Western Australian Salmon (2020)

Arripis truttaceus

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STOCK STATUS OVERVIEW

Jurisdiction	Stock	Stock status	Indicators
Western Australia, Victoria, South Australia	Western Australia	Sustainable	Catch, CPUE, Age composition

STOCK STRUCTURE

The Western Australian Salmon biological stock is distributed from Kalbarri in Western Australia southwards to South Australia, Victoria and the west coast of Tasmania. The species spawns in Western Australia and eggs and larvae are dispersed by the Leeuwin Current. The fish then grow and mature in eastern waters before moving back towards their spawning areas in the west.

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

STOCK STATUS

Western Australia

This cross-jurisdictional biological stock has components in Western Australia, South Australia and Victoria. The status presented here for the entire biological stock has been established using evidence from all jurisdictions.

Historically, the majority of commercial landings of this species were taken in Western Australia. In Western Australia, the commercial catch from the 1940s until the mid-2000s followed a stable trend, averaging 2 000 tonnes (t) per year (range 1 000–4 000 t per year). In the late 2000s, catch and effort declined sharply, as a result of weak market demand and low wholesale prices. Annual commercial catches in Western Australia since 2010 have been less than 400 t per year, reflecting the ongoing low level of targeting. The recreational catch is believed to be lower than the commercial catch, although the current catch level is uncertain due to lack of information about shore-based recreational fishing.

In South Australia, the commercial fishery has predominantly used hauling nets with some fishers using purse seine nets. From 1983–84 to 2002–03, annual commercial catches fluctuated around 550 t per year, with the higher proportion

taken with purse seine nets [Steer et al. 2020]. From 2003–04 to 2013–14, catches declined as several key purse seiners exited the fishery and targeting in the general haul net sector remained low. Catches again increased during 2014–15 to 2017–18 as purse seine activity was reactivated, suggesting new and emerging markets for this species [Steer et al. 2020]. However, in 2018–19, total catch declined to 122 t, reflecting declines in targeting for both major gear types. Catch rates for both major gear types have been characteristically variable, with those of the purse seiners generally considerably higher. In particular, purse-seine catch rates over recent years are among the highest recorded [Steer et al. 2020]. Western Australian Salmon is an iconic recreational fishery species in South Australia. The state-wide recreational survey in 2013–14 estimated that 220 332 Salmon were captured, of which 148 361 fish were harvested [Giri and Hall 2015]. The estimated total recreational harvest weight was 56 t, which was approximately 48 per cent of the state's total catch in 2013–14.

Insufficient data are available from Victorian commercial or recreational fisheries to assess the status of the Western Australian Salmon stock. The Western Australian Salmon stock is subject to very low exploitation by commercial fisheries in Victoria. The species is not a common target in the major Victorian bay and inlet fisheries; for example, "Salmon" were listed as the primary target species by only 0.38% of recreational fishers interviewed in creel surveys in Port Phillip Bay [Conron et al. 2020]. Western Australian Salmon are targeted in small-scale recreational fisheries elsewhere (e.g. in estuaries and along the coast), however these catches are likely small within the context of the species' wide ranging behaviour and ability to use a diverse range of habitats [Conron et al. 2020].

The breeding component of this stock resides exclusively in Western Australia, with only immature/nonbreeding fish occurring in South Australia and Victoria [Cappo et al. 2000]. The most recent assessment is based on catch and catch rate data from each jurisdiction and (2012–15) age composition data from Western Australia. Analyses based on catch curves, a per recruit model, an equilibrium age structured model and a stock reduction model (*Catch-MSY*) indicate that the current rate of fishing mortality (F = 0.25–28 y[-1]) in Western Australia is relatively low (less than natural mortality, M = 0.40 y[-1]) and biomass is well above the limit level of 20 per cent, and likely to be around the target level of 40 per cent [Wise and Molony 2018].

The above evidence indicates that the biomass of this stock is unlikely to be depleted, recruitment is unlikely to be impaired, and the current level of fishing mortality in each jurisdiction is unlikely to cause the stock to become recruitment impaired.

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

BIOLOGY

Smith et al [2016]

Species	Longevity / Maximum Size	Maturity (50 per cent)
Western Australian Salmon	12 years, 960mm TL	3–5 years, 550 mm TL

DISTRIBUTION

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TABLES

Fishing methods			
	South Australia	Victoria	Western Australia
Charter			
Rod and reel	✓		✓
Commercial			
Beach Seine			✓
Gillnet	✓		✓
Haul Seine			✓
Hook and Line		✓	
Net		✓	
Purse Seine	✓		
Seine Nets	✓		
Trolling			✓
Unspecified	✓		
Recreational			
Hook and Line		✓	
Rod and reel	✓		✓

Management Methods			
	South Australia	Victoria	Western Australia
Commercial			
Area restrictions		✓	

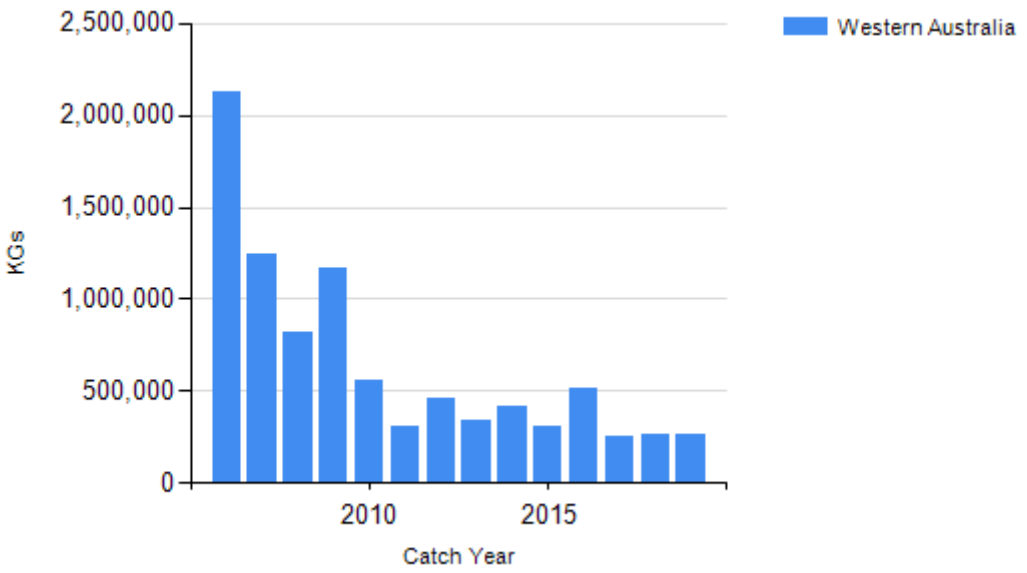
Catch limits	✓		
Gear restrictions	✓	✓	✓
Limited entry	✓	✓	✓
Size limit	✓		
Spatial zoning			✓
Recreational			
Bag limits	✓		✓
Gear restrictions	✓		
Licence (Recreational Fishing from Boat License)			✓
Possession limit			✓
Size limit	✓		✓

Catch			
	South Australia	**Victoria**	**Western Australia**
Charter		Unknown	Negligible
Commercial	57.5457 t	0.384 t	207.98 t
Indigenous	Unknown		
Recreational	61 t (in 2013–14)	Unknown	7 t (2017–18)

LCF Lakes and Coorong Fishery (SA), MSF Marine Scalefish Fishery (SA), OF Ocean Fishery (VIC), PPBWPF Port Phillip Bay and Western Port Bay Fishery (VIC), SCEMF South Coast Estuarine Managed Fishery (WA), SCSMF South Coast Salmon Managed Fishery (WA), SWCBNF South West Coast Beach Net Fishery (Order) (WA), SWCSMF South West Coast Salmon Managed Fishery (WA), WCEMF West Coast Estuarine Managed Fishery (WA), WL (NC, GC, WC) Open Access in the North Coast, Gascoyne Coast and West Coast Bioregions (WA), WL (SC) Open Access in the South Coast Bioregion (WA), SCEMF || SCSMF || SWCBNF || SWCSMF || WCEMF || WL (NC, GC, WC) || WL (SC) Various Fisheries combined due to 3 boat rule (WA).

Victoria – Indigenous (Management Methods) A person who identifies as Aboriginal or Torres Strait Islander is exempt from the need to obtain a Victorian recreational fishing licence, provided they comply with all other rules that apply to recreational fishers, including rules on equipment, catch limits, size limits and restricted areas. Traditional (non-commercial) fishing activities that are carried out by members of a traditional owner group entity under an agreement pursuant to Victoria's *Traditional Owner Settlement Act 2010* are also exempt from the need to hold a recreational fishing licence, subject to any conditions outlined in the agreement. Native title holders are also exempt from the need to obtain a recreational fishing licence under the provisions of the Commonwealth's *Native Title Act 1993*.

CATCH CHART



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