

Eastern School Whiting (2016)

Sillago flindersi



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STOCK STATUS OVERVIEW

Jurisdiction	Stock	Fisheries	Stock status	Indicators
Commonwealth, New South Wales, Victoria, Tasmania	South-Eastern Australia	ITF, OTF, SESSF (CTS), SF	Sustainable	Spawning biomass, fishing mortality, catch rates

SESSF (CTS) Southern and Eastern Scalefish and Shark Fishery (Commonwealth Trawl Sector) (CTH), OTF Ocean Trawl Fishery (NSW), SF Scalefish Fishery (TAS), ITF Inshore Trawl Fishery (VIC)

STOCK STRUCTURE

Eastern School Whiting is endemic to south-eastern Australia and occurs from southern Queensland to western Victoria. It is considered to be a single biological stock for assessment purposes[1].

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

STOCK STATUS

South-Eastern Australia

The last full stock assessment of Eastern School Whiting was conducted in 2009, using commercial catch estimates for the Commonwealth, New South Wales, Victoria and Tasmania. This estimated spawning biomass at the beginning of 2010 to be 50 per cent of the unfished level[2]. This assessment was updated in 2011 with new catch, discard, age and length data[3,4]. The estimated levels of depletion in the updated assessment were similar to those in the 2009 assessment. Standardised catch rate data to 2014[5] and size composition data from observers and port sampling[6] did not indicate any substantial decline in spawning biomass. The stock is not considered to be recruitment overfished.

A long-term recommended biological catch (RBC) of 1660 tonnes (t) was

recommended for Eastern School Whiting from 2013–14 onwards[7]. Total Australian commercial catch of Eastern School Whiting in 2015 was 1308.5 t (Commonwealth—765.5 t; New South Wales—536 t; Victoria—7 t; Tasmania—confidential). Although the most recent stock assessment is dated, which is of concern for a short-lived species such as School Whiting, recent catches have remained below the long-term RBC. This level of fishing pressure is unlikely to cause the stock to become recruitment overfished[8].

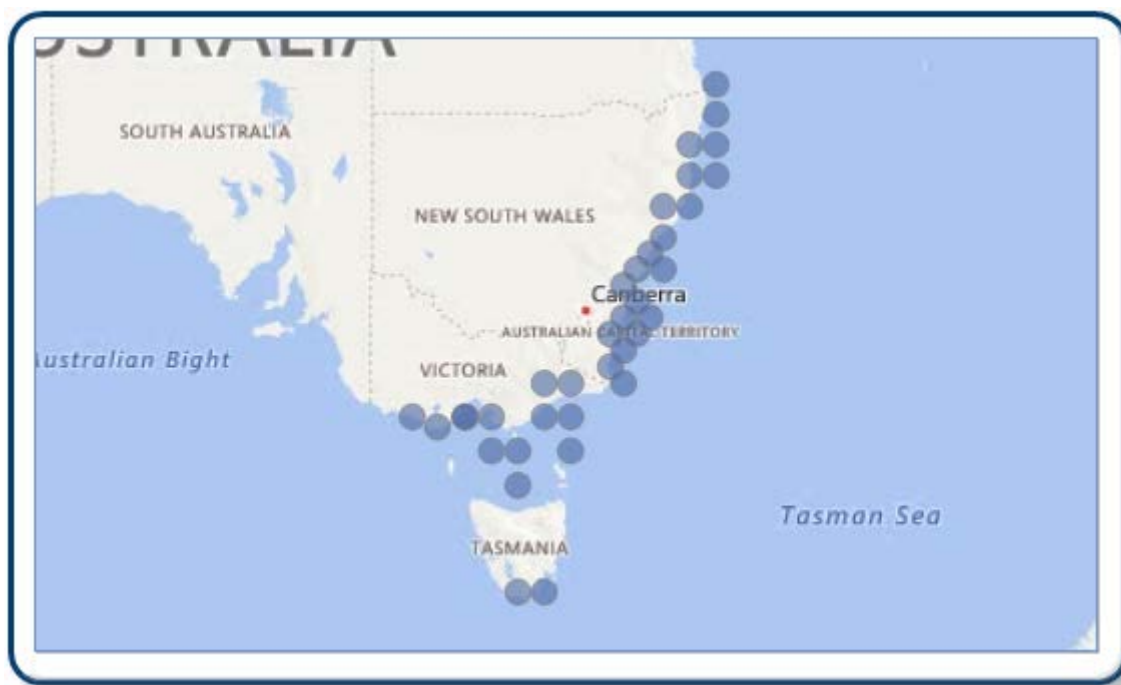
On the basis of the evidence provided above, the South-eastern Australia biological stock is classified as a **sustainable stock**.

BIOLOGY

Eastern School Whiting biology[2,9–11]

Species	Longevity / Maximum Size	Maturity (50 per cent)
Eastern School Whiting	7 years; 32 cm Standard Length	2 years; 14–18 cm <u>FL</u>

DISTRIBUTION



Distribution of reported commercial catch of Eastern School Whiting

TABLES

Commercial Catch Methods	Commonwealth	New South Wales	Tasmania	Victoria
Danish Seine	✓	✓		✓
Mesh Net				✓
Midwater Trawl	✓			
Otter Trawl	✓	✓		✓
Various			✓	✓

Fishing methods				
	Commonwealth	New South Wales	Tasmania	Victoria
Commercial				
Danish Seine	✓	✓		
Otter Trawl	✓	✓		✓
Various			✓	
Recreational				
Gillnet			✓	
Hand Line, Hand Reel or Powered Reels		✓	✓	✓
Management Methods				
	Commonwealth	New South Wales	Tasmania	Victoria
Commercial				
Gear restrictions	✓	✓	✓	✓
Limited entry	✓	✓	✓	✓
Spatial closures	✓	✓	✓	✓
Total allowable catch	✓			
Vessel restrictions		✓		
Indigenous				
Bag limits		✓	✓	✓
Gear restrictions		✓		✓
Section 31 (1)(c1), Aboriginal cultural fishing authority		✓		
Spatial closures		✓		✓
Recreational				
Bag limits		✓	✓	✓
Gear restrictions		✓		✓
Licence		✓		✓
Spatial closures		✓		✓

Active Vessels	Commonwealth	New South Wales	Victoria
	35 License in SESSF (CTS),	90 License in OTF,	12 Fisher in ITF,

SESSF (CTS) Southern and Eastern Scalefish and Shark Fishery (Commonwealth Trawl Sector)(CTH)

OTF Ocean Trawl Fishery(NSW)

ITF Inshore Trawl Fishery(VIC)

Catch	Commonwealth	New South Wales	Tasmania	Victoria
Commercial	732.708t in SESSF (CTS),	536.169t in OTF,		7.271t in ITF,
Indigenous		Unknown	Unknown	None
Recreational		5000 fish (in 2013-14)	2.1 t (2012-13)	Unknown

SESSF (CTS) Southern and Eastern Scalefish and Shark Fishery (Commonwealth Trawl Sector) (CTH), OTF Ocean Trawl Fishery (NSW), SF Scalefish Fishery (TAS), ITF Inshore Trawl Fishery (VIC),

a Commonwealth Commonwealth data are for the 2014–15 fishing season (1 May 2014–30 April 2015).

b New South Wales, Victoria and Tasmania State data are for the 2015 calendar year. Reported landings from northern New South Wales waters are adjusted to account for estimated species misreporting with Stout Whiting, *Sillago robusta*¹⁴.

c 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.

d 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.

e Victoria – Indigenous (management methods) In Victoria, regulations for managing recreational fishing are also applied to fishing activities by Indigenous people. Recognised Traditional Owners (groups that hold native title or have agreements under the Traditional Owner Settlement Act 2010 [Vic]) are exempt (subject to conditions) from the requirement to hold a recreational fishing licence, and can apply for permits under the Fisheries Act 1995 (Vic) that authorise customary fishing (for example, different catch and size limits or equipment). The Indigenous category in Table 3 refers to customary fishing undertaken by recognised Traditional Owners. In 2015, there were no applications for customary fishing permits to access Eastern School Whiting.

f New South Wales – Indigenous (management methods) Aboriginal Cultural Fishing Interim Access Arrangement - allows an Indigenous fisher in New South Wales to take in excess of a recreational bag limit in certain circumstances, for example, if they are doing so to provide fish to other community members who cannot harvest themselves.

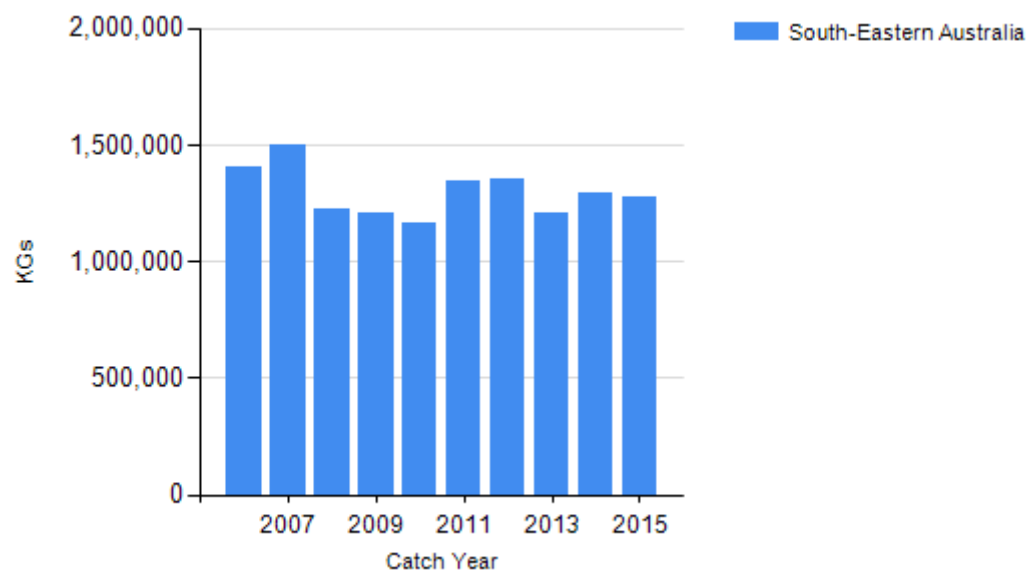
g New South Wales – Indigenous (management methods) Aboriginal cultural fishing authority - the authority that Indigenous persons can apply to take catches outside the recreational limits under the Fisheries Management Act 1994 (NSW), Section 37 (1)(c1), Aboriginal cultural fishing authority.

h Tasmania – Recreational (management methods) In Tasmania, a recreational licence is required for fishers using dropline or longline gear, along with nets, such as gillnet or beach seine.

i Tasmania – Indigenous (management methods) In Tasmania, Indigenous people engaged in aboriginal fishing activities in marine waters are exempt from holding recreational fishing licences, but must comply with all other fisheries rules as if they were licensed. Additionally, recreational bag and possession limits also apply. If using pots, rings, set lines or gillnets,

aborigines must obtain a unique identifying code (UIC). The policy document Recognition of Aboriginal Fishing Activities for issuing a Unique Identifying Code (UIC) to a person for Aboriginal Fishing activity explains the steps to take in making an application for a UIC.

CATCH CHART



Commercial catch of Eastern School Whiting - note confidential catch not shown

EFFECTS OF FISHING ON THE MARINE ENVIRONMENT

- There is bycatch caught in the fish trawl sector. In 2006, mandatory requirements for otter trawls to use 90 mm square-mesh codend panels were introduced in an effort to reduce the catch of small species and juvenile fish[15].
- The New South Wales Ocean Trawl Fishery mandates that otter trawl nets must be fitted with a bycatch reduction device of an approved design to reduce the bycatch of small prawns and juvenile fish. Mesh size and other gear restrictions are regulated to increase the target species selectivity of otter trawl and Danish seine nets and codends.
- Interactions also occur with animals protected under the *Environment Protection and Biodiversity Conservation Act 1999*, including marine mammals (dolphins, seals and sea lions), seabirds, some shark species, and seahorses and pipefish (syngnathids). These interactions are reported quarterly by the Australian Fisheries Management Authority (AFMA)[16] and on-board observer programs are used to validate the reporting in commercial logbooks.
- In 2007, the South East Trawl Fishing Industry Association released an industry code of practice that aims to minimise interactions with fur seals, as well as addressing the environmental impacts of the fishery more generally[17]. Operators have developed other mitigation protocols that have further reduced seal mortalities, including: using breakaway ties that keep the net closed until it is below depths that seals regularly inhabit; adopting techniques to close the trawl opening during recovery to minimise opportunities for seals to enter the net; switching off gantry lights that are not required during night trawling to avoid attracting bait species and seals; and dumping offal only when the boat is not engaged in deploying or hauling gear[16].
- The AFMA mandated individual vessel seabird management plans[18]. The seabird action plans are used in the Southern and Eastern Scalefish and Shark Fishery (Commonwealth Trawl Sector) (SESSF [CTS]) to mitigate the impacts of trawling on seabirds. From 1 May 2017, all vessels in the SESSF (CTS) and Southern and Eastern Scalefish and Shark Fishery (Great Australian Bight Trawl Sector) (SESSF [GABTS]) fisheries must use one of the following mitigation devices: sprayers; bird bafflers; or pinkies with zero discharge of fish waste[19].

- The effects of trawl fishing on the marine environment are assessed through an environmental risk assessment (ERA) and risk management framework and mitigated through spatial closures, and the implementation of bycatch and discard workplans[20,21] in the SESSF (CTS) and SESSF (GABTS) fisheries.
- Danish seine and otter trawl gears interact with soft muddy or flat sandy substrates. However, an ecological risk assessment identified no high-risk habitats on the inner shelf (water less than 100 m), where Eastern School Whiting is targeted[22,23].
- Spiny Pipehorse can be taken as incidental bycatch in dredges, trawls, seines and crayfish pots[24]. An ERA into the effects of fishing from the Danish seine sub-fishery of the SESSF (CTS) indicated that the Spiny Pipehorse was at low risk because the fishery overlaps with only a small portion of the range of this species[22]. An ERA into the effects of fishing from the otter trawl sub-fishery of the SESSF (CTS) considers the Spiny Pipehorse to be high risk because of high exposure to fishing (high proportion of range within the fishery, live in habitats that are likely to encounter the gear, and are the right size to be selected by the fishery)[23].

ENVIRONMENTAL EFFECTS on Eastern School Whiting

- Because Eastern School Whiting is a relatively short-lived species that reaches maturity after only 2 years, it is likely that year-to-year variations in environmental conditions will have a greater effect on this fishery than on a fishery for long-lived species. This is because stocks with a greater number of year classes are generally more resilient to variable recruitment than stocks with few year classes[3].

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