

Southern Bluefin Tuna – *Thunnus maccoyii*

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Introduction

Southern Bluefin Tuna are found in oceanic waters normally on the seaward side of the continental shelf. They belong to the family *Scombridae* which also includes tuna, mackerel, bonito and wahoo. Worldwide the species is considered a single population.

In NSW, Southern Bluefin Tuna occur from northern NSW to the Victorian border. They are considered rare within the NSW State Waters boundary of three nautical miles. Anecdotal reports from recreational and commercial anglers suggest surface schools of Southern Bluefin Tuna did previously occur in NSW waters, however these events have not been reported for over 5 years.

Southern Bluefin Tuna have declined dramatically in both international waters and nationally. The mature population has declined significantly since the 1980's and only 7 – 15% of 1960's parental biomass is thought to remain.

Southern Bluefin Tuna is listed as **endangered** in NSW. There are heavy penalties for harming, possessing, buying or selling them, or for harming their habitat, subject to the fishing rules currently in place (see 'Fishing for Southern Bluefin Tuna in NSW' and 'Legal implications').

Figure 1: Southern Bluefin Tuna (Illustration: Pat Tully)



Description

Southern Bluefin Tuna is a large silver-white fish with a blue-black upper body and yellow tinged fins. They are long and muscular, with small scales covering the skin. The keels near the tail are yellow in juveniles and black in adults.

Southern Bluefin Tuna can reach a maximum length of 2.35 metres and can attain a weight of around 200kg, but rarely exceed 100kg in Australian waters.

Habitat and ecology

- Southern Bluefin Tuna are long lived (up to 40 years), slow growing, late maturing (8 – 12 years) and highly migratory.
- Southern Bluefin Tuna spawn at only one location in the tropical waters between Java and north-west Australia. Spawning occurs during September and March.
- The frequency of spawning events is currently unknown. Females have low fecundity releasing up to 15 million eggs during a spawning period with few survivors.
- The eggs hatch after 2-3 days. Larvae and small juveniles are carried southwards along the West Australian coastline. Juveniles remain nearer to the coast for the first three years of life before moving out to sea.
- Southern Bluefin Tuna are carnivorous feeding mainly on fish, squid, krill and salps. In offshore waters, they also eat small crustaceans and larger fish.

Why is the Southern Bluefin Tuna threatened?

- Commercial fishing in both international and Australian waters for world sashimi markets and the harvest of wild caught juveniles (primarily in South Australia) for aquaculture farming.
- Recreational fishing can impact on the viability of the species, although to a much lesser extent than commercial fishing practices.
- A combination of factors such as natural and anthropogenically caused environmental variability, a reduction in spawning stock and fishing impacts on the population during spawning events are likely to affect recruitment and subsequently reduce an already low fecundity.
- The species recognition as a “k-selected” species with naturally slow growth, long life span and single spawning ground means that Southern Bluefin Tuna are particularly vulnerable to over-exploitation and slow to recover.

Fishing for Southern Bluefin Tuna in NSW

A Ministerial order is in place authorising limited recreational fishing for Southern Bluefin Tuna in NSW waters subject to applicable regulatory controls. The recreational fishing rules are a bag limit of 1 Southern Bluefin Tuna per person per day.

These rules have been developed to assist recovery of the species on a proactive basis, while providing for limited recreational fishing in NSW. For further details consult the [New Fishing Rules for Southern Bluefin Tuna – Frequently Asked Questions](#).

Figure 2: Southern Bluefin Tuna (Photo: David Muirhead)



Conservation and recovery actions

- Conduct further research into the biology and ecology of Southern Bluefin Tuna.
- Actively participate in national and international management arrangements for the species.
- Improve awareness about the endangered status of Southern Bluefin Tuna in NSW and promote compliance with relevant fishing regulations.
- **Report any sightings of the species via the NSW DPI online form:**
www.dpi.nsw.gov.au/fisheries/species-protection/report-it/threatened-species-sighting-form

Legal implications

It is illegal to catch and keep, buy, sell, possess or harm Southern Bluefin Tuna outside of the current recreational fishing rules (see [New Fishing Rules for Southern Bluefin Tuna – Frequently Asked Questions](#)) or without a specific permit, licence or other appropriate approval, and significant penalties apply. For endangered species these penalties can include fines of up to \$220,000 and up to 2 years in prison.

There are also significant penalties for causing damage to the habitat of a threatened species without approval.

The impact of developments or activities that require consent or approval (in accordance with the *Environmental Planning and Assessment Act 1979*) must be assessed and considered by consent or determining authorities. Where such actions are likely to result in a significant impact on a threatened species or its habitat, a detailed species impact statement must be prepared.

Strategies to be adopted for promoting the recovery of Southern Bluefin Tuna to a position of viability in nature must be set out in the NSW DPI Priorities Action Statement.

A recovery plan may be prepared for the species in accordance with the provisions of the *Fisheries Management Act 1994* to promote the recovery of the species to a position of viability in nature.

Bibliography and further reading

Fisheries Scientific Committee (2004) *Thunnus maccoyii* – southern bluefin tuna. Final Determination.

Common MF, Glover CJM and Kuitert RH (eds.) 1994, *The Fishes of Australia's South Coast*, State Print, Adelaide.

Commission for the Conservation of Southern Bluefin Tuna (CCSBT) (2013). Report on Biology, Stock Status and Management of Southern Bluefin Tuna. Report of the Eighteenth Meeting of the Scientific Committee,
http://www.ccsbt.org/site/recent_assessment

Pogonoski JJ, Pollard DA and Paxton JR 2002, *Conservation Overview and Action Plan for Threatened and Potentially Threatened Marine and Estuarine Fishes*, Environment Australia, Canberra, 375pp.

For further information

See the NSW DPI website: www.dpi.nsw.gov.au

Contact the NSW DPI Threatened Species Section:

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