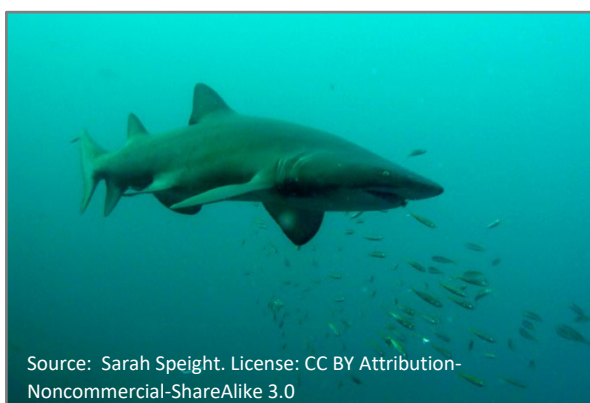


Grey Nurse Shark, *Carcharias taurus*

Report Card assessment	Sustainable (western stock) Depleted (eastern stock)		
IUCN Red List Australian Assessment	Vulnerable	IUCN Red List Global Assessment	Critically Endangered
Assessors	Rigby, C.L., Carlson, J., Derrick, D., Dicken, M., Pacoureaux, N. & Simpfendorfer, C.		
Australian Assessors	Kyne, P.M., Heupel, M.R., White, W.T. & Simpfendorfer, C.A. (Shark Action Plan)		
Report Card Remarks	West coast, no substantial depletion though taken as bycatch. East coast, significant declines with slow recovery. Listed on EPBC Act (Vulnerable west coast, Critically Endangered east coast).		

Summary

The Grey Nurse Shark is a large bodied species that inhabits coastal and continental shelf waters. There are two separate stocks in Australia – and east coast and west coast. On the east coast, significant declines in population numbers occurred in the 1960s and 1970s from targeted and incidental capture in commercial and recreational fisheries and shark control programs, with the population believed to have declined by 94–99% in less than three generations (75 years). A recent genetic study on



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the east coast has estimated that there are more that 1,600–2,100 adults and that the population is increasing. On the west coast catch rates in commercial gillnet fisheries suggest the population is stable. It has been protected in New South Wales since 1984 and nationally since 1999. Australia has a Recovery Plan in place. Therefore, the Grey Nurse Shark is assessed as globally Critically Endangered (IUCN); and in Australia as Vulnerable (IUCN) (Kyne et al. 2021), Depleted (east coast) and Sustainable (western stock) (SAFS). The species is listed on the EPBC Act (Critically Endangered east coast, Vulnerable west coast).

Distribution

Grey Nurse Shark (eastern stock) is distributed throughout Queensland and New South Wales. The western stock occurs in Western Australian waters mostly from at least Exmouth in the north to Albany in the south. It is a migratory species and is known to aggregate in gutters and caves near rocky reefs and islands (Last and Stevens 2009).

Stock structure and status

There are two stocks in Australian waters based on distribution and genetics. The western stocks occurs in Western Australian waters, while the eastern stock occurs in Queensland and NSW (Stow et al. 2006). Recent genetic analysis of the eastern population using close-kin mark recapture analysis

estimated that the current adult population is 1,600–2,100, depending on assumptions about maturity, and that it is increasing at ~4% per year (Bradford et al. 2018). Based on historic data, information from shark control programs in Queensland and NSW, and other sources it is estimated that the eastern population had declined by 94–97% over the decades prior to its protection in NSW. There is less information on the status of the western stock. However, catch rates in commercial gillnet fisheries in the southern half of the Western Australia have remained stable over a relatively long period suggesting the population is stable (Chidlow et al. 2006).

Fisheries

Currently Grey Nurse Sharks are taken as bycatch in commercial and recreational fisheries as well as shark control programs. It is no longer present at a number of sites where aggregations of 40 or more individuals were common. In the 1950s and 1960s, 36 Grey Nurse Sharks were captured annually on average in New South Wales shark control programs. By the 1980s only three were caught per year and in the 1990s only three were caught in total. A similar declining trend was apparent in Queensland shark control programs. Although protected since 1986 in NSW, it is still taken as bycatch in the New South Wales Trap and Line Fishery (Fletcher and McVea 2000). In Western Australia it is taken as a non-retained bycatch in commercial gillnet fisheries operating in temperate waters, and by commercial and recreational line fishing (Chidlow et al. 2006). Australia has a National Recovery Plan in place that aims to halt the decline and support the recovery of the Grey Nurse Shark in Australian waters.

Habitat and ecology

The Grey Nurse Shark is found in coastal and continental shelf waters, often associated with rocky reefs and gutters. It occurs from the surface to depths of 200 m. It migrates in association with seasonal and reproductive events (Otway and Ellis 2011, Bansemer and Bennett 2011). There are no life history data specific to the Eastern Australia subpopulation, so data is inferred from other populations. Maximum size is at least 270 cm total length (TL) for males and 320 cm TL for females. Maximum age for another subpopulation was recorded to be at least 40 years (Passerotti et al. 2014).

Longevity and maximum size	Longevity: ~40 years Max size: 320 cm TL
Age and/or size at maturity (50%)	Males: 190 cm TL Females: 220 cm TL

CAAB Code: 37 008001

Link to IUCN Page: <https://www.iucnredlist.org/species/3854/2876505>

Link to page at Shark References: <http://shark-references.com/species/view/Carcharias-taurus>

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