

# SILVER TREVALLIES (2018)

*Pseudocaranx georgianus*, *Pseudocaranx* sp. "dentex" & *Pseudocaranx wrighti*, *Pseudocaranx dinjerra*



**Ashley Fowler:** Department of Primary Industries, New South Wales, **Rowan Chick:** Department of Primary Industries, New South Wales, **Bradley Moore:** Institute for Marine and Antarctic Studies, University of Tasmania, **David Fairclough:** Department of Primary Industries and Regional Development, Western Australia, **Brent Womersley:** Victorian Fisheries Authority, **Lee Georgeson:** Australian Bureau of Agricultural and Resource Economics and Sciences, **Luke Albury:** Department of Agriculture and Fisheries, Queensland, **Paul Rogers:** South Australian Research and Development Institute

## STOCK STATUS OVERVIEW

Jurisdiction	Stock	Fisheries	Stock status	Indicators
Commonwealth	Commonwealth	SESSF (CTS)	Sustainable	Catch, CPUE
Western Australia	Western Australia	PLF, PLF    SBBSMNMF    SCEMF    WCDSIMF    WL (SC), SBBSMNMF, SCEMF, WCDSIMF, WL (SC)	Sustainable	Catch, CPUE
Queensland	Queensland	CRFFF, CRFFF    ECIFFF    RRFFF, ECIFFF, RRFFF	Undefined	Catch
New South Wales	New South Wales	EGF, N/A, OHF, OTF, OTLF	Depleting	Catch, CPUE, length and age structures
Victoria	Victoria	CIF, GLF, ITF, OF, OPSF, PPBWPF	Sustainable	Catch, effort, CPUE
Tasmania	Tasmania	SF	Sustainable	Catch, effort
South Australia	South Australia	MSF	Sustainable	Catch, effort, CPUE

SESSF (CTS) Southern and Eastern Scalefish and Shark Fishery (Commonwealth Trawl Sector) (CTS), 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), LFR Line Fishery (Reef) (QLD), ECIFFF East Coast Inshore Fin Fish Fishery (QLD), RRFFF Rocky Reef Fin Fish Fishery (QLD), MSF Marine Scalefish Fishery (SA), SF Scalefish Fishery (TAS), 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), PLF Pilbara Line Fishery (WA), SBBSMNMF Shark Bay Beach Seine and Mesh Net Managed Fishery (WA), SCEMF South Coast Estuarine Managed Fishery (WA), WCDSIMF West Coast Demersal Scalefish (Interim) Managed Fishery (WA), WL (SC) Open Access in the South Coast (WA), LFR || ECIFFF || RRRFF Reef Line Fishery, East Coast Inshore Fin Fish Fishery, Rocky Reef Fin Fish Fishery (QLD), PLF || SBBSMNMF || SCEMF || WCDSIMF || WL (SC) Various Fisheries combined due to 3 boat rule (WA)

## STOCK STRUCTURE

Silver Trevallies comprises a complex of species that inhabits estuarine and coastal waters (depths of 10–230 m) throughout southern temperate Australia, from southern Queensland, south through New South Wales, Tasmania, Victoria, South Australia and southern and central Western Australia [Smith-Vaniz and Jelks 2006].

The biological stock structure of Silver Trevallies is uncertain. Fisheries are based on a species complex that varies by region, with *Pseudocaranx georgianus* present in all jurisdictions except Queensland, *P. wrighti* present in all jurisdictions except Queensland and New South Wales, *P. dinjerra* only present in Western Australia, and *P. sp. 'dentex'* only present in Queensland [Smith-Vaniz and Jelks 2006, Gomon et al. 2008]. There have been no investigations of potential genetic structure within these species. Investigations of population connectivity and post-settlement movement are also limited. Despite fast swimming ability, tag-recapture studies in Western Australia, New South Wales and New Zealand indicate restricted post-settlement movement of *P. georgianus*, potentially leading to ecological stock structuring over moderate (hundreds of kilometres) spatial scales [James 1980, Fairclough et al. 2011, Fowler et al. 2018].

Here, assessment of stock status is presented at the jurisdictional level—Commonwealth, Western Australia, Queensland, New South Wales, Victoria, Tasmania and South Australia.

## STOCK STATUS

**Commonwealth** Catch in the Commonwealth Trawl and Scalefish Hook sectors (assumed to be *P. georgianus*) was 55 tonnes (t) in 2017–18. All of the catch in 2017–18 was taken in the trawl sector.

A tier 4 (catch per unit effort [CPUE]) assessment was undertaken in 2017 [Haddon and Sporcic 2017]. The assessment used the reference period 1992–2001 and excluded data from historical catches taken within the Batemans Marine Park. The assessment shows a rapid decline in CPUE from 1990, to be near the limit reference point of 20 per cent of unfished biomass by 2000. The CPUE then increased to 2010, when it was above the target, but has since declined and appears relatively flat and stable between the limit and the target [Haddon and Sporcic 2017]. The assessment produced a one year recommended biological catch (RBC) of 445 t. There is no truncation in port-based or onboard-based catch length frequency data evident in recent Commonwealth catches [Thomson et al. 2016]. Since 1991, when reliable records begin, catches have been well below the RBCs produced by the 2013 and 2017 assessments, and below the recent TACs (which are based on the 2013 assessment). For the 2017–18 fishing season a TAC of 613 t was set.

The above evidence indicates that the stock is unlikely to be depleted and the current level of fishing pressure is unlikely to cause the stock to become recruitment impaired. Despite this evidence, it needs to be acknowledged that the Commonwealth stock may form part of the same biological stock as the New South Wales stock. Given that the New South Wales stock is classified as depleting, based on estimates of total fishing mortality exceeding natural mortality, and the ongoing truncation in age and length classes, the ability to determine status classification for Silver Trevallies in the Commonwealth is increasingly uncertain and may change in future depending on the outcomes of stock structure studies and revised assessments. Currently, in the absence of evidence for the Commonwealth stock to suggest otherwise, Silver Trevallies in the Commonwealth is classified as a sustainable stock.

On the basis of the evidence provided above, Silver Trevallies in the Commonwealth is classified as a **sustainable stock**.

## **New South Wales**

Silver Trevallies (*P. georgianus*) stocks supported historical commercial catches in excess of 1 000 t per year in New South Wales during the 1980s, but the commercial catch has declined steadily since that time to 60 t in 2017; the lowest level in the history of the fishery. Interpreting this decline is complicated by changes in the historical reporting of catch between the state and Commonwealth jurisdictions, as well as management changes within New South Wales that have affected the spatial distribution of effort and fishery reporting through time. Within the state, reduction in the area available to commercial fisheries for Silver Trevallies, through the implementation of recreational fishing havens and marine parks (particularly the Batemans Marine Park), has likely reduced catch and potentially influenced catch rates, thereby creating difficulties in defining useful reference points to assess current stock status. A minimum legal length (MLL) of 300 mm TL was also introduced in late 2007, further impacting the quantity of landed catch and potentially confounding the interpretation of trends in fishery-dependent indicators through time.

Standardised catch rates (kg per day, hereafter 'catch rates') in New South Wales have either declined, or shown no clear trend, depending on the area and fishing method considered. The analysed period (1998–2017) is also characterised by declining effort across the state. Catch rates for fish trawling and fish trapping have declined since the late 1990s to early 2000s in the two ocean areas accounting for the greatest catch. Recent (2015–2017) catch rates for fish trapping in one of these areas have declined to 20 per cent of those achieved during 1998–2001. Declining catch rates for fish trawling in both areas during the most recent reporting year (2016–17) have brought catch rates to their lowest level since the introduction of the MLL in 2007. However, catch rates for fish trawling in other areas have shown no clear trend since the early 1990s, with annual estimates since 2009–10 surrounded by considerable uncertainty. The lack of a suitable reference period from which to evaluate changes in biomass (or a proxy) creates substantial uncertainty and will continue to hinder detection of biomass reductions to levels that might impair recruitment in New South Wales.

While acknowledging difficulties in interpreting the change, retained landings by resident recreational fishers in New South Wales have decreased substantially, with estimated landings declining from approximately 140 000 fish during 2000–01 to around 49 000 individuals during 2013–14 [West et al. 2015]. This corresponds to a decrease in retained catch weight from approximately 100 t during 2000–01 to around 27 t during 2013–14, based on average body weight. Mean catch rate (fish per day) of recreational fishers, not including charter boats, also declined from 0.05 to 0.03 between the two periods [West et al. 2015]. Due to the lack of certainty in defining the level of biomass depletion and despite substantial declines in commercial and recreational catch and CPUE since the late-1990s, the stock is not yet considered to be recruitment impaired, although caution must be applied to this outcome. This conclusion is also driven by a lack of certainty regarding stock boundaries, with some component of the stock likely shared with the neighbouring Commonwealth jurisdiction, which classified the resource as 'sustainable' given available evidence from that area.

Observer studies and monitoring of landed catches have shown that the length of Silver Trevallies captured by the OTF declined substantially between the periods 1987–90, 1993–95 and 1997–99 [Liggins 1996, Rowling and Raines 2000]. The proportion of larger-sized Silver Trevallies landed by New South Wales fisheries has continued to decline since 2007, when the MLL was introduced [Stewart et al. 2015].

As a result of declines in catch and proportion of larger fish, Silver Trevallies

were last assessed as being growth overfished in New South Wales, with yield from the stock being limited by harvesting them at too small a length and at an excessive rate [Stewart et al. 2015]. The only age-based assessment of the Silver Trevallies stock indicated that total mortality increased substantially between 1987–90 and 1997–99 [Rowling and Raines 2000]. These analyses estimated that fishing mortality was greater than natural mortality by the 1997–99 period and that the fishery exhibited age class truncation. Given the ongoing length truncation observed in the fishery, it is likely that the total mortality rate and degree of age class truncation have persisted. Due to the MLL in New South Wales waters, discarding in the OTF is substantial and may exceed 50 per cent at times, based on number of individuals [NSW DPI, unpublished data]. Discard mortality of Silver Trevallies taken by trawling is likely to be substantial and possible mortality from discarding remains a concern to the status of the stock. Some protection to the Silver Trevallies stock is afforded by marine parks in eastern Australia, but total fishing mortality is still likely higher than natural mortality. The above evidence indicates that the current level of fishing mortality is likely to cause the stock to become recruitment impaired.

On the basis of the evidence provided above, Silver Trevallies in New South Wales is classified as a **depleting stock**.

**Queensland** Catch and effort data for Silver Trevallies (*P. sp. 'dentex'*) in Queensland are poor. Commercial and charter catches of Silver Trevallies are not reported specifically, and the species is included as part of a broader 'Trevally-  
unspecified' category. Although species identification may be uncertain, Silver Trevallies is reported specifically in recreational fishing surveys and in 2013–14 approximately 2000 fish were landed [Webley et al. 2015]. It is unlikely that the combined commercial and recreational catches exceeded 10 t in 2017. Silver Trevallies are not subject to size restrictions, although a combined recreational possession limit of 20 applies to members of the Carangidae family. There is insufficient information available to confidently classify the status of the stock.

On the basis of the evidence provided above, Silver Trevallies in Queensland is classified as an **undefined stock**.

**South Australia** In South Australia, Silver Trevallies (*P. georgianus*) is considered a tertiary species within South Australia's commercial multispecies, multi-gear and multi-sectoral Marine Scalefish Fishery. It is also taken in the charter [Rogers et al. 2017], and recreational [Giri and Hall 2015] sectors of South Australian State-managed fisheries. The primary measures for biomass and fishing mortality are commercial catch, effort and handline CPUE; the most recent assessment was for the period to December 2017 [Steer et al. 2018].

Historical annual commercial catches of Silver Trevallies in South Australia have been highly variable, ranging from 2.1 t in 1985 to 21 t in 2000 [Steer et al. 2018]. Recent commercial catches have been at moderate levels, with an average annual catch of 9.8 t over the past 10 years, and 10.5 t landed in 2017. Catch rate for the commercial sector has been stable, at moderate levels since the early 2000s. Handline CPUE was 15.1 kg.fisher day<sup>-1</sup> in 2017, which was the highest catch rate since 2010. The state-wide recreational catch was estimated at approximately 14.57 t in 2013–14 [Giri and Hall 2015]. There is no information available on the catch of Silver Trevallies by Aboriginal and Torres Strait Islander people in South Australian waters. 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 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 presented above, Silver Trevallies in South

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

### Tasmania

In Tasmanian waters, Silver Trevallies is a byproduct species of the Tasmanian Scalefish Fishery, caught predominately using gillnet and beach seine gears. Historical commercial catches have been low, with an average annual landed catch of 3.6 t over the past five years, and 3.2 t landed in 2016–17. These catch estimates are slightly lower than recent estimates of Maximum Sustainable Yield (MSY) based on catch-only estimation methods [Haddon and Punt 2018], which, based on commercial catch data for the period 1990–91 to 2016–17, estimate in State waters to be just over 6 t. Effort has fluctuated through time as the species is not actively targeted, so catch rates are not considered to provide a reliable index of relative abundance. Estimated recreational catch using line and gillnet methods was also low at 1.9 t in 2012–13 [Lyle et al. 2014]. Given the low levels of commercial and recreational catch and effort in Tasmania, the biomass of this stock is unlikely to be depleted and recruitment is unlikely to be impaired. Furthermore, 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, Silver Trevallies in Tasmania is classified as a **sustainable stock**.

### Victoria

In Victoria, haul seines predominantly accounted for 99 per cent of Silver Trevallies caught in the Gippsland Lakes Fishery (GLF), 78 per cent in the Corner Inlet Fishery (CIF) and 99 per cent in the Port Phillip Bay and Western Port Fishery (PPBWPF) [Conron 2016a, Conron 2016b]. They were also caught by trawl in the Ocean Fishery (OF). Since 2000, total commercial catch ranged from 22 t to 84 t. During 2017, 55 t was landed with 58 per cent and 23 per cent taken from CIF and GLF respectively.

For the CIF, Silver Trevallies catch declined from 46 t in 2001 to 13 t in 2015 and then increased to 32.4 t in 2017. Average catch rates using haul seine are highly variable [Conron et al 2016b] ranging from around 5–22 kg per shot (individual haul) with catch rates showing an increasing trend since 2015 [VFA unpublished data]. Catch rate in 2017 was 12.8 kg per shot which is above the long-term average catch [VFA unpublished data]. For the GLF, Silver Trevallies catch declined from 29 t in 2005 to 3.6 t in 2014. Catch in 2017 was 12.8 t which was more than twice the catch attained in the previous five years [VFA unpublished data]. Catch rates have historically been highly variable but in recent years have declined from 93 kg per shot (2005) to a historic low of 4.9 kg per shot (2008); however, catch rates have increased to 58 kg per shot in 2017 [VFA unpublished data]. Commercial netting is being phased out in Port Phillip Bay. Since 2016, 34 of the 43 licenses have been bought out by the Victorian government. This has significantly reduced commercial effort for Silver Trevallies. Commercial catch of 6.4 t in 2016 was reduced to 2.5 t in 2017 in Port Phillip Bay and Western Port. Commercial net fishing in Port Phillip Bay will cease by 2022 and has already ceased in Corio Bay.

Silver Trevallies are also a target species for recreational fishers in Victoria, where they are commonly taken from the shore and from boats; however, there are no estimates of the current recreational catch [Conron et al 2016a].

On the basis of the evidence provided above, Silver Trevallies in Victoria is classified as a **sustainable stock**.

### Western Australia

Commercial catches of Silver Trevallies (likely to be mostly *P. georgianus*) in Western Australia have remained low (2–12 t) between 2008 and 2017 and

catch rates have remained steady at 1–2 kg per fishing day. Most of the catch is landed as byproduct by commercial line fisheries, including the West Coast Demersal Scalefish (Interim) Managed Fishery and open access fishing in the South Coast Bioregion (east of longitude 115°30'E), which focus effort on other demersal species, such as West Australian Dhufish and Snapper. Management regulation of effort in the former fishery limits fishing pressure and catches of Silver Trevallies (along with state-wide recreational regulations such as a minimum legal length and bag limit) [Gaughan and Santoro, 2018]. The open access fishery on the south coast is undergoing review to progress it to formal management.

Recreational sector (private boat-based recreational fishers and tour operators) retained catches of Silver Trevallies in Western Australia decreased from ~35 t in 2011–12 to ~19 t and 18 t in 2013–14 and 2015–16, reflecting an overall decrease in effort [Ryan et al. 2017]. The majority of the catch of Silver Trevallies (86 per cent in 2015–16) is taken by boat-based fishers in the West Coast Bioregion (WCB), who primarily target demersal species like West Australian Dhufish and Snapper. Such demersal species are currently in recovery, after revision of management regulations between 2008 and 2010, which limit effort and thus catch of species typically caught on boats, possibly including Silver Trevallies [Fairclough et al. 2018]. The above evidence indicates that the biomass of this stock is unlikely to be depleted and that recruitment is unlikely to be impaired. In addition, 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, Silver Trevallies in Western Australia is classified as a **sustainable stock**.

## BIOLOGY

**Silver Trevallies biology** [Rowling and Raines 2000]

Species	Longevity / Maximum Size	Maturity (50 per cent)
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## DISTRIBUTION



Distribution of reported commercial catch of Silver Trevallies

TABLES

Commercial Catch Methods	Commonwealth	New South Wales	Queensland	South Australia	Tasmania	Victoria	Western Australia
Beach Seine							✓
Danish Seine	✓						
Demersal Longline				✓			
Demersal Pair Trawl	✓						
Dropline							✓
Fish Trap		✓					✓
Gillnet				✓	✓		✓
Hand Line, Hand Reel or Powered Reels							✓
Haul Seine		✓			✓		✓
Haul Seine/Beach Seine		✓					
Hook and Line		✓	✓	✓		✓	✓
Longline (Unspecified)							✓
Mesh Net		✓			✓		
Midwater Trawl	✓						
Net			✓			✓	✓
Otter Trawl	✓	✓					
Seine Nets				✓			
Traps and Pots						✓	
Trolling							✓
Unspecified		✓		✓	✓	✓	✓

Fishing methods	Commonwealth	New South Wales	Queensland	South Australia	Tasmania	Victoria	Western Australia
<b>Charter</b>							
Hook and Line		✓		✓			✓
Spearfishing							✓
<b>Commercial</b>							
Beach Seine							✓
Danish Seine	✓						
Demersal Longline				✓			
Dropline							✓
Fish Trap		✓					
Gillnet				✓	✓		✓

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Hand Line, Hand Reel or Powered Reels							✓
Haul Seine		✓					
Hook and Line		✓	✓	✓		✓	✓
Mesh Net		✓					
Net			✓			✓	
Otter Trawl	✓	✓					
Seine Nets				✓			
Trolling							✓
Unspecified		✓		✓	✓		✓
<b>Indigenous</b>							
Beach Seine					✓		
Gillnet					✓		
Hook and Line		✓	✓	✓	✓		
Spearfishing		✓					
<b>Recreational</b>							
Beach Seine					✓		
Gillnet					✓		
Hook and Line		✓	✓	✓	✓	✓	✓
Spearfishing		✓					✓
<b>Management Methods</b>							
	<b>Commonwealth</b>	<b>New South Wales</b>	<b>Queensland</b>	<b>South Australia</b>	<b>Tasmania</b>	<b>Victoria</b>	<b>Western Australia</b>
<b>Charter</b>							
Bag limits				✓			✓
Fishing gear and method restrictions				✓			
Licence				✓			✓
Limited entry				✓			
Marine park closures							✓
Passenger restrictions		✓					✓
Possession limit			✓				✓
Size limit				✓			✓
Spatial closures			✓				
Spatial zoning							✓
<b>Commercial</b>							
Fishing gear	✓	✓	✓		✓	✓	✓



STATUS OF AUSTRALIAN FISH STOCKS REPORT  
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<b>and method restrictions</b>							
<b>Gear restrictions</b>				✓			
<b>Limited entry</b>	✓	✓	✓	✓	✓	✓	✓
<b>Size limit</b>		✓		✓	✓	✓	✓
<b>Spatial closures</b>	✓	✓	✓			✓	✓
<b>Spatial restrictions</b>				✓			
<b>Total allowable catch</b>	✓						
<b>Indigenous</b>							
<b>Bag limits</b>		✓		✓	✓		✓
<b>Customary fishing permits</b>						✓	
<b>Fishing gear and method restrictions</b>				✓			
<b>Native Title</b>		✓					
<b>Possession limit</b>					✓		✓
<b>Section 37 (1d)(3)(9), Aboriginal cultural fishing authority</b>		✓					
<b>Size limit</b>				✓	✓		✓
<b>Recreational</b>							
<b>Bag limits</b>		✓		✓	✓	✓	✓
<b>Fishing gear and method restrictions</b>				✓			
<b>Licence</b>		✓			✓	✓	
<b>Licence (boat-based sector)</b>							✓
<b>Marine park closures</b>							✓
<b>Possession limit</b>		✓	✓		✓	✓	✓
<b>Size limit</b>		✓		✓	✓	✓	✓
<b>Spatial closures</b>		✓	✓			✓	
<b>Active Vessels</b>							

STATUS OF AUSTRALIAN FISH STOCKS REPORT  
SILVER TREVALLIES (2018)

	Commonwealth	New South Wales	Queensland	South Australia	Tasmania	Victoria	Western Australia
	26 Vessels in SESSF (CTS),	106 Fishing Business in EGF, 15 Fishing Business in OHF, 24 Fishing Business in OTF, 108 Fishing Business in OTLF,	0 in GOCDFFTF, 0 in GOCIFFF, 1 in GOCLF, 129 in CRFFF    ECIFFF    RRFFF,	63 in MSF,	15 Vessels in SF,	17 Licence Holders in CIF, 10 Licence Holders in GLF, 7 Licence Holders in OF, 1 Licence Holders in OPSF, 5 Licence Holders in PPBWPF, 6 Licence Holders in ITF,	&lt;3 in PLF, &lt;3 in SBBSMNMF, 9 in SCEMF, 12 in WCDSIMF, 9 in WL (SC), 31 in Charter,

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

**EGF** Estuary General Fishery(NSW)

**OHF** Ocean Hauling Fishery(NSW)

**OTF** Ocean Trawl Fishery(NSW)

**OTLF** Ocean Trap and Line Fishery(NSW)

**GOCDFFTF** Gulf of Carpentaria Developmental Fin Fish Trawl Fishery(QLD)

**GOCIFFF** Gulf of Carpentaria Inshore Fin Fish Fishery(QLD)

**GOCLF** Gulf of Carpentaria Line Fishery (QLD)

**MSF** Marine Scalefish Fishery(SA)

**SF** Scalefish Fishery(TAS)

**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)

**PLF** Pilbara Line Fishery(WA)

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

**SCEMF** South Coast Estuarine Managed Fishery(WA)

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

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

**Charter** Tour Operator(WA)

**LFR || ECIFFF || RRFFF** Reef Line Fishery, East Coast Inshore Fin Fish Fishery, Rocky Reef Fin Fish Fishery(QLD)

Catch	Commonwealth	New South Wales	Queensland	South Australia	Tasmania	Victoria	Western Australia
<b>Charter</b>				Unknown			1t

STATUS OF AUSTRALIAN FISH STOCKS REPORT  
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<b>Commercial</b>	51.7538t in SESSF (CTS),	4.618t in EGF, 7.645t in N/A, 0.291t in OHF, 34.99t in OTF, 12.315t in OTLF,		21t in MSF,	3.24802t in SF,	32.435t in CIF, 12.816t in GLF, 0.1147t in ITF, 7.147t in OF, 2.5301t in PPBWPF,	2.3225t in PLF    SBBSMNMF    SCEMF    WCDSIMF    WL (SC),
<b>Indigenous</b>	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown (No catch under permit)	Unknown
<b>Recreational</b>	Unknown	27 t (2013–14)	~2 t	14.57 t (in 2013–14)	1.9 t (in 2012–13)	37 t (2003)	17 t (± 2 se) (in 2015–16)

SESSF (CTS) Southern and Eastern Scalefish and Shark Fishery (Commonwealth Trawl Sector) (CTH), 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), LFR Line Fishery (Reef) (QLD), ECIFFF East Coast Inshore Fin Fish Fishery (QLD), RRFFF Rocky Reef Fin Fish Fishery (QLD), MSF Marine Scalefish Fishery (SA), SF Scalefish Fishery (TAS), 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), PLF Pilbara Line Fishery (WA), SBBSMNMF Shark Bay Beach Seine and Mesh Net Managed Fishery (WA), SCEMF South Coast Estuarine Managed Fishery (WA), WCDSIMF West Coast Demersal Scalefish (Interim) Managed Fishery (WA), WL (SC) Open Access in the South Coast (WA), LFR || ECIFFF || RRFFF Reef Line Fishery, East Coast Inshore Fin Fish Fishery, Rocky Reef Fin Fish Fishery (QLD), PLF || SBBSMNMF || SCEMF || WCDSIMF || WL (SC) Various Fisheries combined due to 3 boat rule (WA),

**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. **Western Australia – Recreational**

**(management methods)** In Western Australia, a licence is required to recreationally fish from a powered vessel.

**Western Australia – Recreational (Catch)** Shore based catches are unknown, thus landings would be underestimated.

**Queensland – Indigenous (management methods)** In Queensland, under the *Fisheries Act 1994* (Qld), Indigenous fishers 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.

**New South Wales – Indigenous** (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 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.

#### Victoria – Indigenous

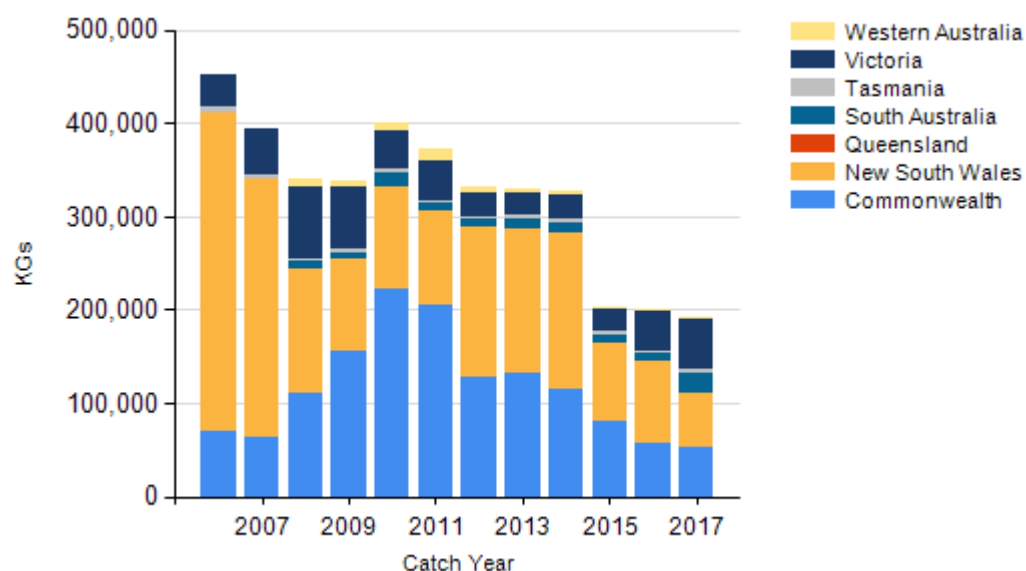
In Victoria, regulations for managing recreational fishing may not apply to fishing activities by Indigenous people. Victorian traditional owners may have rights under the *Commonwealth's Native Title Act 1993* to hunt, fish, gather and conduct other cultural activities for their personal, domestic or 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.

**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. The species is subject to a minimum size of 20 cm in Tasmanian waters. A bag limit of 10 individuals and a possession limit of 20 individuals is in place for recreational fishers.

**Tasmania – Indigenous (management methods)** In Tasmania, Indigenous persons 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, Indigenous fishers must obtain a unique identifying code (UIC). The policy document Recognition of Aboriginal Fishing Activities for issuing a 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 Silver Trevallies - note confidential catch not shown

## EFFECTS OF FISHING ON THE MARINE ENVIRONMENT

### ENVIRONMENTAL EFFECTS on SILVER TREVALLIES

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