E.J., Fernando, E.S., Kathiresan, K., Koedam, N.E., Livingstone, S.R., Miyago, T., Moore, G.E., Ngoc Nam, V., Eong Ong, J., Primavera, J.H., Salmo, S.G., Sanciangco, J.C., Sukardjo, S., Wang, Y. and Hong Yong, J.W. 2010. The Loss of Species: Mangrove Extinction Risk and Geographic Areas of Global Concern. *PLoS One* 5(4): 10.
- Stobutzki, I.C., Silvestre, G.T., Abu Talib, A., Krongprom, A., Supongpan, M., Khemakorn, P., Armada, N., and Garces, L.R. 2006. Decline of demersal coastal fisheries resources in three developing Asian countries. *Fisheries Research* 78: 130-142.
- White, J., Simpfendorfer, C.A., Tobin, A.J. and Heupel, M.R. 2014. Age and growth parameters of shark-like batoids. *Journal of Fish Biology* 84: 1340-1353.
- White, W.T. and Dharmadi. 2007. Species and size compositions and reproductive biology of rays (Chondrichthyes, Batoidea) caught in target and non-target fisheries in eastern Indonesia. *Journal of Fish Biology* 70: 1809-1837.
- Zhou, S. J., and Griffiths, S. P. (2008). Sustainability Assessment for Fishing Effects (SAFE): A new quantitative ecological risk assessment method and its application to elasmobranch bycatch in an Australian trawl fishery. *Fisheries Research* 91(1), 56-68.