

Southern Rock Lobster (2016)

Jasus edwardsii



Adrian Linnane: South Australian Research and Development Institute, **Caleb Gardner:** Institute for Marine and Antarctic Studies, University of Tasmania, **David Reilly:** Department of Economic Development, Jobs, Transport and Resources, Victoria, **Jason How:** Department of Fisheries, Western Australia

STOCK STATUS OVERVIEW

Jurisdiction	Stock	Fisheries	Stock status	Indicators
Western Australia, Victoria, Tasmania, South Australia	Southern Australia	ESRLF, SASRLF, SCCMF, TRLF, VRLF, WHRLF, SRLF	Sustainable	Percentage of egg production relative to unfished level

SASRLF South Australian Southern Rock Lobster Fishery (SA), TRLF Tasmanian Rock Lobster Fishery (TAS), VRLF Victorian Rock Lobster Fishery (VIC), ESRLF Esperance Southern Rock Lobster Fishery (WA), SCCMF South Coast Crustacean Managed Fishery (WA), WHRLF, SRLF Windy Harbour Rock Lobster Fishery, Southern Rock Lobster Fishery (WA)

STOCK STRUCTURE

Southern Rock Lobster is considered to be a single biological stock across southern Australia because the species occurs in a continuous distribution across this range and has extensive and protracted pelagic larval dispersal phase. The pelagic phyllosoma larval phase lasts around 12–18 months. Larval release occurs across the southern continental shelf, which is a high-current area, facilitating dispersal. Oceanographic modelling has also indicated that Southern Rock Lobster dispersal occurs over large spatial scales, indicating that there is a single biological stock. Genetic analyses also indicate that it is a single stock[2].

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

STOCK STATUS

Southern Australia The stock status determination for Southern Rock Lobster is based on estimates of egg production from a combined stock assessment model[3] for South Australia, Victoria and Tasmania. A limit reference point for egg production is applied, which is 20 per cent of the unfished level. The most recent assessments for each jurisdiction estimate that combined egg production in 2014–15 was 21 per cent of the unfished level[4–7]. The above evidence indicates that the

biomass of this stock is unlikely to be recruitment overfished.

Based on stock assessment results, total allowable commercial catches (TACCs) have been reduced across south-eastern Australia over the past decade to reduce fishing mortality to levels predicted to result in increases in biomass and catch rates. The above evidence indicates that the current level of fishing pressure is unlikely to cause the stock to become recruitment overfished.

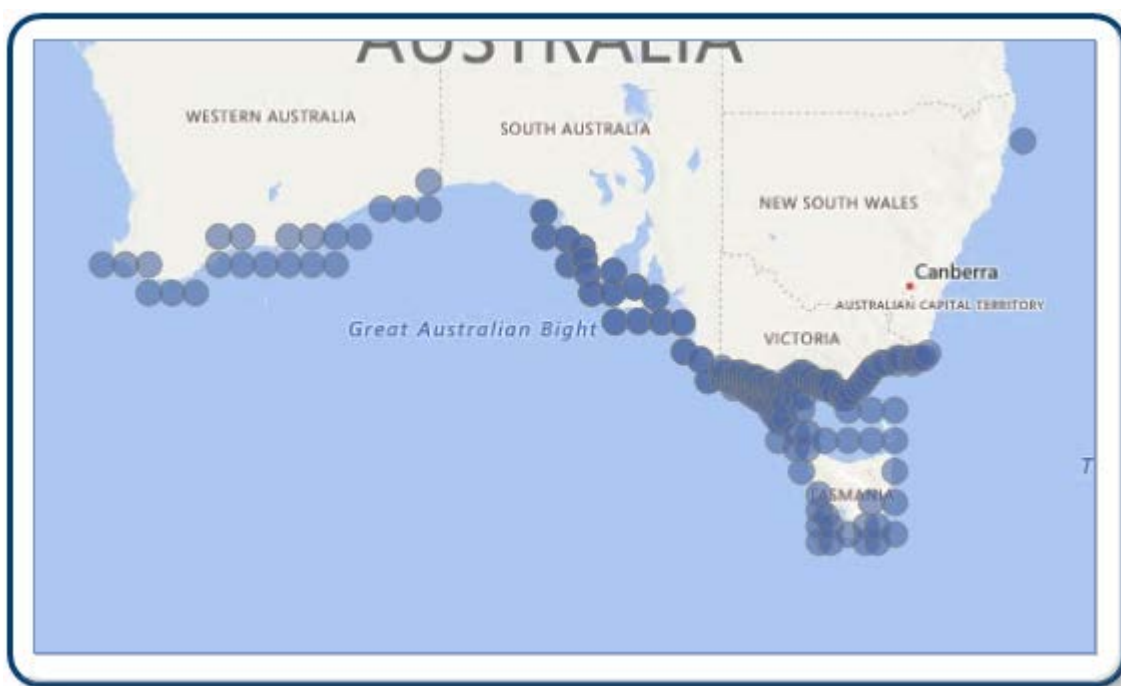
On the basis of the evidence provided above, the Southern Australian biological stock is classified as a **sustainable stock**.

BIOLOGY

Southern Rock Lobster biology[8–10]

Species	Longevity / Maximum Size	Maturity (50 per cent)
Southern Rock Lobster	20+ years; >200 mm <u>CL</u>	59–122 mm <u>CL</u> ; depending on region

DISTRIBUTION



Distribution of reported commercial catch of Southern Rock Lobster

TABLES

Commercial Catch Methods	South Australia	Tasmania	Victoria	Western Australia
Rock Lobster And Crayfish Traps And Pots	✓	✓		
Various			✓	✓
Fishing methods				

	South Australia	Tasmania	Victoria	Western Australia
Commercial				
Rock Lobster And Crayfish Traps And Pots	✓	✓		
Various			✓	✓
Indigenous				
Coastal, Estuary and River Set Nets	✓	✓		
Diving		✓		✓
Rock Lobster And Crayfish Traps And Pots	✓	✓		✓
Recreational				
Coastal, Estuary and River Set Nets	✓	✓	✓	
Diving	✓	✓	✓	✓
Rock Lobster And Crayfish Traps And Pots	✓	✓		✓
Management Methods				
	South Australia	Tasmania	Victoria	Western Australia
Commercial				
Gear restrictions	✓	✓	✓	✓
Limited entry	✓	✓	✓	✓
Size limit	✓	✓	✓	✓
Spatial closures	✓	✓	✓	
Temporal closures	✓	✓	✓	✓
Total allowable catch	✓	✓	✓	
Indigenous				
Bag limits	✓	✓		✓
Size limit	✓	✓		✓

Recreational				
Bag limits	✓	✓	✓	✓
Gear restrictions	✓	✓	✓	✓
Size limit	✓	✓	✓	✓
Spatial closures	✓	✓	✓	
Temporal closures	✓	✓	✓	✓

Active Vessels	South Australia	Tasmania	Victoria	Western Australia
	203 Vessel in SASRLF,	209 Quota in TRLF,	70 Vessel in VRLF,	28 Vessel in WASCCF,

SASRLF South Australian Southern Rock Lobster Fishery(SA)

TRLF Tasmanian Rock Lobster Fishery(TAS)

VRLF Victorian Rock Lobster Fishery(VIC)

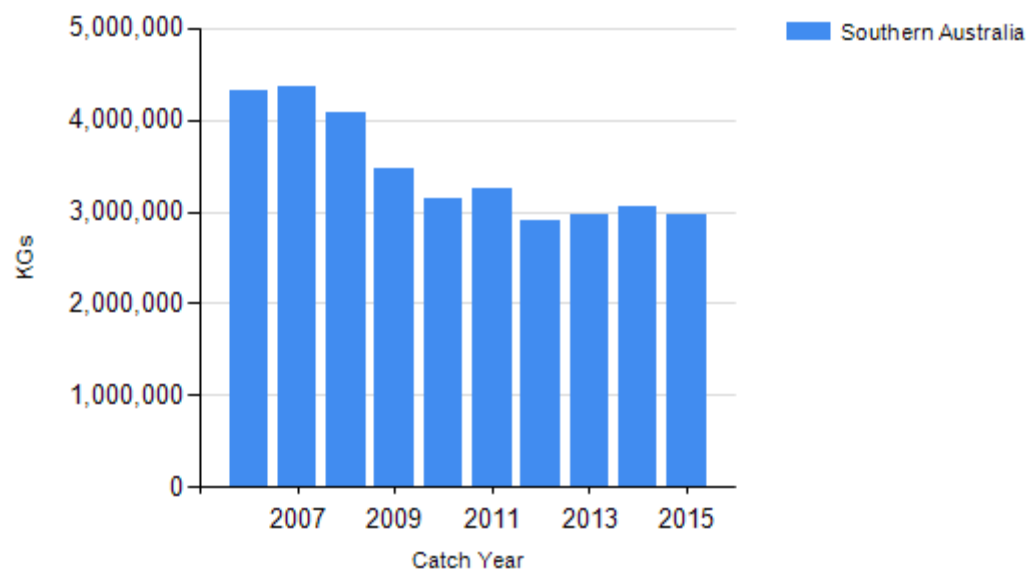
WASCCF Western Australian South Coast Crustacean Fisheries(WA)

Catch	South Australia	Tasmania	Victoria	Western Australia
Commercial	1564.97t in SASRLF,	1071.22t in TRLF,	281t in VRLF,	24.632t in ESRLF, 7.201t in SCCMF, 13.083t in WHRLF,SRLF,
Indigenous	Unknown	Negligible	Unknown	Unknown
Recreational	Unknown	Unknown	Unknown	<5t

SASRLF South Australian Southern Rock Lobster Fishery (SA), TRLF Tasmanian Rock Lobster Fishery (TAS), VRLF Victorian Rock Lobster Fishery (VIC), ESRLF Esperance Southern Rock Lobster Fishery (WA), SCCMF South Coast Crustacean Managed Fishery (WA), WHRLF,SRLF Windy Harbour Rock Lobster Fishery, Southern Rock Lobster Fishery (WA),

a Victoria – Indigenous 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 2014–15, there were no applications for customary fishing permits to access Southern Rock Lobster.**b Indigenous (management methods)** Subject to the defence that applies under Section 211 of the Native Title Act 1993 (Cth), and the exemption from a requirement to hold a recreational fishing licence, the non-commercial take by indigenous fishers is covered by the same arrangements as that for recreational fishing

CATCH CHART



Commercial catch of Southern Rock Lobster - note confidential catch not shown

EFFECTS OF FISHING ON THE MARINE ENVIRONMENT

- In South Australia, concern has been expressed about potential interactions with Australian Sea Lions (*Neophoca cinerea*) in the fishery, specifically the risk of juvenile pups entering pots[11]. Sea lion excluder devices are now mandatory in pots in areas where interactions are likely to occur, such as the Northern Zone fishery of South Australia.
- Whale entanglements are recognised as a management issue by the Victorian Southern Rock Lobster fishery management plan[12]. The fishery management plan responded with a fishery code of practice to prevent and respond to whale entanglements.
- The biomass of Southern Rock Lobster is being rebuilt off eastern Tasmania using a regional limit on catch from recreational and commercial fishers combined. This is intended to assist rock lobsters maintain their ecosystem role including through predation of urchins[13]. Long Spined Urchins (*Centrostephanus* spp.) have extended their range southwards from New South Wales and can create barren patches of reef through overgrazing. Rebuilding of the Southern Rock Lobster biological stock may reduce barren formation.
- Habitat impacts of gear have been researched and assessed as negligible risk[14].

ENVIRONMENTAL EFFECTS on Southern Rock Lobster

- The potential impact of climate change on recruitment, growth and mortality has been identified as a risk across the range of the species[15]. The wide distribution of the species provides resilience to climate change as environmental factors important to settlement of juveniles, such as current strength or temperature are not consistent from region to region[16].
- Recruitment, catchability and growth can vary substantially from year to year as a result of environmental changes, including changes in water temperature and movement of oceanic currents[17]. Below-average recruitment is not necessarily associated with low egg production—it can also result from unusual oceanographic patterns, which can affect larval survival, development and growth.

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