

Giant Manta Ray, *Mobula birostris*

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| Report Card assessment | Depleted | | |
| IUCN Red List Australian Assessment | Endangered | IUCN Red List Global Assessment | Endangered |
| Global Assessors | Marshall, A., Barreto, R., Carlson, J., Fernando, D., Fordham, S., Francis, M.P., Derrick, D., Herman, K., Jabado, R.W., Liu, K.M., Rigby, C.L. & Romanov, E. | | |
| Australian Assessors | Kyne, P.M., Heupel, M.R., White, W.T., Simpfendorfer, C.A. (Shark Action Plan) & Rigby, C.L. | | |
| Report Card Remarks | Australian fishing interactions low and infrequent yet significant declines in population globally and regionally connected. Listed on EPBC Act (Migratory), CITES Appendix II, CMS Appendices I & II. | | |

Summary

The Giant Manta Ray is a large ray that is highly-mobile and globally distributed throughout tropical to temperate pelagic waters. Due to its very low biological productivity, it is highly susceptible to exploitation. In Australia, it is caught infrequently and released as it has been a protected species in all Australian Commonwealth waters since 2012, and is protected in most state and Territory waters. It was found to be at low risk from two Commonwealth tuna fisheries. Globally,



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significant population declines have occurred in much of its distribution due its very low biological productivity, current and ongoing high levels of industrial and artisanal fishing pressure, and demand for its meat and high-value gill plates. These declines include rapid localised depletions in Australian regional waters, that is, Indonesia and Philippines. As the species is migratory and individuals in Australia are connected regionally to the global population, the Australian status follows the global status. The Giant Manta Ray is assessed as globally and in Australia as Endangered (IUCN) (Kyne et al. 2021) and in Australia as Depleted (SAFS). The species is listed as Migratory (EPBC Act) and listed on CITES Appendix II and CMS Appendices I & II.

Distribution

The Giant Manta Ray is circumglobal in tropical to temperate waters (Lawson et al. 2017). It occurs across northern Australia in a wide range from Montague Island (New South Wales) to Shark Bay (Western Australia) (Last and Stevens 2009, Last et al. 2016, Armstrong et al. 2020).

Stock structure and status

The Giant Manta Ray is migratory with a global population although most movement appears to be regional within ocean basins (Marshall et al. 2019). The population has declined significantly due to

current and ongoing high levels of exploitation and demand for its meat and high-value gill plates throughout much of its distribution, including regionally within Southeast Asia where rapid localised depletions have occurred (Marshall et al. 2019).

Fisheries

The Giant Manta Ray is targeted and caught incidentally in industrial and artisanal coastal and pelagic fisheries, including purse seines and gillnets, and is retained for its highly valued gill plates and for its meat (except in Australia) (Marshall et al. 2019). In Australia, it is very occasionally incidentally caught by the Commonwealth Eastern and Western Tuna and Billfish Fisheries. It was assessed as at low risk from these two fisheries (Zhou et al. 2009, Sporcic et al. 2018). It is occasionally encountered in the Queensland and New South Wales shark control programs (Sumpton et al. 2011, DPI 2021), and may infrequently interact with other Australian fisheries. It would be released as it is a protected species in all Australian Commonwealth waters since 2012 when it was listed as a migratory species under the *Environment Protection and Biodiversity Conservation Act 1999*, and is protected in most state and Territory waters.

Habitat and biology

The Giant Manta Ray is mainly pelagic from the surface to a depth of 1,000 m (Marshall et al. 2019). Maximum size is 700 cm disc width (DW) and maximum age estimated as 45 years (Last et al. 2016, Marshall et al. 2019). Males are estimated to mature at 9 years and 350–400 cm DW and females at 9–12 years and 380–500 cm DW (Stevens et al. 2018, Marshall et al. 2019). Litter size is one large pup (122–200 cm DW) born possibly only every 4–5 years (Marshall et al. 2019).

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| Longevity and maximum size | Longevity: estimated 45 years Max size: 700 cm DW |
| Age and/or size at maturity (50%) | Males: 9 years, 350–400 cm DW Females: 9–12 years, 380–500 cm DW |

CAAB Code: 37 041004

Link to IUCN Page: <https://www.iucnredlist.org/species/198921/68632946>

Link to page at Shark References: <https://shark-references.com/species/view/Mobula-birostris>

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