Silky Shark, *Carcharhinus falciformis*

Report Card assessment	**Sustainable**		
IUCN Red List Australian Assessment	Refer to Global Assessment	IUCN Red List Global Assessment	Vulnerable
Assessors	Rigby, C.L., Sherman, C.S., Bonfil, R., Chin, A. & Simpfendorfer, C.		
Report Card Remarks	In Australia, there is no take of Silky Sharks in the tuna fisheries.		

Summary

The Silky Shark is a large bodied oceanic and coastal-pelagic shark that has a global distribution throughout tropical waters. It is taken as bycatch or as a target species and is the second most caught shark species globally after Blue Sharks (*Prionace glauca*). Silky Sharks have a long generation length of 15 years (average age of parents) and are thus sensitive to fishing pressure. In some regions of the world the catches have remained stable or slightly increased, while in others declines of up to 99% have been estimated. There is a very high level of uncertainty in the estimates of decline and an inability to conclusively attribute declines solely to fishing mortality as there is some potential for environmental influences on catchability. The weighted population decline over three generations is estimated to be 47-54%. Therefore, the Silky Shark is assessed globally as Vulnerable (IUCN) and in Australia, where there is no take of Silky Sharks, Sustainable (SAFS).


Source: Joi Ito/Flickr. License: CC By Attribution.

Distribution

The Silky Shark is globally distributed throughout tropical pelagic waters and may move seasonally into warm temperate waters (Last and Stevens 2009). Within Australia, it is found from Lancelin (Western Australia), through the Northern Territory and Queensland to Sydney (New South Wales) (Last and Stevens 2009). Globally, it is found throughout the tropics across the Atlantic, Indian and Pacific Oceans.

Stock structure and status

Within Australia, there is currently no information on population size, structure, or trend for the Silky Shark. Life history parameters vary geographically, suggesting distinct populations. Within the Pacific, there are potentially three stocks; one in the western Pacific and two in the eastern Pacific that are separated by the equator (Aires da Silva et al. 2014). In the western Pacific, the population exhibited no strong trend of decline over 1995-2014 (Rice et al. 2015). In the eastern Pacific, declines in the

north ranged from 17-60% over three generations due to uncertainties in the catch data and in the south more definitive declines of up to 99% are reported (Lennart-Cody 2015). In the Atlantic, declines are also reported of up to 95% over three generations (Cortes et al. 2007). When the three generation population trend is weighted according to the relative size of each region, the global population decline is estimated to be 16-22%.

Fisheries

The primary threat to Silky Sharks is fishing pressure, which is high throughout most of its distribution. Silky Sharks are retained for their meat and fins and in some fisheries, such as the tropical purse seine fisheries, their mortality remains high even when released (Hutchinson et al. 2015). Silky Sharks are sensitive to fishing pressure due to their life history characteristics. Within Australia fishing appears minimal in the west where pelagic longlining fishing effort is low. There are now bans on the take of Silky Sharks in both the Eastern and Western Tuna and Billfish Fisheries (AFMA 2015, 2016). Globally, fishing pressure is high with Silky Sharks the second most caught species of shark (Oliver et al. 2015).

Habitat and biology

The Silky Shark is found in pelagic and continental shelf edge waters throughout the tropics and occurs from the surface to depths of 500 m (Last and Stevens 2009). Maximum age and size range vary geographically. Maximum observed size is 330 cm total length (TL) and maximum estimated size is approximately 370 cm TL (Serafy et al. 2012, Ebert et al. 2013). Maximum age estimates vary from 16 to 36 years (Sanchez-de-Ita et al.2011, Joung et al. 2008).

Longevity and maximum size	Longevity: estimates from 16 to 36 years Max size: 330 cm (observed) TL
Age and/or size at maturity (50%)	Males: 180-225 cm TL Females: 180-246 cm TL

Link to IUCN Page: http://www.iucnredlist.org/details/39370/0

Link to page at Shark References: http://shark-references.com/species/view/Carcharhinus-falciformis

References

Aires-da-Silva, A., Lennert-Cody, C., Maunder, M.N. and Román-Verdesoto, M. 2014. Stock status indicators for silky sharks in the eastern Pacific Ocean. Document SAC-05-11a. Inter-American Tropical Tuna Commission Scientific Advisory Committee Fifth Meeting. 12-16 May 2014, La Jolla, California, USA [http://www.iattc.org/Meetings/Meetings2014/MAYSAC/PDFs/SAC-05-11a-Indicators-for-silky-sharks.pdf].

Australian Fisheries Management Authority. 2015. Eastern Tuna and Billfish Fishery (ETBF). Management arrangements booklet. 2015 Fishing Season.

Australian Fisheries Management Authority. 2016. Western Tuna and Billfish Fishery (WTBF). Management arrangements booklet. 2016 Fishing Season.

Cortés, E., Brown, C. and Beerkircher, L.R. 2007. Relative abundance of pelagic sharks in the Western North Atlantic Ocean, including the Gulf of Mexico and Caribbean Sea. *Gulf and Caribbean Research* 19(2): 37-52.

Ebert, D.A., Fowler, S. and Compagno, L. 2013. Sharks of the world. A fully illustrated guide. Wild Nature Press.

Hutchinson, M.R., Itano, D.G., Muir, J.A. and Holland, K.N. 2015. Post-release survival of juvenile silky sharks captured in a tropical tuna purse seine fishery. *Marine Ecology Progress Series* 521: 143-154.

Joung, S.J., Chen, C., Lee, H., Liu, K. 2008. Age, growth and reproduction of silky sharks, *Carcharhinus falciformis*, in northeastern Taiwan waters. *Fisheries Research*, 90, 78-85

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

Lennert-Cody, C., Aires-da-Silva, A., Maunder, M. and Roman, M. H. 2016. Updated stock status indicators for Silky Sharks in the eastern Pacific Ocean. Inter-American Tropical Tuna Commission Scientific Advisory Committee Seventh Meeting, La Jolla, California.

Oliver, S., Braccini, M., Newman, S.J. and Harvey, E.S. 2015. Global patterns in the bycatch of sharks and rays. *Marine Policy* 54: 86-97.

Rice, J., Tremblay-Boyer, L., Scott, R., Hare, S. and Tidd, A. 2015. Analysis of stock status and related indicators for key shark species of the Western Central Pacific Fisheries Commission. In: Western Central Pacific Fisheries Commission (ed.), Scientific Committee Eleventh Regular Session, 5-13 August 2015, Pohnpei, Federated States of Micronesia.

Sánchez-de Ita, J.A., Quiñónez-Velázquez, C., Galván-Magaña, F., Bocanegra-Castillo, N. and Félix-Uraga, R. 2011. Age and growth of the silky shark *Carcharhinus falciformis* from the west coast of Baja California Sur, Mexico. *Journal of Applied Ichthyology* 27: 20–24. doi: 10.1111/j.1439-0426.2010.01569.x.

Serafy, J.E., Orbesen, E.S., Snodgrass, D.J., Beerkircher, L.R. and Walter, J.F. 2012. Hooking survival of fishes captured by the United States Atlantic pelagic longline fishery: impact of the 2004 circle hook rule. *Bulletin of Marine Science* 88(3): 605-621.