

RECOMMENDATION

CARCHARODON CARCHARIAS - GREAT WHITE SHARK

The Fisheries Scientific Committee, established under Part 7A of the *Fisheries Management Act 1994* (the Act), has made a recommendation to support the nomination to list the Great White Shark, *Carcharodon carcharias* as a VULNERABLE SPECIES in Schedule 5 of the Act. Listing of Vulnerable Species is provided for by Part 7A, Division 2 of the Act.

The Fisheries Scientific Committee has found that:

1. The Great White Shark, *Carcharodon carcharias* (Linnaeus, 1758) of the family Lamnidae, has also been known in Australia as *Carcharodon albimors* Whitley, 1939 with alternate common names of white shark, white pointer and white death.
2. *Carcharodon carcharias* has been recorded from the temperate waters of all oceans, including the length of the NSW coast, though it appears to be more common in waters of southern Australia. The species is described and figured in Last, P.R. & J.D. Stevens, 1994, *Sharks and Rays of Australia*, CSIRO, Melbourne, where details of its distribution are also given.
3. *Carcharodon carcharias* is an apex predator with relatively low natural mortality and is probably long lived and late maturing. Females do not reproduce until longer than 4.5-5.0 m, produce few pups (7-9) and may not reproduce every year. Details of its biology, that have proven very difficult to obtain, are described in Klimley, A.P. & D.G. Ainley (eds.), 1996, *Great White Sharks*, Academic Press, San Diego.
4. *Carcharodon carcharias* appears to have suffered a population decline in NSW, based upon:
 - Decreases in annual catches in beach meshing from 1950s to 1990s,
 - Less compelling evidence of decline from game-fishing landings,(Note – Both of the above data sets are principally from the region between Port Stephens and Wollongong)
 - Available game-fish tagging data indicate some increase since 1990. This is not reflected in beach meshing catches.
5. *Carcharodon carcharias* has the following official conservation status:
 - Vulnerable on Schedule 1 of the *Endangered Species Protection Act 1992* (Commonwealth),
 - Protected in all State and Commonwealth waters in Australia (in NSW since Jan 1997),
 - Vulnerable on the IUCN Red List of Threatened Species,
 - Protected overseas in South Africa, the Maldives, Namibia, and Florida and California (USA).

6. Protection measures in NSW have not been in place for sufficient time to expect or detect any increase in the population. The cause/s of this decline in NSW waters have not been identified. Bycatch in commercial fisheries in southern Australian states has been suggested as one of the causes of the decline in white shark numbers.
7. Despite limited contradictory evidence from the game-fish tagging program of recent higher tagging rates, the Fisheries Scientific Committee is of the opinion that the species is likely to become endangered unless the circumstances and factors threatening its survival cease to operate given that:
 - there is evidence of a decline indicated by the beach meshing catch data,
 - the species is considered threatened in other parts of its range outside NSW,
 - its life history suggests a slow recovery potential.

Therefore the species qualifies for inclusion in Schedule 5 of the *Fisheries Management Act 1994* as a VULNERABLE SPECIES.

Dr Andrew Sanger
Chair
Fisheries Scientific Committee