

Eastern King Prawn (2023)

Melicertus plebejus



Andrew Prosser: Department of Agriculture and Fisheries, Queensland, **Matthew Taylor:** New South Wales Department of Primary Industries

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 Assessment

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).

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% of the unfished 1958 levels. Maximum sustainable yield (MSY) was estimated at 2,423 tonnes (t). Catches have been consistently higher than this estimate for more than ten years. The stock is not considered to be recruitment impaired.

The stock assessment estimated effort at maximum sustainable yield (EMSY),

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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 the 2010 estimate [O'Neill et al. 2014]. Standardised fishing effort was below this level for the 2021 fishing year (1 November 2020–31 October 2021). 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.

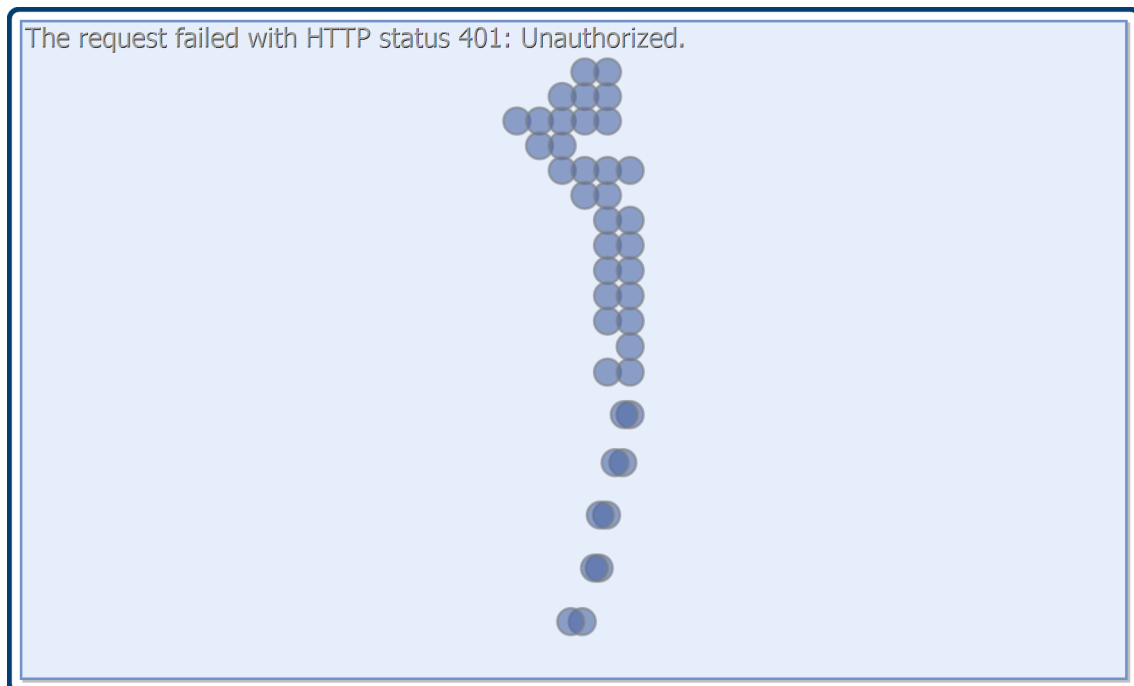
On the basis of the evidence provided above, the Eastern Australia biological stock is classified as a **sustainable stock**.

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	More than 3 years, Males 52 mm CL, Females 73 mm CL	Females 42 mm CL

DISTRIBUTION



TABLES

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Fishing methods		
	New South Wales	Queensland
Commercial		
Otter Trawl	✓	✓
Various	✓	
Recreational		
Cast Net		✓
Dip Net	✓	
Haul Seine	✓	

Management Methods		
	New South Wales	Queensland
Commercial		
By-catch reduction devices		✓
Effort limits	✓	
Effort limits (individual transferable effort)		✓
Gear restrictions	✓	✓
Harvest Strategy		✓
Limited entry	✓	✓
Processing restrictions		✓
Seasonal or spatial closures		✓
Spatial closures	✓	
Temporal closures	✓	
Vessel restrictions	✓	✓
Recreational		
Bag limits	✓	
Bag/possession limits		✓

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Gear restrictions		✓
Recreational fishing licence	✓	
Seasonal or spatial closures		✓

Catch		
	New South Wales	Queensland
Commercial	415.019 t	2139.4 t
Indigenous	Unknown	Unknown
Recreational	>396,152 prawns (all Penaeidae combined, 2019-20)	Unknown

Commercial (Catch). The 2021 fishing season for both jurisdictions is 1 November 2020 to 31 October 2021.

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>

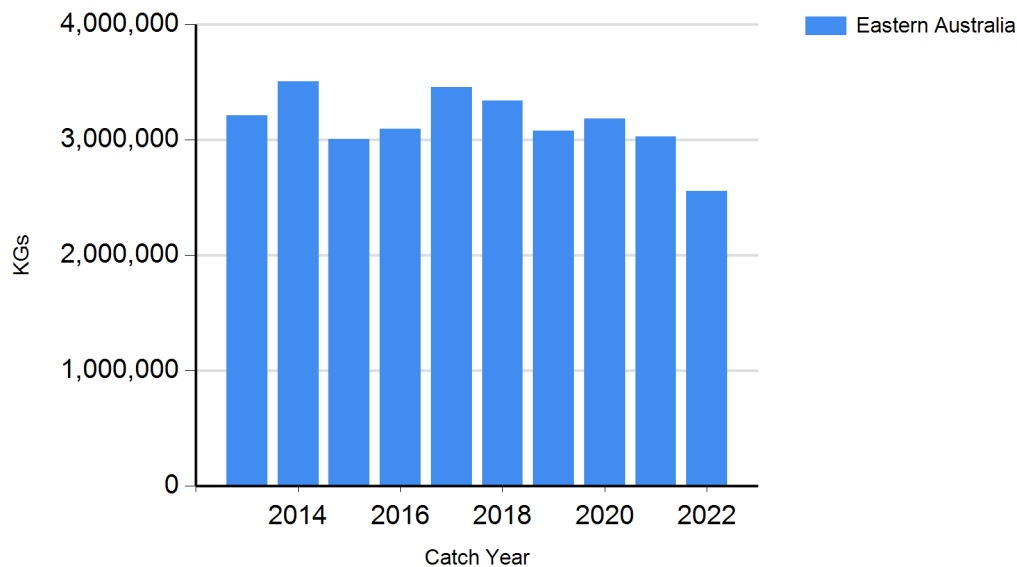
Queensland – Commercial (Catch). Queensland commercial and charter data has been sourced from the commercial fisheries logbook program. Further information available through the Queensland Fisheries Summary Report <https://www.daf.qld.gov.au/business-priorities/fisheries/monitoring-research/data/queensland-fisheries-summary-report>

Queensland – Commercial (Management Methods). Harvest strategies are available at: <https://www.daf.qld.gov.au/business-priorities/fisheries/sustainable/harvest-strategy>

Queensland – Recreational Fishing (Catch). Data with high uncertainty (Residual Error >50 %) has been excluded and listed as unknown. More information available at: <https://www.daf.qld.gov.au/business-priorities/fisheries/monitoring-research/monitoring-reporting/statewide-recreational-fishing-surveys>

CATCH CHART

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

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