

Tailor (2018)

Pomatomus saltatrix



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STOCK STATUS OVERVIEW

Jurisdiction	Stock	Fisheries	Stock status	Indicators
Western Australia	Western Australia	GDSMF, GDSMF SBBSMNMF SCEMF SWCBNF WCDSIMF WCEMF WL (NC, GC, WC) WL (SC), SBBSMNMF, SCEMF, SWCBNF, WCDSIMF, WCEMF, WL (NC GC WC), WL (SC)	Sustainable	Catch, CPUE, recruitment index
Queensland, New South Wales, Victoria	Eastern Australia	CIF, ECIFFF, EGF, GLF, ITF, N/A, OF, OHF, OPSF, OTF, OTLF, PPBWPF	Sustainable	Biomass, CPUE, catch, effort, fishery-dependent length and age

EGF Estuary General Fishery (NSW), N/A Not Applicable (NSW), OHF Ocean Hauling Fishery (NSW), OTF Ocean Trawl Fishery (NSW), OTLF Ocean Trap and Line Fishery (NSW), ECIFFF East Coast Inshore Fin Fish Fishery (QLD), CIF Corner Inlet Fishery (VIC), GLF Gippsland Lakes Fishery (VIC), OF Ocean Fishery (VIC), OPSF Ocean Purse Seine Fishery (VIC), PPBWPF Port Phillip Bay and Western Port Bay Fishery (VIC), ITF Inshore Trawl Fishery (VIC), GDSMF Gascoyne Demersal Scalefish Managed Fishery (WA), SBBSMNMF Shark Bay Beach Seine and Mesh Net Managed Fishery (WA), SCEMF South Coast Estuarine Managed Fishery (WA), SWCBNF South West Coast Beach Net Fishery (Order) (WA), WCDSIMF West Coast Demersal Scalefish (Interim) Managed Fishery (WA), WCEMF West Coast Estuarine Managed Fishery (WA), WL (SC) Open Access in the South Coast (WA), WL (NC || GC || WC) Open Access in the North Coast, Gascoyne Coast and West Coast Bioregions (WA), GDSMF || SBBSMNMF || SCEMF || SWCBNF || WCDSIMF || WCEMF || WL (NC, GC, WC) || WL (SC) Various Fisheries combined due to 3 boat rule (WA)

STOCK STRUCTURE

Tailor are a wide ranging species with several separate stocks found in temperate and sub-

tropical waters around the world. Genetic evidence indicates that there are two biological stocks of Tailor in Australia, one along the east coast and a second along the west coast [Nurthen et al. 1992]. The Eastern Australian biological stock is distributed from Bundaberg in southern Queensland along the entire New South Wales coast and into eastern Bass Strait in Victoria [Brodie et al. 2018, Miskiewicz et al. 1996]. The Western Australian biological stock is distributed along the western coastline of Australia from Exmouth to Esperance [Lenanton et al. 1996, Smith et al. 2013]. Within each stock, multiple spawning groups may exist that spawn at different times and locations [Miskiewicz et al. 1996, Ward et al. 2003, Young et al. 1999]. However, several characteristics, such as the dispersal of pelagic eggs and larvae with prevailing currents, the movement of juveniles into sheltered nearshore or estuarine habitats in northern and southern areas of the species range, and the seasonal migration behaviour of adults, suggest that a genetically homogenous population occurs on each coast [Bade 1977, Brodie et al. 2018, Juanes et al. 1996, Lenanton et al. 1996, Miskiewicz et al. 1996, Ward et al. 2003, Young et al. 1999].

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

STOCK STATUS

Eastern Australia

Tailor has a long history as a key fishery species for Indigenous, commercial and recreational fishers on the east coast. The status presented here for the entire biological stock has been established using evidence from the three jurisdictions which access this stock—Queensland, New South Wales and Victoria.

The Eastern Australian biological stock of Tailor has been targeted by commercial fisheries in Queensland and New South Wales and to a lesser extent in Victoria from the early-mid 1900s [Bade 1977, Leigh et al. 2017]. By the 1970s the stock was predominantly targeted by recreational fisheries in Queensland and New South Wales. In 2017 the stock continues to be targeted by recreational and commercial fisheries in Queensland and New South Wales, albeit at lower levels, with a relatively small fishery in Victoria [Leigh et al. 2017]. Tailor remain a culturally significant species for Indigenous groups along the eastern seaboard. Although state-wide estimates of harvest are unknown, Tailor are a dominant component of the cultural catch in northern New South Wales [Schnierer 2011]. The total harvest of Tailor from Queensland and New South Wales peaked in the mid-1970s and again in the mid-1990s. This was followed by a sharp decline due in part to changes in market demand, participation rates and management measures. Harvest peaks coincided with periods of high recruitment of fish into the fishery, conceivably when favourable environmental factors allowed larger numbers of young Tailor to thrive (such as water temperature, and the timing and direction of prevailing currents and eddies bringing eggs, larvae and juveniles into productive nearshore habitats) [Leigh et al. 2017]. Between 2001 and 2008, recruitment was considered to be below average [Leigh et al. 2017]. The most recent stock assessment (data inclusive of 2015 for New South Wales and Queensland Fisheries where the majority of the catch is taken) indicates the exploitable biomass was approximately 50 per cent of the virgin level from the mid-1980s to 2012. Modelling indicates the exploitable biomass has bounced back strongly since 2012 due to high recruitment occurring from 2012 onwards. However, this pattern requires additional years of monitoring data to confirm as the rise is not supported by commercial catch rate trends up to 2014 [Leigh et al. 2017]. Standardised catch per unit effort (CPUE) for the Queensland gill net fishery shows a peak in 2000 and another in 2009 which reflect periods of good recruitment [Leigh et al. 2017]. CPUE for the New South Wales line and gill net fisheries show a slight increasing trend over the time period 1988–2014 [Leigh et al. 2017]. Annual fishery-dependent monitoring of the Queensland harvest shows relatively consistent length structures up to 2017 and indicates a range of ages, including older fish (4–7 year olds), are consistently present in the harvest [QDAF 2018]. The length composition in New South Wales commercial landings have remained consistent, typically ranging between 300–450 mm fork length

[Stewart et al. 2015]. These are positive indicators of a stable population with continuing recruitment.

The most recent stock assessment did not incorporate the small harvest of Tailor from Victoria. In this jurisdiction most of the commercial catch of Tailor since 2007 has come from the Gippsland Lakes and Corner Inlet fisheries [Victorian Fisheries Authority 2017]. Tailor is a transient species that moves between the ocean and the lakes system in that location, such that catches and catch rates are influenced by availability of fish (and consequent high variability between years). The most recent assessment (2016) [Conron et al. 2016] for Tailor in the Gippsland Lakes used the five year moving average commercial mesh net catch rate (kg per km per hour) as an indicator. These catch rates have increased since historical lows (0.2 kg per km per hour) in the mid-1990s to a peak of 2.5 kg per km per hour in 2012–13. Since 2012–13, the five year moving average catch rate has generally declined; however, it remains above the annual long-term average (based on a 32 year time series of data). The catch rates for this species are variable between years but show no evidence of a sustained decline. However, as the majority of catch is taken in NSW and Queensland, catch from Victoria is unlikely to influence the biomass of the biological stock.

The above evidence indicates that the biomass of this stock is unlikely to be depleted and that recruitment is unlikely to be impaired.

Estimates of maximum sustainable yield (MSY) for the combined Queensland and New South Wales harvest from the most recent stock assessment are highly variable (approximately 1 350 t per year but may range between 1 000 t per year and 2 000 t per year) [Leigh et al. 2017]. Long-term fluctuations in Tailor recruitment levels can mean that fishing the population at the estimated MSY can be unsustainable in the long-term if there is an extended period of low recruitment. In 2017, total harvest in Queensland and New South Wales is below the lower MSY level [QDAF 2018].

The recreational and commercial fisheries in Queensland, New South Wales and Victoria have been subject to numerous management measures aimed at lowering fishing pressure. These measures have been relatively influential in reducing fishing pressure as indicated in the trends shown in harvest and effort for both recreational and commercial fisheries [QDAF 2018, Stewart et al. 2015, Webley et al. 2015, West et al. 2015]. Fishing pressure is considered adequately controlled in commercial fisheries. In New South Wales this is through restrictive daily trip limits of 100 kg per day (ocean haul nets) or 50 kg per day (other netting methods). In Queensland, gill, seine and haul nets methods used by commercial fishers in nearshore and estuarine waters are deployed in a targeted manner and result in minimal bycatch relative to the harvest of the target species [Halliday et al. 2001]. Mesh size regulations help ensure that target species caught by these methods are within an appropriate size range. Fishers using tunnel nets in Queensland operate under the Industry Code of Best Practice to minimise their impacts [MBSIA 2012]. In general, line-based fishing methods in nearshore and estuarine waters can result in the capture and release of a significant number of non-target species and undersized fish. The rates of survival for released Tailor are considered high under some scenarios [Ayvazian et al. 2002, Broadhurst et al. 2012]. However, due to the prevalence of line fishing along ocean beaches, levels of discard mortality should be quantified for line-caught fish captured and released in surf breaks.

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 Eastern Australia biological stock is classified as a **sustainable stock**.

**Western
 Australia**

The Western Australian biological stock is accessed by one jurisdiction, Western Australia. In Western Australia, Tailor is primarily targeted by recreational fishers

who take the majority of the catch [Smith et al. 2013]. In the 1980s and 1990s, there was a marked decline in average size and catch rate of Tailor caught recreationally. In response, new management measures (bag and size limits) were introduced which substantially reduced the recreational harvest [Smith et al. 2013].

The current total recreational catch is uncertain due to lack of information about the shore-based harvest, which is larger than the boat-based harvest [Henry and Lyle 2003, Smith et al. 2013]. However, the boat-based catch is monitored regularly and has been relatively stable over the past decade [Smith et al. 2013, Ryan et al. 2017]. The boat-based catch was estimated to be around 5 t in 2015–16 [Ryan et al. 2017].

The current commercial catch is relatively low (8 t in 2017) compared to historic levels. Most of the commercial catch is taken in the Gascoyne Coast Bioregion (GCB), with the remainder in the West Coast Bioregion (WCB) and the South Coast Bioregion (SCB). The GCB catch has been declining due to reduced targeting because of low market demand. In the WCB, most of the catch is taken in the Peel-Harvey Estuary, where the Harvest Strategy limits the annual catch to < 10.4 t [Johnston et al. 2015]. Overall, there has been a deliberate reduction in commercial and recreational catches since the 1990s.

Recreational catches are mainly taken in the WCB. Recreational catch rates and juvenile recruitment in this region are monitored annually. The catch rate fluctuates in response to recruitment variations, which are linked to environmental factors [Smith et al. 2013, Department of Fisheries 2017]. Recruitment levels have been variable but followed a stable (non-directional) trend over the past 20 years. This evidence indicates that the stock is unlikely to be depleted and that recruitment is unlikely to be impaired. The current rate of fishing mortality is unlikely to cause the stock to become recruitment impaired.

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

BIOLOGY

Tailor biology [Bade 1977, Juanes et al. 1996, Smith et al. 2013, Young et al. 1999]

Species	Longevity / Maximum Size	Maturity (50 per cent)
Tailor	11–13 years, 1200 mm TL	Eastern Australian biological stock: 1–2 years, males 290 mm TL, females 310 mm TL Western Australian biological stock: 1–2 years, L50 per cent 320 mm TL

DISTRIBUTION



Distribution of reported commercial catch of Tailor

TABLES

Commercial Catch Methods	New South Wales	Queensland	Victoria	Western Australia
Beach Seine				✓
Dropline				✓
Gillnet				✓
Hand Line, Hand Reel or Powered Reels				✓
Haul Seine	✓			✓
Haul Seine/Beach Seine	✓			
Hook and Line	✓	✓	✓	
Mesh Net	✓			
Net		✓	✓	
Otter Trawl	✓			✓
Trolling	✓			✓
Unspecified	✓		✓	✓

Fishing methods	New South Wales	Queensland	Victoria	Western Australia
Charter				
Hook and Line	✓			
Commercial				
Beach Seine				✓
Gillnet				✓
Hand Line, Hand Reel				✓

or Powered Reels				
Haul Seine	✓			✓
Haul Seine/Beach Seine	✓			
Hook and Line	✓	✓	✓	
Mesh Net	✓			
Net		✓	✓	
Otter Trawl	✓			
Trolling	✓			
Unspecified	✓			✓
Indigenous				
Hook and Line	✓	✓		
Spearfishing	✓			
Traditional apparatus		✓		✓
Recreational				
Beach Seine				✓
Gillnet				✓
Hook and Line	✓	✓	✓	✓
Spearfishing	✓	✓		
Management Methods				
	New South Wales	Queensland	Victoria	Western Australia
Charter				
Bag and possession limits	✓	✓		
Bag limits	✓			
Gear restrictions	✓	✓		
Licence	✓			
Marine park closures	✓			
Size limit	✓	✓		
Spatial closures	✓			
Temporal closures		✓		
Commercial				
Gear restrictions	✓	✓	✓	✓
Limited entry	✓	✓	✓	✓
Marine park closures	✓			

Size limit	✓	✓	✓	✓
Spatial closures	✓		✓	
Spatial zoning	✓			✓
Temporal closures		✓	✓	✓
Total allowable catch		✓		
Total allowable effort				✓
Vessel restrictions	✓	✓		✓
Indigenous				
Bag limits	✓			
Customary fishing permits			✓	
Gear restrictions				✓
Native Title	✓			
Section 37 (1d)(3)(9), Aboriginal cultural fishing authority	✓			
Size limit				✓
Recreational				
Bag and possession limits	✓	✓	✓	
Bag limits	✓		✓	✓
Gear restrictions	✓	✓	✓	
Licence	✓		✓	✓
Limited entry (Charter only)				✓
Marine park closures	✓			
Passenger restrictions (Charter only)				✓
Size limit	✓	✓	✓	✓
Spatial closures	✓		✓	
Spatial zoning (Charter only)				✓
Temporal		✓	✓	✓

closures				
Active Vessels				
	New South Wales	Queensland	Victoria	Western Australia
	198 Fishing Business in EGF, 19 Fishing Business in OHF, 18 Fishing Business in OTF, 88 Fishing Business in OTLF,	97 in ECIFFF,	17 Licence Holders in CIF, 10 Licence Holders in GLF, 2 Licence Holders in OF, 1 Licence Holders in OPSF, 4 Licence Holders in PPBWPF, 3 Licence Holders in ITF,	3 in GDSMF, 6 in SBBSMNMF, 13 in SCEMF, 3 in SWCBNF, 4 in WCDSIMF, 9 in WCEMF, <3 in WL (SC), 3 in Charter, 7 in WL (NC GC WC),

EGF Estuary General Fishery(NSW)

OHF Ocean Hauling Fishery(NSW)

OTF Ocean Trawl Fishery(NSW)

OTLF Ocean Trap and Line Fishery(NSW)

ECIFFF East Coast Inshore Fin Fish Fishery(QLD)

CIF Corner Inlet Fishery(VIC)

GLF Gippsland Lakes Fishery(VIC)

OF Ocean Fishery(VIC)

OPSF Ocean Purse Seine Fishery(VIC)

PPBWPF Port Phillip Bay and Western Port Bay Fishery (VIC)

ITF Inshore Trawl Fishery(VIC)

GDSMF Gascoyne Demersal Scalefish Managed Fishery(WA)

SBBSMNMF Shark Bay Beach Seine and Mesh Net Managed Fishery(WA)

SCEMF South Coast Estuarine Managed Fishery(WA)

SWCBNF South West Coast Beach Net Fishery (Order)(WA)

WCDSIMF West Coast Demersal Scalefish (Interim) Managed Fishery(WA)

WCEMF West Coast Estuarine Managed Fishery(WA)

WL (SC) Open Access in the South Coast(WA)

Charter Tour Operator(WA)

WL (NC || GC || WC) Open Access in the North Coast, Gascoyne Coast and West Coast Bioregions(WA)

Catch				
	New South Wales	Queensland	Victoria	Western Australia
Charter				0.03 t in Tour Operator,
Commercial	10.149t in EGF, 6.378t in N/A, 1.473t in OHF, 1.63t in OTF, 35.546t in OTLF,	59.127t in ECIFFF,	11.8943t in CIF, 58.2903t in GLF,	7.6011t in GDSMF SBBSMNMF SCEMF SWCBNF WCDSIMF WCEMF WL

				(NC, GC, WC) WL (SC),
Indigenous	Unknown	Unknown	Unknown (No catch under permit)	Unknown
Recreational	107 t (2013–14)	75 t (2013–14)	Unknown	3–8 t (in 2015–16 (boat-based only, 95 per cent confidence range)

EGF Estuary General Fishery (NSW), N/A Not Applicable (NSW), OHF Ocean Hauling Fishery (NSW), OTF Ocean Trawl Fishery (NSW), OTLF Ocean Trap and Line Fishery (NSW), ECIFFF East Coast Inshore Fin Fish Fishery (QLD), CIF Corner Inlet Fishery (VIC), GLF Gippsland Lakes Fishery (VIC), OF Ocean Fishery (VIC), OPSF Ocean Purse Seine Fishery (VIC), PPBWPF Port Phillip Bay and Western Port Bay Fishery (VIC), ITF Inshore Trawl Fishery (VIC), GDSMF Gascoyne Demersal Scalefish Managed Fishery (WA), SBBSMNMF Shark Bay Beach Seine and Mesh Net Managed Fishery (WA), SCEMF South Coast Estuarine Managed Fishery (WA), SWCBNF South West Coast Beach Net Fishery (Order) (WA), WCDSIMF West Coast Demersal Scalefish (Interim) Managed Fishery (WA), WCEMF West Coast Estuarine Managed Fishery (WA), WL (SC) Open Access in the South Coast (WA), WL (NC || GC || WC) Open Access in the North Coast, Gascoyne Coast and West Coast Bioregions (WA), GDSMF || SBBSMNMF || SCEMF || SWCBNF || WCDSIMF || WCEMF || WL (NC, GC, WC) || WL (SC) Various Fisheries combined due to 3 boat rule (WA),

Western Australia – Recreational (Catch) Current shore-based recreational catch and effort in Western Australia is unknown. Boat-based recreational catch estimated in 2015–16 [Ryan et al. 2017]

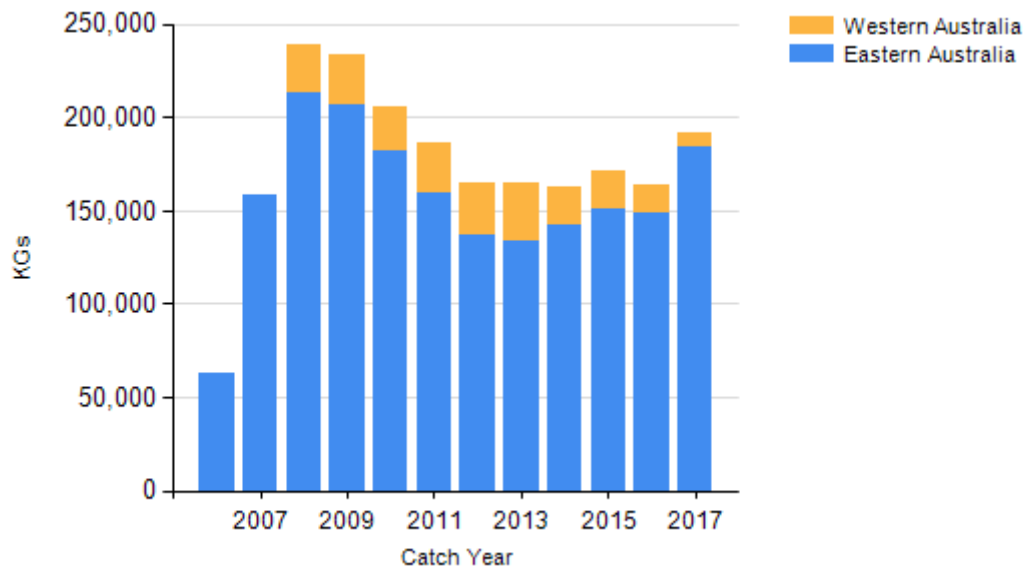
Queensland – Indigenous (Management methods) In Queensland, under the *Fisheries Act 1994* (Qld), Indigenous fishers in Queensland are able to use prescribed traditional and non-commercial fishing apparatus in waters open to fishing. Size and possession limits, and seasonal closures do not apply to Indigenous fishers. Further exemptions to fishery regulations may be applied for through permits.

Victoria – Indigenous (Management methods) In Victoria, regulations for managing recreational fishing may not apply to fishing activities by Indigenous people. Victorian traditional owners may have rights under the Commonwealth's *Native Title Act 1993* to hunt, fish, gather and conduct other cultural activities for their personal, domestic or non-commercial communal needs without the need to obtain a licence. Traditional Owners that have agreements under the *Traditional Owner Settlement Act 2010* (Vic) may also be authorised to fish without the requirement to hold a recreational fishing licence. Outside of these arrangements, Indigenous Victorians can apply for permits under the *Fisheries Act 1995* (Vic) that authorise fishing for specific Indigenous cultural ceremonies or events (for example, different catch and size limits or equipment). There were no Indigenous permits granted in 2017 and hence no Indigenous catch recorded.

New South Wales – Recreational (Catch) West et al. (2015) estimate of approximately 190 000 fish retained by NSW residents with the average weight retained [NSWDPI Unpublished data].

New South Wales – Indigenous (Management methods) (a) The 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 for themselves, (b) 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, and (c) 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 Tailor - note confidential catch not shown

EFFECTS OF FISHING ON THE MARINE ENVIRONMENT

ENVIRONMENTAL EFFECTS on Tailor

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