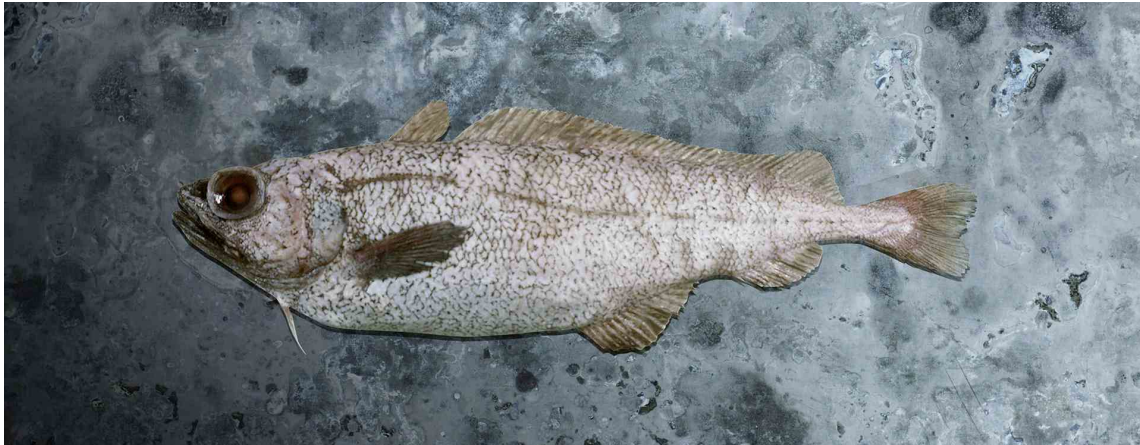


# Ribaldo (2018)

*Mora moro*



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## STOCK STATUS OVERVIEW

Jurisdiction	Stock	Fisheries	Stock status	Indicators
Commonwealth, New South Wales	South Eastern Australia	N/A, OTLF, SESSF (CTS), SESSF (GABTS), SESSF (GHTS)	Sustainable	Catch, CPUE

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), SESSF (GHTS) Southern and Eastern Scalefish and Shark Fishery (Gillnet Hook and Trap Sector) (CTH), N/A Not Applicable (NSW), OTLF Ocean Trap and Line Fishery (NSW)

## STOCK STRUCTURE

Ribaldo inhabit temperate deepwater areas on the continental shelf. They occur close to the seabed at depths of 450–2 500 metres and are most commonly found at depths of 500–1 000 metres. Ribaldo are associated with sea mounts and rough sea beds. Juveniles may be pelagic. One stock of Ribaldo is assumed for assessment and management purposes in the SESSF [Morison et al. 2013].

Here, assessment of stock status is presented at the biological stock level—South Eastern Australia.

## STOCK STATUS

### South Eastern Australia

Ribaldo is a secondary species managed in the Commonwealth as a tier 4 stock under the SESSF Harvest Strategy Framework. The stock is managed to a target reference point that aims to maintain the exploitable biomass at 40 per cent of the unfished level (B40). The Commonwealth Resource Assessment Group (RAG) has provided advice on the recommended biological catch (RBC) using the B40 target reference point [Morison et al. 2013].

The assessment underpinning the management of Ribaldo in 2017 is the tier 4 standardised catch per unit effort (CPUE) analysis of 2013 with CPUE data to 2012 producing an RBC of 355 tonnes (t) [Haddon 2013]. The assessment considers Commonwealth and New South Wales catches. Calculations used the period 1995 to 2004 as the reference period (when catches first approached

100 t). Given the lightly exploited nature of the fishery during the reference period, the target CPUE was calculated by halving the average reference period CPUE, to reflect the likely change in CPUE that would occur as the fishery became fully exploited. Trawl CPUE have been relatively stable since 2000, and auto-longline catch rates have been stable since 2005. Both are above the target level. Throughout this period, catches have remained below the established total allowable catches (TACs) and below RBCs. The 2013 analysis produced an RBC of 355 t using the B40 target [Haddon 2013]. The RAG recommended a three year RBC of 355 t, with a review if 70 per cent or more of the TAC is caught, if trawl CPUE changes by 50 per cent or more, or if there is a significant change in the proportion of catch by the line sector [AFMA 2013]. The RAG also recommended that a discount factor not apply because an adequate level of precaution was provided through existing closures for both trawl and auto-longline methods. After applying the large change-limiting rule, AFMA implemented a three year multiyear TAC of 355 t for 2015–16, 2016–17 and 2017–18 season.

A cursory CPUE standardisation was conducted more recently in 2017 (with data to 2016) which produced an RBC of 430 t [Haddon and Sporcic 2017]. This suggests that the current TAC 355 t (as discussed above) is conservative. The 2017 analysis has not been adopted to underpin the current management of Ribaldo. Standardised CPUE has remained stable or increased, and has been above the target level for the past decade. The above evidence indicates that the biomass of this stock is unlikely to be depleted and that recruitment is unlikely to be impaired. For the 2017–18 fishing season, the RBC was 355 t. Total landed catch in the 2017 calendar year was 95.4 t for the Commonwealth, 23.07 t for New South Wales, and the weighted average discards were 6.52 t [Castillo Jordán et al. 2018]. The landed catch and discards combined was 124.99 t, well below the RBC of 355 t. This indicates that the fishing mortality rate in 2017, if maintained, is unlikely to deplete the stocks to a level below their biomass limit reference points. The above evidence indicates that 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 South Eastern Australia biological stock is classified as a **sustainable stock**

## BIOLOGY

Ribaldo biology [AFMA website]

Species	Longevity / Maximum Size	Maturity (50 per cent)
Ribaldo	30 years, 400–700 mm	Female 14 years Male 8 years

## DISTRIBUTION



Distribution of reported commercial catch of Ribaldo

**TABLES**

<b>Commercial Catch Methods</b>	<b>Commonwealth</b>	<b>New South Wales</b>
Danish Seine	✓	
Demersal Longline	✓	✓
Demersal Pair Trawl	✓	
Dropline	✓	
Handline (mechanised)	✓	
Midwater Trawl	✓	
N/A		✓
Otter Trawl	✓	
Rod and reel	✓	
Trotline	✓	

<b>Fishing methods</b>	<b>Commonwealth</b>	<b>New South Wales</b>
<b>Charter</b>		
Handline		✓
<b>Commercial</b>		
Demersal Longline	✓	✓
Dropline	✓	
Otter Trawl	✓	
<b>Indigenous</b>		
Handline		✓

Recreational		
Handline		✓
Management Methods		
	Commonwealth	New South Wales
Charter		
Licence		✓
Spatial closures		✓
Commercial		
Gear restrictions	✓	
Quota	✓	
Indigenous		
Native Title		✓
Section 37 (1d)(3)(9), Aboriginal cultural fishing authority		✓
Recreational		
Licence		✓
Spatial closures		✓

Active Vessels	Commonwealth
	3 Fisher in SESSF (GABTS), 5 Fisher in SESSF (GHTS), 18 Fisher in SESSF (CTS),

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)

SESSF (GHTS) Southern and Eastern Scalefish and Shark Fishery (Gillnet Hook and Trap Sector)(CTH)

Catch		
	Commonwealth	New South Wales
Commercial	52.6536t in SESSF (CTS), 1.033t in SESSF (GABTS), 41.7512t in SESSF (GHTS),	
Indigenous	No catch	Unknown
Recreational	No catch	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), SESSF (GHTS) Southern and Eastern Scalefish and Shark Fishery (Gillnet Hook and Trap Sector) (CTH), N/A Not Applicable (NSW), OTLF Ocean Trap and Line Fishery (NSW),

**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.

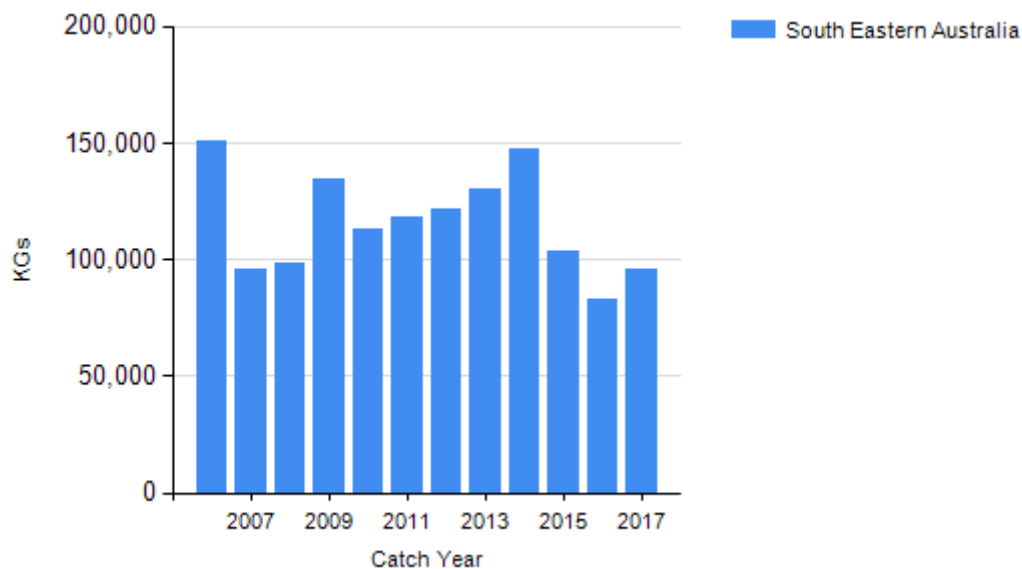
**Commonwealth – Indigenous** The Australian government does not manage non-commercial Indigenous fishing in Commonwealth waters, with the exception of Torres Strait. In general, non-commercial Indigenous fishing in Commonwealth waters is managed by the state or territory immediately adjacent to those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

**Commonwealth – Commercial (Management Methods/ Catch)** Data provided for the Commonwealth align with the Commonwealth Southern and Eastern Scalefish and Shark Fishery for the 2017 calendar year.

**New South Wales – Indigenous (Management Methods)** The Aboriginal cultural fishing authority is the authority that Indigenous persons can apply to take catches outside the recreational limits under the *Fisheries Management Act 1994* (NSW), Section 37 (1d)(3)(9), Aboriginal cultural fishing authority.

**New South Wales – Indigenous (Management Methods)** In cases where the *Native Title Act 1993* (Cth) applies fishing activity can be undertaken by the person holding native title in line with S.211 of that Act, which provides for fishing activities for the purpose of satisfying their personal, domestic or non-commercial communal needs. In managing the resource where native title has been formally recognised, the native title holders are engaged with to ensure their native title rights are respected and inform management of the State's fisheries resources.

## CATCH CHART



Commercial catch of Ribaldo - note confidential catch not shown

## EFFECTS OF FISHING ON THE MARINE ENVIRONMENT

### ENVIRONMENTAL EFFECTS on Ribaldo

#### References

- 472 AFMA 2013a, 'Southern and Eastern Scalefish and Shark Fishery Slope Resource Assessment Group (SlopeRAG), minutes, 6–8 November 2013, Hobart', AFMA, Canberra.

473	AFMA website
474	Castillo-Jordán, C, Althaus, F and Thomson, R 2018, SESSF catches and discards for TAC purposes. CSIRO Oceans and Atmosphere for AFMA, Canberra
475	Haddon, M and Sporcic, M 2017, Tier 4 Assessments for selected SESSF species (data to 2016), 14 November 2017. Prepared for the SE RAG teleconference meeting, December 2017, Hobart for the Australian Fisheries Management Authority.
476	Haddon 2013a, Tier 4 analyses in the SESSF, including deep water species: data from 1986–2012, CSIRO Marine and Atmospheric Research, Hobart.
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