Southern Bluefin Tuna (2020)

Thunnus maccoyii

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STOCK STATUS OVERVIEW

Jurisdiction	Stock	Stock status	Indicators
Commonwealth	Global	Recovering	Spawning stock biomass, projections of rebuilding

STOCK STRUCTURE

Southern Bluefin Tuna constitutes a single, highly migratory biological stock that spawns in the north-east Indian Ocean and migrates throughout the temperate southern oceans, supporting a number of international fisheries [Proctor et al. 1995, Evans et al. 2012, Patterson et al. 2018].

Here, assessment of stock status is presented at the biological stock level—Global.

STOCK STATUS

Global

The biological stock of Southern Bluefin Tuna is fished by Australian fishers endorsed to operate in the Southern Bluefin Tuna Fishery (Commonwealth) — and members of the Commission for the Conservation of Southern Bluefin Tuna. Fishers in the Eastern Tuna and Billfish Fishery (Commonwealth) and the Western Tuna and Billfish Fishery (Commonwealth) who have quota for Southern Bluefin Tuna can retain catches of the species. The species is also caught by recreational fishers in the waters off southern Australia, and there are other sources of unaccounted mortalities, including catches by fleets that are not members of the Commission for the Conservation of Southern Bluefin Tuna (CCSBT) [CCSBT 2015, Patterson et al. 2020]. The Australian recreational catch was estimated to be 270 t in 2018–19 [Tracey et al. 2020].

In 2011, the CCSBT adopted a management procedure (analogous to a harvest strategy, evaluated fully using management strategy evaluation) to guide the recovery of the biological stock to 20 per cent of unfished biomass by 2035 with 70 per cent probability [Hillary et al. 2016]. Performance of the management procedure is monitored using the biomass of fish that are 10 years and older. A new management procedure was adopted in 2019 that aims to rebuild the stock to 30 per cent of unfished biomass by 2035 with 50 per cent probability. This new management procedure will be used to set the global total allowable catch

from 2021 onwards.

The most recent assessment (2017) undertaken by the CCSBT takes into account reported catch from all international jurisdictions [CCSBT 2017]. It also examines the sensitivity of the results to alternate scenarios for unaccounted fishing mortalities. The actual (current and historic) level of unaccounted fishing mortality from all sources is uncertain, but there are indications it may be substantial [Patterson et al. 2020].

The most recent assessment estimated that the biomass of fish 10 years and older in the Southern Bluefin Tuna biological stock is still low, at 11 per cent of unfished levels (9 to 13 per cent across reference set of models) [CCSBT 2017, Hillary et al. 2017]. This is a progressive increase since the 2014 assessment which was 7 per cent [CCSBT 2017]. The most recent estimate of spawning stock biomass is 13 per cent (11 to 17 per cent across reference set of models) of unfished levels [CCSBT 2017]. The assessment also indicated that the stock may be more productive than for previous assessments and recent recruitment levels are estimated to be above long-term average levels. Based on the estimated stock size (13 per cent), the stock is considered to be recruitment impaired.

The estimate of fishing mortality was 50 per cent (38 to 66 per cent for reference set of models) of the level associated with maximum sustainable yield. Although there may be substantial unaccounted mortality of Southern Bluefin Tuna [CCSBT 2017], projections of the performance of the management procedure under scenarios of different levels of unaccounted mortalities showed that these mortalities are unlikely to reduce the probability of rebuilding to the specified interim management target to below the required 70 per cent within the specified time frame [CCSBT 2017]. In fact, the projections indicate that the stock may recover to 20 per cent of unfished levels before 2035.

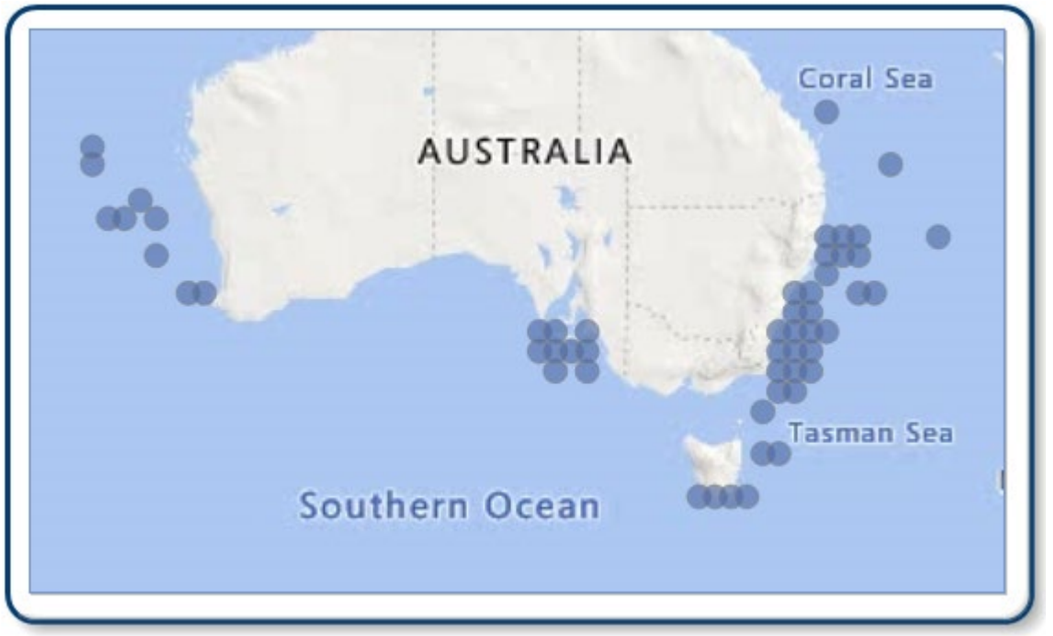
On the basis of the evidence provided above, the global biological stock is classified as a **recovering stock.**

BIOLOGY

Southern Bluefin Tuna biology [Davis et al. 2001, Laslett et al. 2002, Farley et al. 2014, 2015]

Species	Longevity / Maximum Size	Maturity (50 per cent)
Southern Bluefin Tuna	40+ years; ~1 900 mm FL	~10–12 years; 1 580–1 630 mm FL

DISTRIBUTION



Distribution of reported commercial catch of Southern Bluefin Tuna

TABLES

Fishing methods							
	Commonwealth	New South Wales	Queensland	South Australia	Tasmania	Victoria	Western Australia
Commercial							
Longline (Unspecified)	✓						
Purse Seine	✓						
Recreational							
Hook and Line		✓	✓	✓	✓	✓	✓
Spearfishing		✓	✓	✓	✓	✓	✓

Management Methods							
	Commonwealth	New South Wales	Queensland	South Australia	Tasmania	Victoria	Western Australia
Commercial							
Area restrictions	✓						
Catch limits	✓						
Individual transferable quota	✓						
Recreational							
Bag limits		✓	✓	✓	✓	✓	✓

Catch						
	Commonwealth	New South Wales	South Australia	Tasmania	Victoria	Western Australia
Commercial	6074 t					
Indigenous		Unknown	Unknown	Unknown	Unknown	Unknown

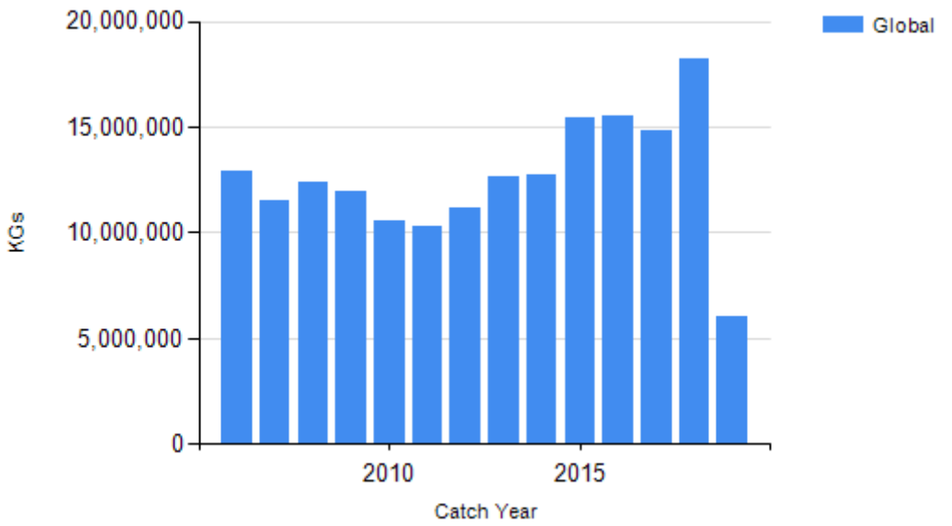
Commonwealth – Recreational The Australian Government does not manage recreational fishing in Commonwealth waters. Recreational fishing in Commonwealth waters is managed by the state or territory immediately adjacent to those waters, under its management regulations. Recreational catches reported here are from state surveys during specific time periods, as noted.

Commonwealth Recreational and Indigenous – Recreational and Indigenous fishing sectors reported here are New South Wales, Queensland, South Australia, Tasmania, Victoria and Western Australia. Measures listed here exist in at least one of these jurisdictions.

Commonwealth – Indigenous The Australian Government does not manage non-commercial Indigenous fishing in Commonwealth waters, with the exception of the Torres Strait. In general, non-commercial Indigenous fishing in Commonwealth waters is managed by the state or territory immediately adjacent to those waters.

Commonwealth – Commercial (catch) Catches reported for the Commission for the Conservation of Southern Bluefin Tuna (CCSBT) are for 2018, the most recent year available.

CATCH CHART



Commercial catch of Southern Bluefin Tuna - note confidential catch not shown

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