

Blue Grenadier (2018)

Macruronus novaezelandiae



Lee Georgeson: Australian Bureau of Agricultural and Resource Economics and Sciences

STOCK STATUS OVERVIEW

Jurisdiction	Stock	Fisheries	Stock status	Indicators
Commonwealth	Commonwealth Trawl Sector	SESSF (CTS)	Sustainable	Spawning stock biomass, current and historical fishing pressure
Commonwealth	Great Australian Bight Trawl Sector	SESSF (GABTS)	Sustainable	Current and historical fishing pressure

SESSF (CTS) Southern and Eastern Scalefish and Shark Fishery (Commonwealth Trawl Sector) (CTH), SESSF (GABTS) Southern and Eastern Scalefish and Shark Fishery (Great Australian Bight Trawl Sector) (CTH)

STOCK STRUCTURE

Comparative analysis of otolith chemistry and shape indicates two biological stocks of Blue Grenadier: one in the region of the Commonwealth Trawl Sector (CTS) of the Southern and Eastern Scalefish and Shark Fishery (SESSF), and the other in the region of the Commonwealth Great Australian Bight Trawl Sector (GABTS) of the SESSF [Hamer et al. 2009]. There is some evidence that Blue Grenadier from the western Tasmanian and eastern Bass Strait regions of the SESSF (CTS) may constitute separate sub-stocks, but these are currently assessed and managed as a single Commonwealth Trawl Sector stock [Morison et al. 2013].

Here, assessment of stock status is presented at the biological stock level—Commonwealth Trawl Sector and Great Australian Bight Trawl Sector (Commonwealth).

STOCK STATUS

Commonwealth Trawl Sector Blue Grenadier in the Commonwealth Trawl Sector (SESSF [CTS]) and the Gillnet, Hook and Trap Sector (Commonwealth) (SESSF [GHTS]) of the Southern and Eastern Scalefish and Shark Fishery (Commonwealth) is managed under a multiyear total allowable catch (TAC). The SESSF (CTS) accounts for the majority of the catch. Given the relatively low catch from the SESSF (GHTS) from the area of the SESSF (CTS), the biological stock is referred to in this report as the Commonwealth Trawl Sector biological stock.

The Blue Grenadier stock assessment was updated in 2013 with new catch-at-age and catch rate data up to 2012, and it also used estimates of

spawning biomass from industry-based acoustic surveys and egg survey indices of female spawning biomass [Tuck 2014]. The assessment estimated a large recruitment event in 2010. The stock was assessed as being above the target reference point at 77 per cent of unfished biomass in 2012, and trending upwards. This stock is not considered to be recruitment impaired [Helidoniotis et al. 2018].

The 2013 assessment estimated a three year recommended biological catch of 8 810 tonnes (t), starting in 2014–15 [Tuck 2014]. A 2014–15 TAC of 6 800 t was implemented after consideration of industry's preference for a cautious approach to increasing the TAC, to promote economic stability [SEMAC 2014]. The multiyear TAC increased to 8 810 t in the 2015–16 season and has remained at this level for subsequent seasons. After deductions for research catches taken as part of the fishery independent survey (45 t) the 2017–18 TAC was set at 8 765 t. Reported landings in 2017–18 were 1 624 t, of which 1 619 t was taken in the SESSF (CTS). Weighted average discards between 2013 and 2016 were 712 t [Castillo-Jordán et al. 2018]. This level of fishing mortality is unlikely to cause the stock to become recruitment impaired.

On the basis of the evidence provided above, the Commonwealth Trawl Sector biological stock is classified as a **sustainable stock**.

Great Australian Bight Trawl Sector

There have been no stock assessments for the Southern and Eastern Scalefish and Shark Fishery (Great Australian Bight Trawl Sector) (Commonwealth) biological stock of Blue Grenadier. A catch trigger of 400 t is in place; if this is exceeded, data collection and the development of an assessment plan are required. A cease-to-fish catch trigger of 500 t also applies [AFMA 2017].

This Blue Grenadier biological stock was historically caught on the upper continental slope (around 200–700 m). Fishing effort on the Great Australian Bight continental slope has decreased since 2005, with commercial catches of Blue Grenadier reducing from a peak catch of 423 t in 2005–06 to 15 t in 2017–18. There are large areas of slope habitat across the Great Australian Bight and Western Australia, with fishing generally limited to a small area [Pitcher et al. 2018]. It is therefore likely that parts of this biological stock remain unfished. The above evidence indicates that the biomass of this stock is unlikely to be depleted and that recruitment is unlikely to be impaired. Furthermore, the current level of fishing mortality is unlikely to cause the stock to become recruitment impaired.

On the basis of the evidence provided above, the Great Australian Bight Trawl Sector (Commonwealth) biological stock is classified as a **sustainable stock**.

BIOLOGY

Blue Grenadier biology [Hamer et al. 2009, Tuck 2006]

Species	Longevity / Maximum Size	Maturity (50 per cent)
Blue Grenadier	25 years, 1 100 mm TL, weight 6 kg	4–5 years, females 640 mm TL, males 570 mm TL

DISTRIBUTION



Distribution of reported commercial catch of Blue Grenadier

TABLES

Commercial Catch Methods	Commonwealth
Danish Seine	✓
Demersal Pair Trawl	✓
Midwater Trawl	✓
Otter Trawl	✓

Fishing methods	Commonwealth
Commercial	
Otter Trawl	✓
Recreational	
Handline	✓

Management Methods	Commonwealth
Commercial	
Gear restrictions	✓
Limited entry	✓
Spatial closures	✓
Total allowable catch	✓

Trigger limits	✓
Active Vessels	

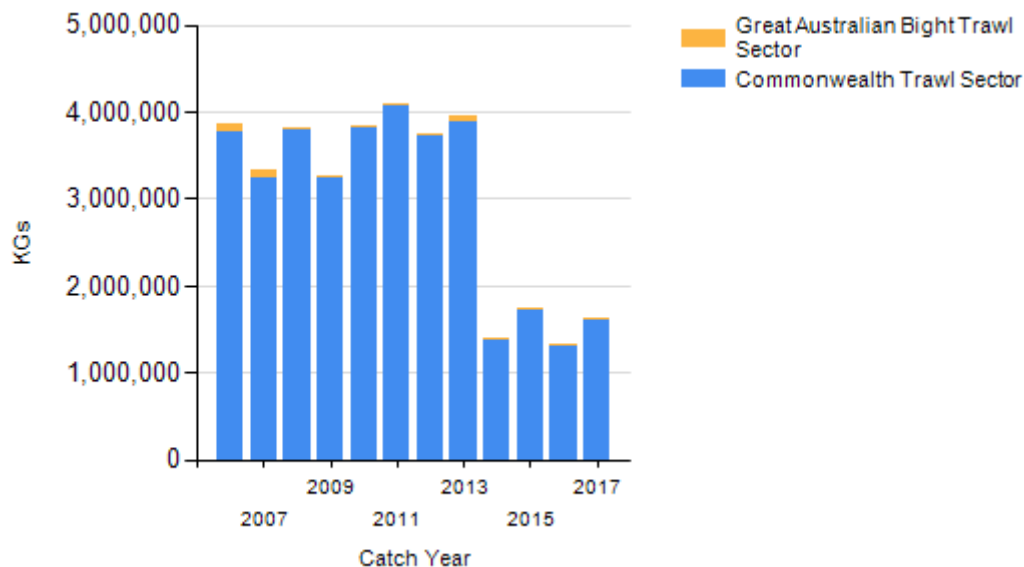
Catch	
	Commonwealth
Commercial	1618.65t in SESSF (CTS), 14.701t in SESSF (GABTS),
Indigenous	Unknown
Recreational	Unknown

SESSF (CTS) Southern and Eastern Scalefish and Shark Fishery (Commonwealth Trawl Sector) (CTH), SESSF (GABTS) Southern and Eastern Scalefish and Shark Fishery (Great Australian Bight Trawl Sector) (CTH),

Commonwealth – Recreational The Commonwealth 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.

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

CATCH CHART



Commercial catch of Blue Grenadier - note confidential catch not shown

EFFECTS OF FISHING ON THE MARINE ENVIRONMENT

ENVIRONMENTAL EFFECTS on Blue Grenadier

References	
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