# Milk Shark, *Rhizoprionodon acutus*

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| **Report Card assessment** | **Sustainable** | | |
| IUCN Red List Australian Assessment | Least Concern | IUCN Red List Global Assessment | Vulnerable |
| Assessors | Rigby, C.L., Harry, A.V., Pacoureau, N., Herman, K., Hannan, L. & Derrick, D. | | |
| Australian Assessors | Kyne, P.M., Heupel, M.R., White, W.T. & Simpfendorfer, C.A. (Shark Action Plan) | | |
| Report Card Remarks | In Australia, taken in managed fisheries; globally heavily fished in unregulated fisheries. | | |

## Summary

The Milk shark is a small bodied, common and broadly distributed species found throughout tropical and subtropical waters of the Indian Ocean, Western Central Pacific and eastern Atlantic Ocean. It is targeted for its meat and fins and apart from Australia, is heavily fished throughout its range in unregulated fisheries. The fast growth and very young age at maturity imply it is a productive species which would be expected to recover quickly following management intervention. Within Australia, fishing pressure is low and managed and it is not considered to be at risk of decline. Therefore, the Milk Shark is assessed as Least Concern (IUCN) in Australia (Kyne et al. 2021) and Sustainable (SAFS). From November 2023, the species will be listed on Appendix II of the Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES).


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## Distribution

The Milk Shark is found throughout continental shelf waters from South Africa, across Asia to Australia and southern Japan. An isolated population is also present in the southeast Atlantic Ocean from Mauritania to Angola (Compagno 1984). Within Australia, it is found from Fraser Island (Queensland), across the Northern Territory and as far south as Geraldton (Western Australia) (Last and Stevens 2009).

## Stock structure and status

There is currently no information on population size, structure, or trend for the Milk Shark. The species may contain several subpopulations (Naylor et al. 2012). The eastern Atlantic subpopulation is geographically isolated from the remainder of the population. The Milk Shark from the east coast of Australia is genetically homogenous with no evidence of fine-scale stock structuring (Ovenden et al. 2011).

## Fisheries

The Milk Shark is an abundant inshore species and is often a large component of shark landings (Compagno 1984, Stevens and McLoughlin 1991, Moore et al. 2012). Apart from Australia, unregulated fishing pressure is high throughout much of its distribution where it is commonly caught in subsistence, artisanal, recreational, and commercial fisheries (Schaefer 2004, Diop and Dossa 2011, Moore et al. 2012). Within Australia, it is commonly encountered as a non-retained bycatch in gillnet and trawl fisheries, however post-release mortality is likely high (Stobutzki et al. 2002, Tobin et al. 2010). It has benefitted from the implementation of bycatch reduction devices on trawl nets (Griffiths et al. 2006). Fisheries pressure on the Milk Shark in Australia is low to moderate (Stobutzki et al. 2002, Zhou and Griffiths 2008, Tobin et al. 2010).

## Habitat and biology

The Milk Shark is common in coastal and continental shelf waters with seagrass habitats considered important to this species (White and Potter 2004). Maximum size is at least 100 cm total length (TL) (Stevens and McLoughlin 1991, Henderson et al. 2006, White 2007). Maximum age reported is 8 years (Harry et al. 2010). Growth is rapid, with age at maturity very young at 1 year for males and 2 years for females (Harry et al. 2010). They reproduce annually (Stevens and McLoughlin 1991).

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| Longevity and maximum size | Longevity estimated 8 years<br>Max size: at least 100 cm TL |
| Age and/or size at maturity (50%) | Males: 1 year, 65–95 cm TL<br>Females: 2 years, 65–95 cm TL |

**CAAB Code:** 37 018006

**Link to IUCN Page:** https://www.iucnredlist.org/species/41850/68642326

**Link to page at Shark References:** http://shark-references.com/species/view/Rhizoprionodon-acutus

### References


Compagno, L.J.V. 1984. *FAO species catalogue. Vol. 4. Sharks of the world. An annotated and illustrated catalogue of shark species known to date*. FAO Fisheries Synopsis No. 125, Volume 4, Part 1.

Diop, M. and Dossa, J. 2011. *30 Years of Shark Fishing in West Africa*. FIBA.

Griffiths, S. P., Brewer, D. T., Heales, D. S., Milton, D. A. and Stobutzki, I. C. 2006. Validating ecological risk assessments for fisheries: assessing the impacts of turtle excluder devices on elasmobranch bycatch populations in an Australian trawl fishery. *Marine and Freshwater Research* 57: 395–401.

Harry, A. V., Simpfendorfer, C. A., & Tobin, A. J. 2010. Improving age, growth, and maturity estimates for aseasonally reproducing chondrichthyans. *Fisheries Research* 106(3): 393–403.

Henderson, A.C., McIlwain, J.L., Al-Oufi, H.S. and Ambu-Ali, A. 2006. Reproductive biology of the milk shark *Rhizoprionodon acutus* and the bigeye houndshark *Iago omanensis* in the coastal waters of Oman. *Journal of Fish Biology* 68: 1662–1678.

Kyne, P.M., Heupel, M.R., White, W.T. and Simpfendorfer, C.A. 2021. *The Action Plan for Australian Sharks and Rays 2021*. National Environmental Science Program, Marine Biodiversity Hub, Hobart.

Last, P.R. and Stevens, J.D. 2009. *Sharks and Rays of Australia*. Second Edition. CSIRO Publishing, Collingwood, Australia.

Moore, A.B.M., McCarthy, I.D., Carvalho, G.R., Peirce, R. 2012. Species, sex, size and male maturity composition of previously unreported elasmobranch landings in Kuwait, Qatar and Abu Dhabi Emirate. *Journal of Fish Biology* 80: 1619–1642.

Naylor, G.J., Caira, J.N., Jensen, K., Rosana, K.A.M., White, W.T. and Last, P.R. 2012. A DNA sequence-based approach to the identification of shark and ray species and its implications for global elasmobranch diversity and parasitology. *Bulletin of the American Museum of Natural History*: 1–262.

Ovenden J. R., Morgan J. A. T., Street R., Tobin A., Simpfendorfer C., Macbeth W. and Welch D. 2011. Negligible evidence for regional genetic population structure for two shark species *Rhizoprionodon acutus* (Ruppell, 1837) and *Sphyrna lewini* (Griffith & Smith, 1834) with contrasting biology. *Marine Biology* 158: 1497–1509.

Schaeffer, D. 2004. Assessment of the Artisanal Shark Fishery and Local Shark Fin Trade on Unguja Island, Zanzibar. *Independent Study Project (ISP) Collection. Paper 536*.

Stevens, J.D. and McLoughlin, K.J. 1991. Distribution, size and sex composition, reproductive biology and diet of sharks from northern Australia. *Australian Journal of Marine and Freshwater Research* 42:151–199.

Stobutzki, I.C., Miller, M.J., Heales, D.S. and Brewer, D.T. 2002. Sustainability of elasmobranches caught as bycatch in a tropical prawn (shrimp) trawl fishery. *Fishery Bulletin* 100: 800–821.

Tobin, A. J., Simpfendorfer, C. A., Mapleston A., Currey, L., Harry, A. J., Welch, D. J., Ballagh, A. C., Chin, A., Szczenski, N., Schlaff, A. and White, J. 2010. *A quantitative ecological risk assessment of sharks and finfish of Great Barrier Reef World Heritage Area inshore waters: A tool for fisheries and marine park managers: identifying species at risk and potential mitigation strategies*. In: Marine and Tropical Sciences Research Facility (eds). Cairns.

White, W.T and Potter, I.C. 2004. Habitat partitioning among four elasmobranch species in nearshore, shallow waters of a subtropical embayment in Western Australia. *Marine Biology* 145(5): 1023–1032.

White, W.T. 2007. Aspects of the biology of carcharhiniform sharks in Indonesian waters. *Journal of the Marine Biological Association of the United Kingdom* 87: 1269–1276.

Zhou, S. 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: 56–68.