

Deepwater Flathead (2020)

Platycephalus conatus



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STOCK STATUS OVERVIEW

Jurisdiction	Stock	Stock status	Indicators
Commonwealth	Great Australian Bight	Sustainable	Spawning stock biomass, fishing mortality

STOCK STRUCTURE

The biological stock structure of Deepwater Flathead is unknown; however, it is treated as a single biological stock or management purposes in the Great Australian Bight Trawl Sector (GABTS) of the Southern and Eastern Scalefish and Shark Fishery (SESSF). A stock assessment has been completed for this biological stock [Tuck et al. 2019].

Here, assessment of stock status is presented at the biological stock level—Great Australian Bight.

STOCK STATUS

Great Australian Bight

The most recent quantitative assessment [Tuck et al. 2019] estimated that the spawning biomass at the start of the 2018–19 fishing season was 37 per cent of the unfished (1978) level. This assessment was generally consistent with previous assessments [Haddon 2016] and fishery-independent surveys [Knuckey et al. 2009 and 2011], however the 2015 fishery-independent survey suggested a 45 per cent decrease in Deepwater Flathead catch rates compared to previous surveys [Knuckey et al. 2015]. There were uncertainties around the outputs of the survey due to seismic testing and unintentional changes to the trawl net used. The 2018 fishery-independent survey suggested a decrease in relative biomass of 33 per cent compared to 2015 and 63 per cent compared to 2011 [Knuckey et al. 2018]. This trend is concerning, though these changes may reflect movement of fish rather than changes in abundance.

Previous quantitative stock assessments estimated that the spawning biomass was progressively fished-down in the mid-2000s, but the biological stock had recovered to above the maximum economic yield target of 43 per cent of virgin biomass by the start of 2010, and was 44 per cent in 2016 [Klaer 2013, Haddon

2016]. The recovery was likely a result of lower fishing pressure, combined with at least one substantial recruitment event. As indicated above, the 2019 stock assessment suggests spawning biomass at the start of 2018–19 to be 37 per cent of the unexploited biomass. The quantitative assessment provided good fits to the catch rate, length and age data, but a poor fit for the last two years of fishery-independent trawl data [Tuck et al. 2019]. There is no evidence of a truncation in size or age structure of Deepwater Flathead [Haddon 2016]. The above evidence indicates that the biomass of this stock is unlikely to be depleted and that recruitment is unlikely to be impaired.

The recommended biological catch (RBC) estimated by Haddon [2016] (1155t) was used to set a total allowable catch (TAC) for the SESSF Great Australian Bight Trawl Sector (Commonwealth) for the 2018–19 fishing season (1128t). Total landed catch of Deepwater Flathead in the 2019-20 fishing season was 693 t (528t for the 2018-19 fishing season) below the RBC. This 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 biological stock is classified as a **sustainable stock**

BIOLOGY

Deepwater Flathead biology [Kailola et al. 1993, Stokie and Krusic-Golub 2005, Stokie and Talman 2003]

Species	Longevity / Maximum Size	Maturity (50 per cent)
Deepwater Flathead	Females ~26 years, 820 mm TL Males ~19 years, 590 mm TL	Females 5–6 years, 430 mm TL Males 4–5 years, 430 mm TL

DISTRIBUTION



Distribution of reported commercial catch of Deepwater Flathead

TABLES

Fishing methods	
	Commonwealth
Commercial	
Danish Seine	✓
Otter Trawl	✓

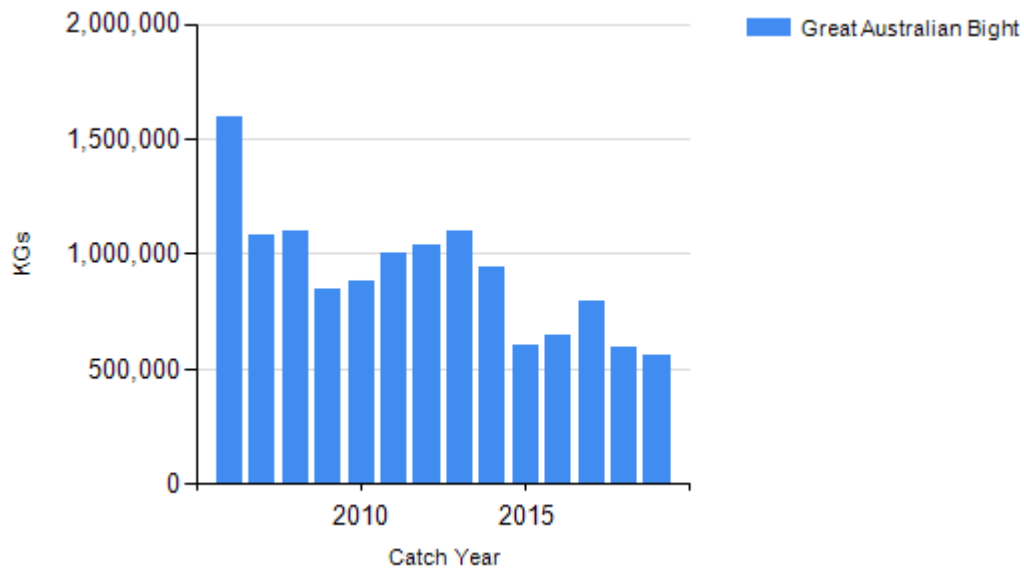
Management Methods	
	Commonwealth
Commercial	
Gear restrictions	✓
Limited entry	✓
Spatial closures	✓
Total allowable catch	✓

Catch	
	Commonwealth
Commercial	563.896 t

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.

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.

CATCH CHART



Commercial catch of Deepwater Flathead — note confidential catch not shown

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Tuck et al. 2019	Tuck, G, Day, J and Burch, P 2019, Deepwater flathead (<i>Neoplatycephalus conatus</i>) stock assessment based on data up to 2018/19, CSIRO Oceans and Atmosphere Flagship, Hobart.

