

# NSW TOTAL ALLOWABLE FISHING COMMITTEE

## OCEAN TRAWL FISHERY

- BLUESPOTTED FLATHEAD
- SILVER TREVALLY

## DETERMINATION FOR THE 2024/25 FISHING PERIOD

19 March 2024

## Executive Summary

### Preamble

The New South Wales (NSW) Total Allowable Fishing Committee (TAFC) has statutory responsibilities set out in Part 2A of the *Fisheries Management Act 1994* (the Act) to determine the Total Allowable Commercial Catch (TACC) or Total Allowable Commercial Effort (TACE) by NSW fishers holding the relevant endorsement in some commercial fisheries. Various fishing regulations under the Act also contain provisions requiring the making of fishery determinations.

The TAFC is an independent statutory body established under Schedule 2 of the Act. In making a determination on catch or effort in a commercial fishery, the TAFC must consider the ecological, economic and social issues associated with each fishery and make determinations that 'on balance' pursue the objectives of the Act. As of February 2022, for determinations relating to the Ocean Trawl Fishery, the TAFC is required to make recommendations compatible with the finalised and adopted NSW Trawl Whiting Harvest Strategy. There is no set harvest strategy for Bluespotted Flathead or Silver Trevally.

The TAFC is not subject to the control or direction of the Minister as to any determination made. However, the Minister may direct the TAFC on the procedures to be followed and the matters to be taken into account in making a fishing determination.

This determination is for Bluespotted Flathead in the Ocean Trawl Fishery for the fishing periods 1 May 2024 to 30 April 2025 and 1 May 2025 to 20 April 2026 and Silver Trevally for the fishing period 1 May 2024 to 30 April 2025.

### Management recommendations & supporting actions

The TAFC provides the following recommendations to the Minister, NSW Fisheries and the fishing industry towards improving the management of the fishery:

1. The recommendations on improving specifications of assessment models (for Bluespotted Flathead) should be addressed, to reduce the number of plausible models presented and to define a defensible base-case for future assessments.
2. Given the wide range in assessment model results for Bluespotted Flathead and the apparent conflicts between some of the observed data and some model results, and noting that the TACC has been substantially under-caught since inception, it is prudent to maintain the TACC at the current level of 108.1 tonnes while work is done to address uncertainties and conflicts in assessments.
3. Although there are signs of some rebuilding in the Silver Trevally stock, it remains depleted to near (slightly above or slightly below) the 20%  $B_0$  limit level. The current TACC of 12 tonnes should be retained to try and ensure that stock rebuilding continues.

4. The T AFC continues to recommend the development of a rebuilding strategy for ST, which could enable an increased TACC in future, if recovery of the stock is evident.
5. Efforts to try and collect representative length composition data for retained and discarded ST should continue, including by means of a cooperative sampling program with industry, to improve the ability of the integrated assessment to evaluate year-class strengths, stock status and rate of rebuilding.

## Determination

The Total Allowable Fishing Committee, pursuant to Part 2A of the *Fisheries Management Act 1994*, determines that the commercial catch of Bluespotted Flathead and Silver Trevally in the Ocean Trawl Fishery should be controlled and allocated through the following measures:

1. A TACC for Bluespotted Flathead during the fishing periods 1 May 2024 to 30 April 2025 and 1 May 2025 to 30 April 2026 of **108.1 tonnes**; and
2. A TACC for Silver Trevally during the fishing period 1 May 2024 to 30 April 2025 of **12.0 tonnes**.

## Introduction

The NSW Ocean Trawl Fishery (OT Fishery) is a share management, multi-method, multispecies fishery with a gross value of production of around \$22.7 million for 2020/21 (McKinnon 2024)<sup>1</sup>. The OT Fishery is described in Schedule 1 of the *Fisheries Management Act 1994* (the FM Act) as:

- a) the use of an otter trawl net (prawns) to take fish from any of the following waters:
  - (i) inshore waters (not more than 3 nautical miles from the natural coast line),
  - (ii) offshore waters (more than 3 nautical miles from natural coast line) and north of a line drawn due east from Barrenjoey Headland,
  - (iii) the waters of Coffs Harbour;
- b) the use of an otter trawl net (fish) to take fish from ocean waters (east of the natural coast line) that are north of a line drawn due east from Barrenjoey Headland and south of a line drawn due east from Smoky Cape (other than any waters in which use of an otter trawl net (fish) is prohibited under the regulations); and
- c) the use of a Danish seine trawl net (fish) to take fish from ocean waters that are north of a line drawn due east from Barrenjoey Headland.

North of Barrenjoey Headland (Sydney) the OT Fishery extends to the 4,000-metre depth contour, approximately 60 to 80 nautical miles offshore. South of Barrenjoey Headland the OT Fishery extends seaward to three nautical miles offshore. The OT Fishery is subject to many spatial and temporal closures within these waters. Schedule 2 of the *Fisheries Management (Ocean Trawl Share Management Plan) Regulation 2006* details waters closed to ocean trawling.

The OT Fishery is a share managed fishery. Access to the OT Fishery is limited to shareholders, or their nominated fishers, who hold sufficient shares to satisfy the minimum shareholding levels established for each share class in the Plan. Minimum shareholdings apply to all 'access' share classes in the OT Fishery and are used to determine if a shareholder (or their nominated fisher) is eligible for an endorsement authorising a particular commercial fishing activity in respect of that share class. A summary of the 'access' share classes and associated minimum shareholding is provided in Table 1.

**Table 1:** Minimum shareholdings and numbers of endorsements

Access share class	Minimum shareholding	No. of endorsements
OT – inshore prawn	50	111
OT – offshore prawn	50	103
OT – deepwater prawn	25	15
OT – fish northern zone	50	29

The T AFC is responsible for making a determination in relation to four of the finfish species taken in this fishery – Trawl Whiting (Eastern School Whiting and Stout Whiting), Bluespotted Flathead and Silver Trevally. A multi-year determination was made for Trawl Whiting in 2023, so this determination is only for Bluespotted Flathead and Silver Trevally.

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<sup>1</sup> McKinnon, F (2024) Ocean Trawl Fishery Management Report. Department of Regional NSW

A video conference meeting was held with industry shareholders and representatives of NSW Fisheries (Department of Regional NSW) on 15 February 2024 to gain additional information on the stock assessment, fisheries management, economic considerations and compliance issues.

## Biological considerations

### Bluespotted Flathead

#### *Distribution*

Bluespotted Flathead (*Platycephalus caeruleopunctatus*, BSF) distribution extends from southern Queensland to eastern Victoria. The stock is primarily fished in NSW state waters with no landings data available for other jurisdictions.

#### *Fishery*

NSW catches of BSF are classified under the sectors Ocean Prawn Trawl (OPT) (otter trawl), Fish Trawl (OFT - otter trawl and Danish seine), Ocean Trap and Line (all methods), Estuary (all methods) and Flathead unspecified (OPT only). NSW landed catches by all commercial sectors averaged around 250 tonnes per year over 1974 to 1990, decreasing to around 155 tonnes per year over 1991 to 2012. Since then, commercial catches have remained below 150 tonnes per fiscal year<sup>2</sup>. Over 2019 – 2023, the northern OFT and OPT component has averaged ~63 tonnes, with the NFT landing 71% of this northern catch. Over 2019 – 2023 the SFT landed catch has averaged only ~9 tonnes, with an estimated 2 tonnes by other state fisheries and 43 tonnes of discards.

BSF is an important species for recreational and charter boat fishers in NSW and surveys indicate that the recreational catch historically exceeded the commercial catch, accounting for up to 70% of the total NSW SBF harvest when catches by interstate fishers are included. From results of surveys, NSW statewide recreational catches have since declined substantially from an estimated 278 tonnes in 2000-01, to 210 tonnes in 2013-14, 128 tonnes in 2017-18 and 72 tonnes in 2019-20, with similar quantities to the landed catch being discarded. Estimated charter boat catches increased from around 7 tonnes in 2008-09 to around 15 tonnes from 2016-17 to 2020-21, after which it has decreased back to around 7-8 tonnes per year. The estimated recreational catch used in assessments averaged ~81 tonnes over 2019-23.

The TACC (northern OPT/OFT) component has averaged 31.7% of the total commercial catch, recreational catch and discards over 2019 - 2023. Quota usage has been low. Of the total 108.1 tonne TACC implemented for the northern OFT and OPT sectors since 2019-20, quota usage was estimated to be 36% in 2019-20 and 2020-21, 40% in 2021-22 and 59% in 2022-23. Despite this, there are anecdotal reports that limited availability of quota for trade has been constraining catches in the OPT fishery, resulting in increased discards by this sector.

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<sup>2</sup> Hall, K.C. (2024) Stock assessment report 2023/24 – Bluespotted Flathead (*Platycephalus caeruleopunctatus*). NSW Department of Primary Industries, Coffs Harbour, NSW, 68 pp.

### *Stock assessment and stock status*

Total fishing effort decreased from a peak of over 21,000 days for OPT and around 4,000 days for OFT over 2000 – 2002 to about 3,500 days OPT and 1,400 days OFT in 2009/10. Since then, effort has remained stable in the OPT fishery, but continued to decline slowly in the OFT fishery to around 750 days in 2022-23. Reported recreational charter boat effort increased from around 4,000 angler hours in 2007-08 to near 14,000 angler hours in 2016-17, although some of this increase resulted from increased compliance in reporting. A substantial decrease in reported charter-boat effort over the past two years seems unlikely and may be due to poor recent reporting.

The simultaneous decline in catch and effort for the OTF has resulted in apparently stable CPUE near the long-term average since 2018. This is not the case for OPT, for which CPUE continued to decline from 2018 – 2022. Fishing in the OTF, which accounts for over 70% of the northern BSF catch, targets BSF when these are of a size to be landed. It is less clear whether BSF CPUE in the OPT sector reflects targeted fishing, with anecdotal reports of difficulty in obtaining quota resulting in discarding of BSF. The OPT sector uses different gear when targeting prawns, indicating that CPUE for the OPT sector may not provide an index of abundance for BSF, raising questions of whether OPT CPUE should be used in assessments.

The BSF stock off NSW was assessed in 2022 using a Bayesian state-space production model (BSM) fitted to alternative historical catch and CPUE series. Given the importance of recreational catches, substantial effort was put into estimating historical trends in recreational catches, scaled between survey estimates using estimates of annual recreational fishing effort derived from coastal population statistics. That assessment estimated an MSY of 230 tonnes for commercial fishing (no recreational or discards) for all areas, with a TACC equivalent (north only) of ~120 tonnes.

The 2024 BSM assessment was updated in 2024 and a *JABBA* assessment was also conducted, which can integrate across multiple separate CPUE indices, doing away with the need to try and link these outside the model<sup>1</sup>. Eighteen alternative *JABBA* assessment models were run. The results were sensitive to inclusion or not of the OPT and Charter CPUE indices, the historical reconstruction method for recreational catches and the form of the underlying production model (Schaefer or Pella-Tomlinson), but particularly to assumptions regarding the assumed resilience of the stock. Assuming medium resilience resulted in estimates of total MSY (for all catches, commercial, recreational and discards) across 12 medium resilience models from 811 – 1,031 tonnes. Assuming low resilience resulted in estimates of total MSY across six low resilience models from 557 – 714 tonnes. The NFT TACC proportion of the lowest estimate of MSY would be ~176 tons, being the northern NFT/OPT 37% proportion of the total MSY.

The proposed 'base-case' models 1 (medium resilience) and 2 (low resilience) produce substantially different trends in recent stock status depending on the

assumption of resilience. Model 1 (and the other medium resilience models) estimates that stock status has been increasing steadily since about 1990 and is now around 80% of  $B_0$ . Model 2 (low resilience) estimates that stock status has been stable around a 48%  $B_0$  target level since about 2000. The medium resilience results seem unlikely, given that CPUE in the main fish trawl targeting sector has been stable around the long-term average since 2018 and fairly stable around the long-term average since 2010.

These results would indicate that the TACC could be higher than the current level, given that stock status appears to be stable or increasing at or above 48%  $B_0$ . However, this conflicts with the fact that recent stability in CPUE and in stock status, has occurred at total catch plus discards levels of around 200 tonnes and commercial catch levels slightly above 60 tonnes. Recreational and charter catches have also been decreasing, despite model results indicating an increase in stock status. It is difficult to reconcile these apparent conflicts between reality and model results.

There are various aspects of model specification that would benefit from additional work and clearer specification:

- An agreed catch series needs to be developed for use in assessments. This particularly relates to agreeing on the most plausible re-construction of historical recreational catches and adopting this for future assessments.
- The CPUE series for the OPT sector may not be providing an index of abundance for BSF, given the different gear used and discarding by this sector. If there is active gear avoidance of BSF, or avoidance as a result of fishing in different areas for prawns, then this may not be a useful index for BSF. Alternately, it might be possible to standardise this index for the proportions of prawns in the catch, to correct for the effect of prawn targeting.
- Assessment relying on an underlying production model (such as the BMS and JABBA assessments used) are strongly driven by assumptions regarding resilience or productivity range for the stock. Noting the substantial difference depending on prior assumptions regarding resilience, it is important to try and resolve the choice of low vs medium resilience in these models.

## Recommendations

- The recommendations on improving specifications of assessment models should be addressed, to reduce the number of plausible models presented, and to define a defensible base-case for future assessments.
- Given the wide range in assessment model results and the apparent conflicts between some of the observed data and some model results, and noting that the TACC has been substantially under-caught since inception, it would be prudent to maintain the TACC at the current level of 108.1 tonnes while work is done to address uncertainties and conflicts in assessments.

## Silver Trevally

### *Biology and distribution*

Silver Trevally (*Pseudocaranx georgianus*, ST) are relatively long-lived and slow growing, attaining a maximum age of at least 25 years, although maturing at a relatively early age of 2–4 years at 18 – 24 cm fork length<sup>3</sup>. The species has a relatively contiguous distribution from northern NSW to Western Australia, south of 25°S latitude and is considered to constitute a single genetic stock across this range. Tagging studies in Australia and New Zealand suggest that movement after settlement is limited, so there is potential for finer-scale population structure within the east coast population and potential localised depletion of settled adults.

### *Fishery*

Historically the stock has mainly been fished by NSW commercial and recreational sectors, with lesser and more recent catches by the Commonwealth southeast trawl fishery and Victoria commercial and recreational fisheries. Substantial effort has been put into resolving duplication between the NSW and Commonwealth fleets catch data (which resulted from double reporting in early years after the Commonwealth fishery was established out of the offshore NSW fishery) and preparing an agreed catch history for use in assessments. Over 1945 – 2023, the NSW commercial sectors have caught 58% of the total landed catch, followed by Victoria (13%), Commonwealth (9%) and estimated NSW/Victoria recreational catch (20%). Over the recent decade 2014 – 2023, these proportions have changed to NSW 40%, Victoria 18%, Commonwealth 29% and recreational 13%.

Total annual ST catches by all fisheries declined steadily from a peak of 1,782 tonnes in 1989-90 to less than 100 tonnes since 2020. In NSW ST are caught in the Estuary General (EG), Ocean Hauling (OH), Ocean Trap and Line (OTL), Southern Fish Trawl (SFT), Ocean Prawn Trawl (OPT) and Ocean Fish Trawl – north (OFT-N) sectors. Over 2021 – 2023 these sectors have landed an average of 39.5 tonnes per year, the proportions being EG 25.4%, OH 5.9%, OTL 28.6%, SFT 2.9%, OPT 0.0% and OFT-N 37.1%. Of these, only the OPT and OFT-N operating north of Barrenjoey are subject to the TACC.

OFT-N catches declined rapidly from more than 200 tonnes in 2006 to 8.6 tonnes in 2022 following introduction of a 30 cm total length minimum legal length (MLL). Large adult fish have virtually disappeared from the fishery and it is estimated that the northern OFT is discarding 16% - 38% of the total ST catch by weight, largely due to them being under the MLL. The estimated proportion of fish in commercial catches larger than 30cm fork length decreased from around 70% in 1993 and 1994 (onboard observers), to 40% in 1997 (onboard observers), 14% in 2008 (fish market sampling) and 6% in 2019-20 (fish market sampling) (A. Fowler DPI *pers comm*). There are now few large mature ST in OFT commercial landed catches.

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<sup>3</sup> Rowling, K. R., & Raines, L. P. 2000. Description of the biology and an assessment of the fishery for silver trevally *Pseudocaranx dentex* off New South Wales. NSW Fisheries Research Institute, Cronulla, 70 p.



### *Stock assessment and stock status*

Prior to the most recent assessment in 2023, separate assessments were conducted by NSW and the Commonwealth, using separate standardised CPUE indices of abundance. Due to differences in recent CPUE trends for the NSW and Commonwealth fisheries, the conclusions of these assessments differed, with the NSW assessment concluding that the NSW component of the stock was depleted below a 20%  $B_0$  limit reference level, whereas the Commonwealth component of the stock was not considered to be depleted and was between the Commonwealth limit and target reference levels.

Following results of genetic analysis indicating a single shared stock, NSW and the Commonwealth agreed to conduct a joint *Stock Synthesis* assessment in 2023, allowing for integration across multiple CPUE series for the various fisheries<sup>4</sup>. This assessment was sensitive to the value of natural mortality ( $M$ ) used, and two plausible options for  $M$  were used to estimate stock status. There is agreement between the NSW and Commonwealth CPUE indices that the stock was depleted to below a 20%  $B_0$  limit level by 2005, with signs of rebuilding from 2019 onwards. Depending on the value of  $M$  used, the assessment indicates the stocks to be slightly above ( $M = 0.18$ ) or slightly below ( $M = 0.14$ ) a 20%  $B_0$  limit level in 2023.

A range of constant catch projections was used to provide the basis for advice on recommended total biological catch levels that should allow for rebuilding towards a 48%  $B_0$  target. Projections were conducted at a constant catch of 100 tonnes, being approximately the current total catch by all fisheries, and at 50 tonnes and 150 tonnes. Projections indicated that the choice of value of  $M$  was relatively unimportant in terms of time to rebuild to the target under any of the projections, although the magnitude of constant catch affected the time taken to rebuild.

Given that ST remains near the limit level, advice was to maintain catches by all sectors at current levels of ~100 tonnes across all fisheries to try and ensure that the observed rebuilding continues at the projected rates. If the recent average or estimated catches of the Victoria commercial and combined recreational fisheries are maintained and the Commonwealth retains their 2023-24 TACC, then the NSW OTF-N / OPT share of a 100 tonne RBC would be slightly above the current TACC of 12 tonnes. To try and ensure that rebuilding continues as projected, the current NSW OTF TAC of 12 tonnes should be retained.

### **Recommendations**

- Although there are signs of some rebuilding in the Silver Trevally stock, it remains depleted to near (slightly above or slightly below) the 20%  $B_0$  limit level. The current TAC of 12 tonnes should be retained to try and ensure that stock rebuilding continues.

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<sup>4</sup> Burch, P., Fowler, A., Liggins, G., Sporcic, M., Dowling, N., Chick, R., Tuck, G. 2023. A joint Commonwealth and NSW assessment of Silver Trevally (*Pseudocaranx georgianus*). Prepared for the Australian Fisheries Management Authority. 83 pp.

- Efforts to try and collect representative length composition data for retained and discarded ST should continue, including by means of a cooperative sampling program with industry, to improve the ability of the integrated assessment to evaluate year-class strengths, stock status and rate of rebuilding.

## Fishery management considerations

The Ocean Trawl (OT) Fishery is a share managed, multi-species fishery that uses otter trawl and Danish seine trawl nets. The fishery is made up of four different endorsement types that differ by area fished, gear type used and catch composition.

The OT Fishery is managed using a suite of input and output controls, including limited entry, controls on fishing gear, temporal and spatial closures, Minimum Legal Size (MLS) limits, TACCs (or TACE) and ITQs. There is no harvest strategy for the species being considered in this report, although there is a harvest strategy for Trawl Whiting, which informs the TACC determinations for Eastern School Whiting and Stout Whiting, both of which are taken in the OT Fishery.

BSF and ST are important recreational species in NSW. Recreational catches are managed using bag or boat limits and minimum size limits consistent with those in the commercial fishery.

The Department uses a risk-based approach to enforcement activities that uses Statewide and fishery specific risk analysis. Compliance strategies employed include intelligence gathering and analysis, education, targeted patrols, and covert and overt operations. Reports to the TAFC focus on matters relevant to TACC/ITQ managed fisheries, with quota evasion the major risk of concern. Although there are a number of FBs that have failed to submit catch returns (logbooks) and reports of undersized landings, for the purposes of the stock assessments the level of illegal, unregulated and unreported fishing is considered low and would not substantially influence assessment outcomes.

Currently, vessels in the OT Fishery are not required to carry either vessel monitoring system (VMS) or AIS, which contributes to a number of quota evasion risks, including transshipment at sea, landing fish without declaring them or reporting catch from areas where no TACC applies. The lack of verifiable spatial data is also a risk for the stock assessment with industry logbooks the only significant source of this information. The Department advises that a small number of vessels are currently trialling VMS units, with use of VMS expected to increase due to an impending requirement by Parks Australia that all commercial fishing vessels transiting or conducting fishing activities in Australian Marine Parks carry an operating VMS.

## **Bluespotted Flathead (BSF)**

The majority of commercial catches of BSF are taken in the OPT and OFT fisheries, both of which are subject to the TACC and quota management. Catches also occur in the NSW Southern Fish Trawl Fishery (SFT), which is not subject to a TACC. The SFT catches have remained relatively constant at around 10% of total catches, although as a proportion it has increased in recent years to around 25% as a result of the drop off in catches in other sectors. BSF is also a significant recreational and charter species, with preliminary data from a 2021/22 Recreational Fishing Research Survey indicating annual catches of 42 tonne, a significant decline from the 199 tonnes estimated in 2013/14.

Although there is no harvest strategy for this species, NSW adopts a default 20% depletion of spawning biomass Limit Reference Point (LRP) for the purpose of classifying exploitation status. The stock assessment indicates the BSF stock is above the LRP, and likely above the potential TRP of 48% of unfished biomass. However, there are a number of conflicting results in the standardised catch rate analyses, with fish trawl and charter catch rates in central and southern NSW remaining stable, while prawn trawl and charter rates in northern NSW declined over the last five years. Estimates of recreational catch have also decreased. Some of these indicators may suggest a contraction of the population at the northern end of its distribution, which could be driven by climate change effects.

Given the uncertainty and conflicting signals, the TAFC decided to maintain the current TACC of 108.1 tonne for the next two fishing periods.

## **Silver Trevally (ST)**

ST are caught in a number of fisheries in NSW and in other jurisdictions, by both commercial and recreational fishers. Catches across all jurisdictions have reduced from 113.8 tonne in 2020 to 97.5 tonne in 2022, and NSW catches have also declined during this period. The majority of ST landings in NSW commercial fisheries are from the SFT, although catches in that fishery have reduced to less than 10 tonne in recent years. ST is only subject to quota management and TACCs in the OT Fishery.

Recreational catch represents a significant proportion of total catches, with preliminary data from the 2021/22 Recreational Fishing Research Survey estimating 13 tonnes of ST caught in NSW waters, including charter catches.

Results of the recent joint stock assessment indicate that the ST stock is either just above the default LRP (20% depletion of spawning biomass) if using the high productivity scenario, or below the LRP in the low productivity scenario. Noting the uncertainty, NSW has assessed the stock status to be “recovering”, which according to the NSW Fisheries Harvest Strategy Policy, requires decision rules to enable the stock to recover. Although a formal Harvest Strategy has not yet been developed for

Silver Trevally, management should be consistent with the policy intent, therefore the TACC and associated management should support recovery of the stock.

The T AFC determined TACC of 12 tonne in 2023/24, a reduction from the TACC of 20 tonne in 2021/22 and 2022/23, due to the urgent need to minimise fishing mortality and allow for recovery of the stock. Although there are some encouraging indications of rebuilding in the recent stock assessment, given the “recovering” status of the stock and the uncertainty regarding harvest and discards in other fisheries, any increase in the TACC would be premature and compromise rebuilding at this time.

The T AFC understands that NSW DPI has developed a rebuilding framework for depleted fish stocks and consultation on management changes for depleted species is proceeding in 2024. Until this has been finalised, the T AFC continues to recommend the development of a rebuilding strategy for ST, which could enable an increased TACC to be determined in future, if recovery of the stock continues.

As noted in previous determination reports, species with similar biology to ST are known to be negatively affected by rising water temperatures due to climate change. Given south east Australian waters are a warming hotspot, it’s possible that the effects of climate change are contributing to the depleted stock status and are compromising the recovery of the stock. It is also possible that the warming waters and extension of the East Australian Current are causing a southern shift in the species.

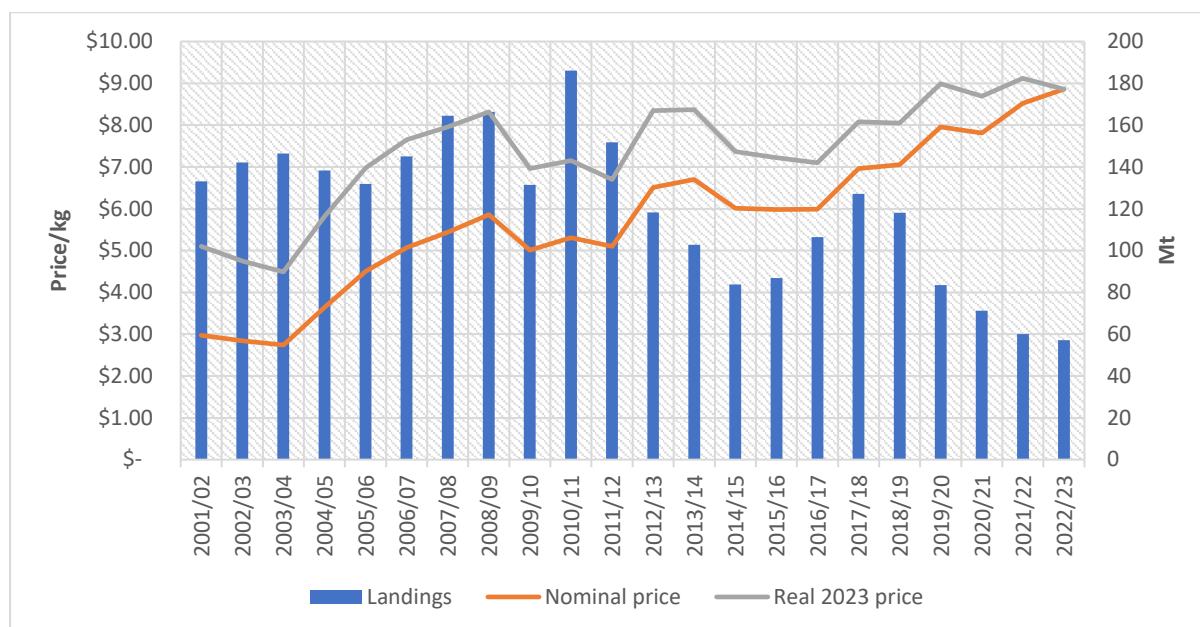
Efforts being taken in the OT Fishery to enable recovery of the stock should be done in the context of minimising overall fishing mortality of ST across all fisheries.

The Commonwealth has identified ST as ‘overfished’ and have a TACC of 25 tonnes for 2023/24 in the South East Scalefish and Shark Fishery. Although the Victorian commercial catches have stayed relatively stable, given the decline in catches elsewhere, they now represent a substantial proportion of the total catches (42% in 2022/23). Significant catches are also being taken in the NSW SFT, as well as in recreational fisheries in both NSW and Victoria. The T AFC encourages NSW to work closely with other jurisdictions, including Victoria, to seek catch sharing arrangements, or at a minimum complementary management to minimise fishing mortality of ST across all fisheries. The T AFC also strongly encourages NSW to reduce the recreational possession limit for ST in line with reductions made for other depleted species.

## Economic considerations

### Bluespotted Flathead

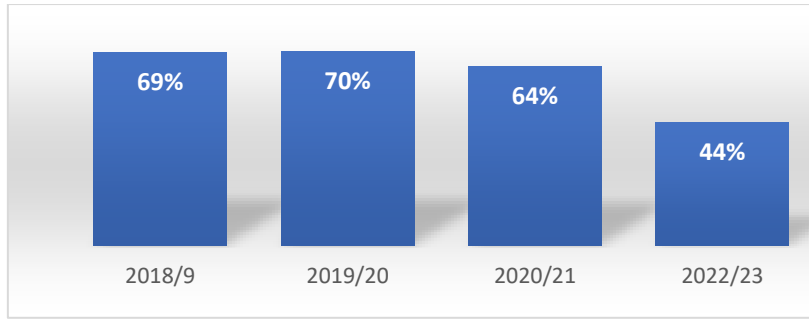
BSF are sold whole (gilled and gutted) and in fillet form on the domestic market. Prices have been trending upwards despite falling landings since 2012/13 (Figure 1).



**Figure 1.** Average nominal and real price/kg and annual NSW landings of Bluespotted Flathead 2001/2-2022/23

Since quota was introduced, overall, the percent of the total TACC being caught has averaged at 62% (Figure 1), but percentage usage amongst Fishing Businesses (FBs) will vary depending on allocation and usage. BSF quota shares distributed among 102 shareholders with quota shareholdings ranging between 1 and 2312 quota shares. In 2023/24 (up until 29/1/24), 3 FBs accounting for 46% of the TACC, reported landings of less than 1% of their allocation. Two FBs, accounting for 33% of the TACC, have not reported any quota usage to date. However, anecdotal evidence from fishers and preliminary analyses of quota usage data by NSW DPI suggest that many prawn trawlers with smaller allocations may exhaust their BSF quota early in the fishing season and higher discarding then occurs. This will be largely influenced by variation in fisher's targeting practices and the depth distribution of fishing effort. Together with quota transfer information provided by NSW DPI, the mismatch between demand and supply suggests that there are market imperfections in the BSF quota market which are unlikely to be addressed by changes in the TACC.

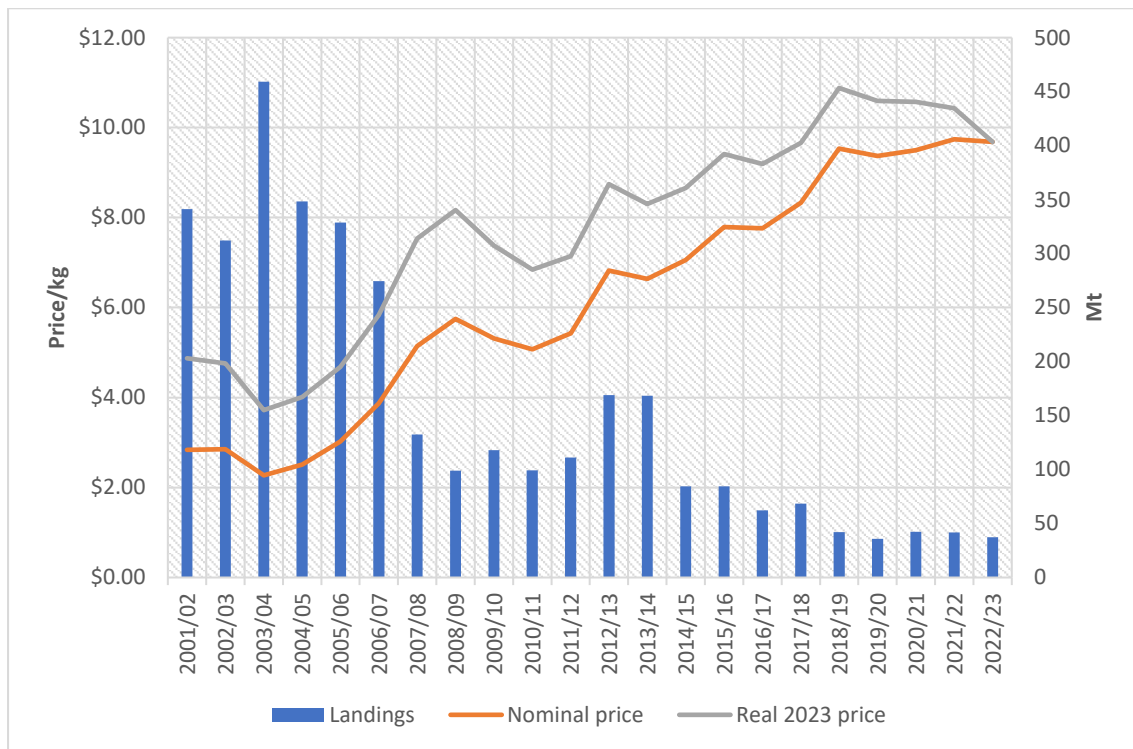
Overall, given the uncertainty and conflicting signals in stock status as highlighted in the scientific and management sections, there is no compelling economic reason to change the TACC of 108.1 tonnes for the next two fishing periods.



**Figure 2.** Percentage of Bluespotted Flathead TACC caught 2018/19-2022/23

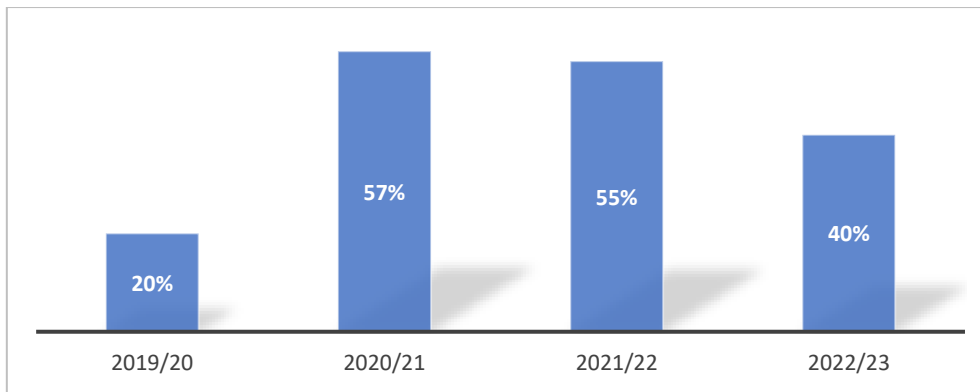
### Silver Trevally

ST, primarily sold in the domestic market have experienced a steadily increasing average price since 2003/4, despite declining landings (Figure 3).



**Figure 3.** Average nominal and real price/kg and annual NSW landings of Silver Trevally 2001/2-2022/23

There are 4,990 ST quota shares in the OT Fishery distributed among 19 FBs with shareholdings ranging between 1 and 2,519. As of 28 January 2024, 4 FBs have caught 15 % of the TACC (Figure 4). Sixteen FBs have not reported any quota usage. Over the last four financial years, total landings have averaged around 43% of the TACC.



**Figure 4** Percentage of Silver Trevally TACC caught 2018/19-2022/23

There seems to be a low risk of ST being a “choke” species in the OT mixed species fishery. Fishers have indicated that target fishing for ST can be avoided. The TACC should remain at 12 tonnes, given the current underutilisation of TACC over the last four years and the longer-term economic benefit stock recovery would bring to the fishery.

## **Progress Report Against TAFC Recommendations from 2022/23 and 2023/24**

### **Provided by the Department of Regional NSW (DPI Fisheries)**

1. *Given the substantial decrease in the proportion of large mature fish in catches over the past decade and the apparent levels of discards in response to the minimum legal length (MLL), efforts should continue to obtain length-frequency composition data for retained and discarded fish, perhaps by means of a cooperative sampling program with industry.*

Length-frequencies (LF) of retained catch for four NSW fleets (inc. fish trawl) have continued to be sampled annually from fish markets along the coast. These data, along with LF data from the Commonwealth, have been included in this year's length- and age-structured population dynamics model developed jointly by the two jurisdictions. The use of LF data from numerous fleets is an improvement on the modelling approach used in last year's NSW assessment, which only included LF data from NSW trawl. While the proportion of large (>30 cm FL) fish in NSW fish trawl catches remains low after 2007 (MLL introduced, Bateman's closure etc), this is not reflected in data from other fleets, including NSW fleets, which show a greater proportion of large fish (albeit not to pre-2000 levels). This suggests that some larger fish remain in the east-coast population but are not being caught/retained in NSW trawl catches. Although the cause of this is unclear, the need to understand it from a whole-of-stock perspective is lessened to some degree, given the model now does not solely rely on LFs from NSW trawl and the heavily truncated length data from this fleet post-2007 does not influence the model fit substantially.

Discard estimates (weight, not LFs) from the NSW Trawl Observer Program (2014-2015) are included in the integrated model and used, along with the difference between the selectivity and retention functions, to estimate discards in other years for NSW trawl (post-MLL introduction). While additional data on

discard proportions would be useful, to improve estimation within the model, the lengths of these discards are likely of lesser importance because discarding is almost solely due to the introduction of the MLL and the inflection point for the retention function is therefore known with some precision.

2. *NSW should develop a Silver Trevally rebuilding plan and a process to achieve proportional catch reductions in consultation with other relevant NSW fisheries stakeholders and AFMA.*

Harvest strategies are the preferred approach to manage key NSW fish stocks, noting that ongoing or interim rebuilding measures may be established for depleted stocks prior to or during development.

DPI Fisheries has developed a rebuilding framework for depleted fish stocks with the broad objective to return those fish stocks to sustainable levels. As an interim strategy – pending the development of specific rebuilding or harvest strategies – the framework identifies management and research actions that are being taken or will be explored to reduce fishing mortality and support the rebuilding of depleted stocks.

The framework focuses on rebuilding stocks of the two depleted species that are primarily managed by NSW and for which a harvest strategy is not yet in development – Grey morwong and Silver trevally. Consultation on proposed management changes for depleted species is expected early 2024.

3. *In multi-species fisheries, information on the cost and returns of fishing of those businesses catching and/or targeting quota species would be beneficial for economic assessment of those species. More disaggregated analysis of the data collected for the Economic and Social Indicators for the Ocean Trawl Fishery report may help in this regard.*

There are some species-specific financial indicator analyses in the latest Economic and Social Indicator reports for NSW fisheries. It is limited to Pipi, Mud Crab and Spanner Crab. It provides an understanding of the performance of the average businesses that target particular species and allows the financials of these groups of businesses to be understood separately. While it does not present the performance of the specific activities that target those species, it can be used as a better proxy than the fishery average.

Each species group includes only businesses that earned over half of their revenue in a fishery from that species, and over half of their total business revenue from that species. Only surveyed businesses (or those choosing to do the survey) can be included in each species group. **More comprehensive data collection (i.e. greater industry participation in the survey) would be required to present information for more species with greater specificity.**



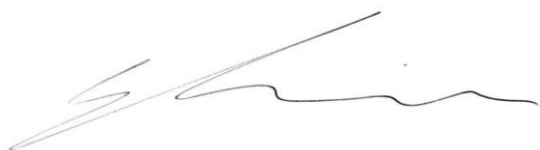
## Determination

The Total Allowable Fishing Committee, pursuant to Part 2A of the *Fisheries Management Act 1994*, determines that the commercial catch of Bluespotted Flathead and Silver Trevally in the Ocean Trawl Fishery should be controlled and allocated through the following measures:

1. A TACC for Bluespotted Flathead during the fishing periods 1 May 2024 to 30 April 2025 and 1 May 2025 to 30 April 2026 of **108.1 tonnes**; and
2. A TACC for Silver Trevally during the period 1 May 2024 to 30 April 2025 of **12.0 tonnes**.

Species	Catch Limit (tonnes)
Bluespotted Flathead	108.1
Silver Trevally	12.0

Signed (for and on behalf of the TAFC)



William Zacharin  
**Chair, TAFC**

Alice McDonald – Fisheries Management member

Sevaly Sen – Deputy Natural Resource Economist member

Andrew Penney – Deputy Scientific member

19 March 2024