

# Eastern King Prawn (2020)

*Melicertus plebejus*



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## STOCK STATUS OVERVIEW

Jurisdiction	Stock	Stock status	Indicators
Queensland, New South Wales	Eastern Australia	Sustainable	Biomass; catch, effort and CPUE relative to MSY reference points

## STOCK STRUCTURE

Eastern King Prawn (*Melicertus plebejus*) is endemic to Australia. It occurs on the eastern Australian coast between Hayman Island in Queensland and north-eastern Tasmania (20–42°S) and exhibits strong stock connectivity throughout its range [Montgomery 1990]. Undertaking northward migrations into deeper water as they grow, Eastern King Prawn utilise the East Australian Current to disperse larvae southward after spawning in offshore areas [Montgomery 1990]. Eastern King Prawn are harvested in Queensland and New South Wales fisheries and are considered a single multi-jurisdictional biological stock [Courtney et al. 2014, Montgomery 1990]. There are two contiguous management units for the stock: one from 22–28°S in Queensland, and another along the whole New South Wales coast (28–37.5°S). A comprehensive stock assessment of the Eastern Australia biological stock was completed in 2014 [Courtney et al. 2014, O'Neill et al. 2014].

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

## STOCK STATUS

**Eastern Australia** The most recent assessment [Helidoniotis 2020] estimated that the spawning biomass of Eastern King Prawn in 2019 was 62 per cent of the unfished 1958 levels. Maximum sustainable yield (MSY) was estimated at 2 423 tonnes (t). The stock is not considered to be recruitment impaired.

The stock assessment estimated effort at maximum sustainable yield (EMSY), standardised to the number of boat-days in the 2019 fishing year, to be 27 242 boat days/year [Helidoniotis 2020] which is similar to 2010 estimate [O'Neill et al. 2014]. Standardised fishing effort was below this level in 2019 at 15 940 days. The observed decline in effort since 2000 has been offset by increases in fishing power [Braccini et al. 2012]. The number of boats accessing the fishery

has remained stable in Queensland since 2012 but has continued to decline in New South Wales. 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**.

## BIOLOGY

**Eastern King Prawn biology** [Courtney et al. 1995, Courtney et al. 1996, Lloyd-Jones et al. 2012]

Species	Longevity / Maximum Size	Maturity (50 per cent)
Eastern King Prawn	< 3 years, Males 52 mm CL, Females 73 mm CL	Females 42 mm CL

## DISTRIBUTION



**Eastern King Prawn biology** [Courtney et al. 1995, Courtney et al. 1996, Lloyd-Jones et al. 2012]

## TABLES

Fishing methods		
	New South Wales	Queensland
<b>Commercial</b>		
Otter Trawl	✓	✓
Various	✓	
<b>Recreational</b>		
Cast Net		✓
Dip Net	✓	

Haul Seine	✓	
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Management Methods		
	New South Wales	Queensland
<b>Commercial</b>		
Effort limits	✓	✓
Gear restrictions	✓	✓
Limited entry	✓	✓
Spatial closures	✓	✓
Temporal closures	✓	✓
Vessel restrictions	✓	✓
<b>Recreational</b>		
Bag limits	✓	
Possession limit		✓
Recreational fishing licence	✓	

Catch		
	New South Wales	Queensland
<b>Commercial</b>	606.476 t	2416.25 t
<b>Indigenous</b>	Unknown	Unknown
<b>Recreational</b>	<328 000 prawns (all Penaeidae combined, 2017-18)	Unknown

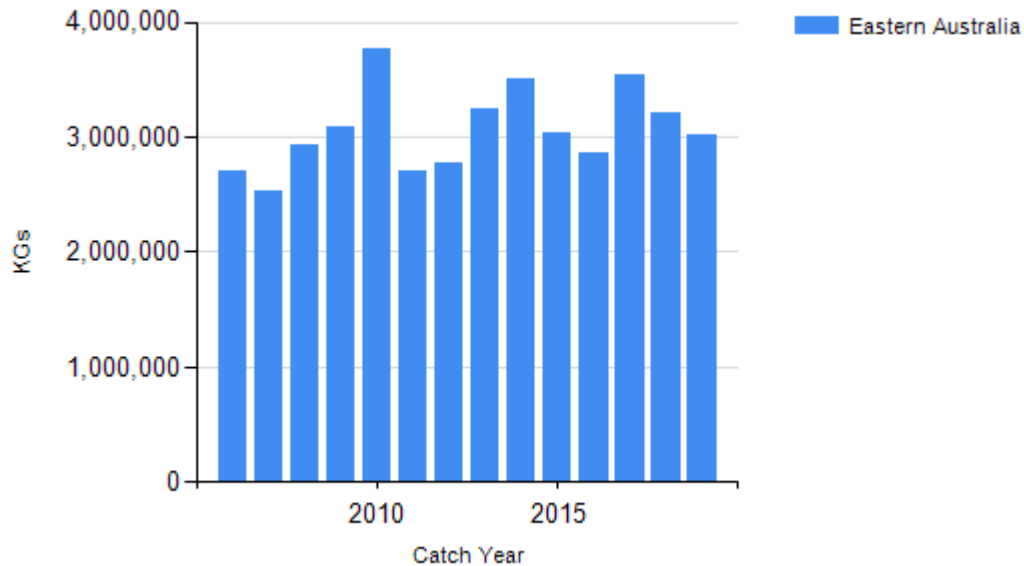
**Commercial (Catch)** The 2017 fishing season for both jurisdictions is 1 November 2016 to 31 October 2017.

**New South Wales – Indigenous (Management Methods)** see <https://www.dpi.nsw.gov.au/fishing/aboriginal-fishing>.

**New South Wales – Recreational (Catch)** Murphy et al. [2020].

**Queensland – Indigenous (management methods)** for more information see <https://www.daf.qld.gov.au/business-priorities/fisheries/traditional-fishing>

**CATCH CHART**



Commercial catch of Eastern King Prawn - note confidential catch not shown

<b>References</b>	
NSWDPI Unpublished	NSWDPI Unpublished. Status of Australian Fish Stocks 2018 – NSW Stock status summary – Eastern King Prawn ( <i>Melicertus plebejus</i> )
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