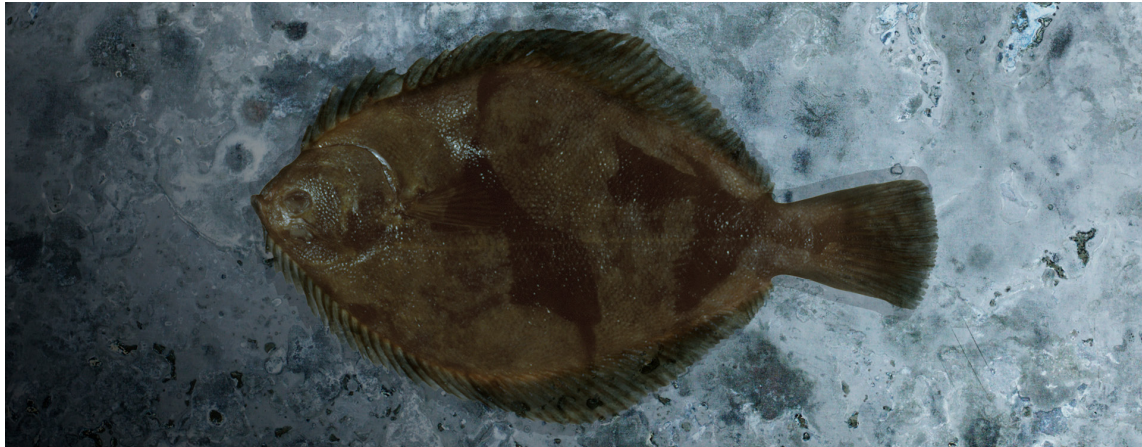


Greenback Flounder (2023)

Rhombosolea tapirina



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STOCK STATUS OVERVIEW

Jurisdiction	Stock	Stock status	Indicators
Western Australia	Western Australia	Negligible	
Victoria	Victoria	Sustainable	Catch, CPUE
Tasmania	Tasmania	Undefined	
South Australia	South Australia	Depleted	Catch, targeted effort

STOCK STRUCTURE

Greenback Flounder has a wide distribution in Australia, from Jervis Bay on the south coast of New South Wales, around the south of the continent including Tasmania, and up to Mandurah on the south-western coast of Western Australia [Kailola et al. 1993]. They also occur in New Zealand [Sutton et al. 2010].

The broad distribution of Greenback Flounder in Australia is thought to be divisible into a number of separate biological stocks. Genetic studies have demonstrated that the most significant division occurs between Australian and New Zealand populations [van den Enden et al. 2000]. Within Australia, there is strong evidence that populations in western Tasmania are genetically isolated from populations in Victoria, and northern and south-eastern Tasmania. These results are consistent with those of Kurth [1957], who identified distinct western and eastern Tasmania populations on the basis of morphometrics. Biological stock structure along the southern mainland coasts of Australia is not known.

Here, assessment of stock status for Greenback Flounder is presented at the jurisdictional level—Western Australia, Victoria, Tasmania and South Australia.

STOCK STATUS

South Australia

The Lakes and Coorong Fishery (LCF) has traditionally been the most productive of South Australia's fisheries for Greenback Flounder, consistently accounting for more than 95% of the State's commercial catch since the 1970s [Earl and Ye 2016]. Small catches of this species are also taken by the Marine Scalefish Fishery. The most recent assessment for Greenback Flounder in the LCF was completed in 2023 and used a weight-of-evidence approach that considered fishery catch and effort data to the end of June 2022 [Earl 2023].

The primary measures of biomass and fishing mortality are total catch and targeted effort from LCF gillnet fishers. Long-term catch trends indicate high interannual variability in biomass in the Coorong Estuary [Earl and Ye 2016]. Annual catches were highly variable during the 1980s and 1990s, peaking at 65 tonnes (t) in 1990–91. After several smaller peaks during the 1990s, catches declined and were historically low (< 1 t per annum) during the Millennium Drought of the 2000s and early 2010s. An exception was in 2011–12, (i.e., the year after drought-breaking River Murray flows reached the Coorong Estuary), when a large biomass of Flounder moved into the Coorong from the adjacent marine environment [Earl et al. 2017] and catch increased to 31 t—its fourth highest level on record. This sudden increase in catch was associated with high targeted effort and near-record high catch rates and was not consistent with a biomass that was recruitment overfished. From 2013–14 to 2019–20, annual catches averaged 1.5 t before increasing to 4.5 t in 2021–22.

The high interannual variation in commercial catch since 1984–85 has been strongly associated with variation in freshwater inflow to the Coorong with a lag of 1–2 years [Earl and Ye 2016]. This variation occurs because large areas of estuarine habitat that support high abundances of Flounder are only available after years of high freshwater inflow. It is likely that low flow conditions reduce the favourable habitat for this species in the Coorong, during which time, some individuals move from the estuary to the ocean where they remain and can possibly return when estuarine conditions improve [Earl et al. 2017]. This was evidenced by the immediate increase in catch in the Coorong Estuary shortly after high inflow events in 1990–91, 1995–96, 1998–99 and 2011–12 [Earl and Ye 2016]. The low catches over the past decade, including 2021–22, likely reflect low biomass in the Coorong primarily because of low freshwater inflows to the system (i.e., non-fishing effects). The state-wide recreational catch of Greenback Flounder was estimated at 0.49 t in 2021–22 [Beckmann et al. 2023].

The above evidence indicates that the biomass of this stock is likely to be depleted and recruitment is likely to be impaired. The above evidence indicates that current fishing mortality is constrained by management to a level that should allow the stock to recover from its recruitment impaired state; however measurable improvements are yet to be detected.

On the basis of the evidence provided above, Greenback Flounder in South Australia is classified as a **depleted stock**.

Tasmania

Although not generally reported at the species level, Greenback Flounder are assumed to constitute most of the commercial catch of flounder in Tasmania. Flounder landings have declined steadily from recorded peak annual catches of more than 30 t in the mid-1990s to a historical low of 1 t in 2015–16. Catches since then have remained below 5 t with 1.7 t caught in 2021–22 [Sharples et

al. 2023]. Greenback Flounder are a relatively important recreational species, and in recent years, recreational landings have matched or exceeded those of the commercial sector [Lyle et al. 2019]. Like commercial catches, recreational catches appear to have declined progressively over the years, with an estimated peak of 15.2 t in 2000–01 and a low of 3.8 t in 2017–18 [Lyle et al 2019]. Possible explanations for declining commercial catches of flounder include a change in targeting behaviour by fishers in response to a ban on overnight gillnetting and reduced market demand. However, the potential role of overfishing and population depletion cannot confidently be assessed due to insufficient data. There is no published assessment of this species, and there are no data available to estimate biomass or exploitation rates. In addition, there is no knowledge of recruitment or harvestable biomass, and there are no defined target or limit reference levels. This prevents assessment of current stock size or fishing pressure. Consequently, there is insufficient information available to confidently classify the status of this stock.

On the basis of the evidence provided above, Greenback Flounder in Tasmania is classified as an **undefined stock**.

Victoria

Commercial catches of Greenback Flounder in Victoria have averaged 11 t annually over the past two decades, and generally ranged between approximately 9–20 t.

Since the closure of most commercial Bay and Inlet fisheries, Greenback Flounder are mostly taken commercially by haul/ring seine, and to a lesser extent mesh nets, from Corner Inlet-Nooramunga. Greenback flounder are also targeted by recreational fishers in bays and inlets, predominantly by wading at night with a submersible light and hand spear but there is no recent information on landings.

In Corner Inlet-Nooramunga, haul/ring seine catch rates have shown an increasing trend through time since historic lows in the late 1980s and early 1990s, but have been highly variable over time with peaks in the raw data in 1978–79, 1984–85, 1997–98, 2004–05, 2011–12 and 2021–22 [Bell et al. 2023]. In contrast, the trend for mesh net catch rate follows a consistently negative trajectory, leveling out at close to zero after the mid-2000s [Bell et al. 2023]. While this results in conflicting information about stock status, it is important to note that Greenback Flounder were historically targeted using specifically designed mesh nets set over shallow sand, whereas in recent years, fishers in Corner Inlet have predominantly targeted rock flathead with mesh nets set over seagrass and taken flounder as by-product. Consequently, the low landings of flounder by mesh net during the past two decades should not be interpreted as a reduction in biomass, but rather a change in targeting by the commercial sector [Bell et al. 2023]. Thus, given the low selectivity of haul/ring seines, the CPUE of this gear is considered a more reliable indicator of biomass for Greenback Flounder in Victoria, showing an increasing trend through time. In addition, the closure of all other Victorian Bay and Inlet commercial fisheries means fishing mortality has decreased through time so there is no reason to believe Greenback Flounder abundance has declined.

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 provide above, Greenback Flounder in Victoria is

classified as a **sustainable stock**.

**Western
Australia**

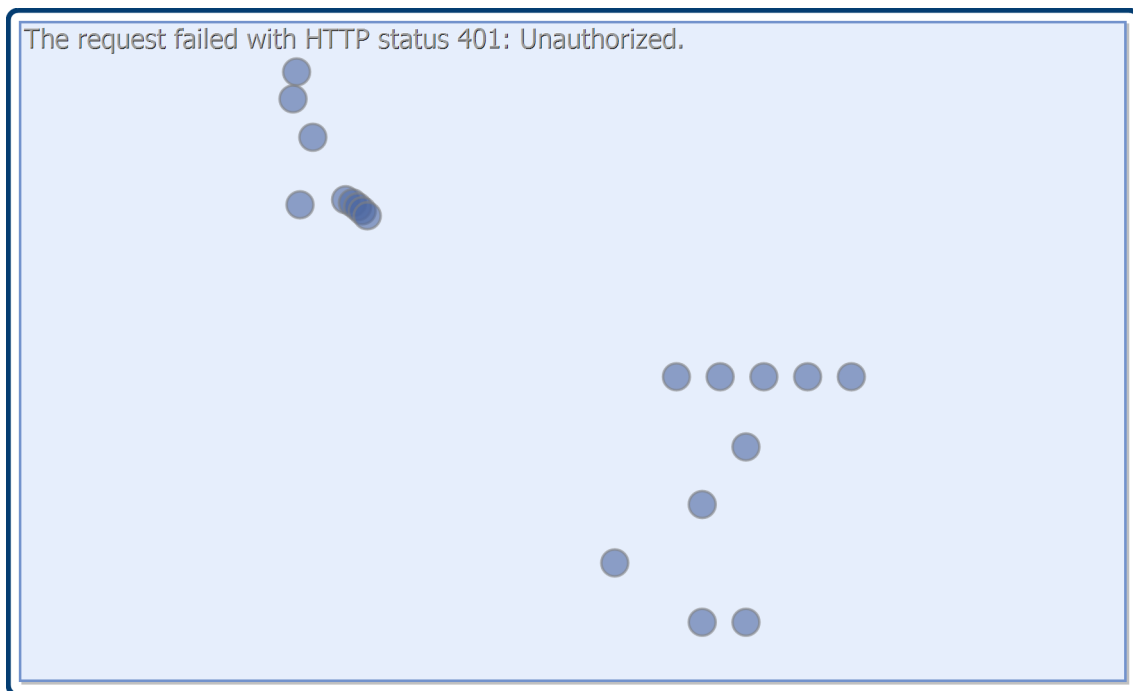
Stock status for Greenback Flounder in Western Australia is reported as Negligible due to historically low catches in this jurisdiction, the stock has generally not been subject to targeted fishing and the species is not a major component of recreational landings. Fishing is unlikely to be having a negative impact on the stock.

BIOLOGY

[Sutton et al. 2010; Earl et al. 2014]

Species	Longevity / Maximum Size	Maturity (50 per cent)
Greenback Flounder	10 years; 500 mm TL	198 mm TL for females; 211 mm TL for males (SA)

DISTRIBUTION



Distribution of reported commercial catch of Greenback Flounder.

TABLES

STATUS OF AUSTRALIAN FISH STOCKS REPORT
Greenback Flounder (2023)

Fishing methods			
	South Australia	Tasmania	Victoria
Commercial			
Gillnet	✓	✓	
Net			✓
Unspecified	✓	✓	
Recreational			
Gillnet	✓		
Hand held- Implements	✓	✓	✓
Hook and Line	✓	✓	✓

Management Methods			
	South Australia	Tasmania	Victoria
Commercial			
Gear restrictions	✓	✓	✓
Limited entry	✓	✓	✓
Size limit	✓	✓	✓
Spatial closures		✓	✓
Spatial restrictions	✓		
Temporal closures	✓		✓
Total allowable effort	✓		
Vessel restrictions		✓	
Recreational			
Bag and boat limits	✓		
Bag and possession limits		✓	
Bag limits			✓
Gear restrictions	✓	✓	✓
Licence		✓	

STATUS OF AUSTRALIAN FISH STOCKS REPORT
Greenback Flounder (2023)

Size limit		✓	✓
Spatial closures	✓		✓
Temporal closures	✓		

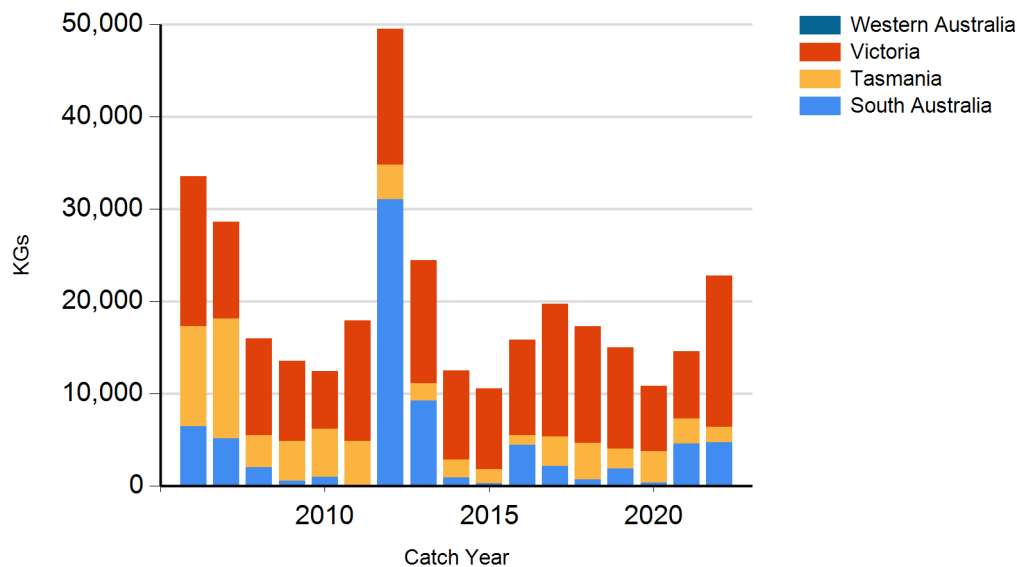
Catch	South Australia	Tasmania	Victoria	Western Australia
Commercial	4.708 t	1.65158 t	16.4151 t	0 t
Indigenous	Unknown	Unknown	Unknown	Unknown
Recreational	0.49 t (in 2021–22)	3.8 t (in 2017–18)	Unknown	Unknown

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*.

Tasmania - Indigenous (Management methods). In Tasmania, Indigenous persons engaged in traditional 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. For details, see the policy document 'Recognition of Aboriginal Fishing Activities' <https://fishing.tas.gov.au/Documents/Policy%20for%20Aboriginal%20tags%20and%20alloting%20an%20UIC.pdf>

CATCH CHART

STATUS OF AUSTRALIAN FISH STOCKS REPORT
Greenback Flounder (2023)



Commercial catch of Greenback Flounder - note confidential catch not shown.

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