# NSW TOTAL ALLOWABLE FISHING COMMITTEE

# ESTUARY GENERAL FISHERY

- MESHING
- HAULING (CATEGORY 1 AND 2)

# DETERMINATION FOR THE 2024/25 FISHING PERIOD

20 May 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.

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.

There are no formal harvest strategies for major target species in the meshing and hauling sectors.

This determination is for the Estuary General Fishery - Meshing and Hauling (Category 1 and 2) for the fishing periods 1 July 2024 to 30 June 2025 and 1 July 2025 to 30 June 2026.

## 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. DPI Fisheries needs to address the underlying economic issues in the fishery that has resulted in the effort quotas having very low market value. This was a direct result of initially setting the ITCAL so high in 2017/18 that the market for effort quota units reduced significantly.
- 2. DPI Fisheries work with industry to review all aspects of the share management arrangements and fee structures for the meshing and hauling sectors and this review should include the design of a scheme to remove a significant proportion of unused fishing effort quota units.
- 3. DPI Fisheries implement a TACC for Sea mullet and Mulloway for the 2026/27 fishing period.
- 4. Implementation of species-specific TACCs to directly limit fishing mortality will allow for some of the other restrictive measures to be removed.

# Determination

The Total Allowable Fishing Committee, pursuant to Part 2A of the *Fisheries Management Act 1994*, determines that the commercial effort for the Estuary General Fishery – Meshing and Hauling (Category 1 and 2) should be controlled and allocated through the following measure for the fishing periods 1 July 2024 to 30 June 2025 and 1 July 2025 to 30 June 2026:

1	A TACE for	each	of the	21	regions	as	follows
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Quota Effort	Region	TACE (days)		
FG Meshing	1	2 002		
	2	7 709		
	3	4 846		
	4	15.196		
	5	2,731		
	6	3,651		
	7	2,521		
EG Hauling (Category 1)	1	593		
	2	2,497		
	3	606		
	4	3,017		
	5	1,217		
	6	994		
	7	703		
EG Hauling (Category 2)	1	42		
	2	238		
	3	97		
	4	264		
	5	63		
	6	185		
	7	48		

## Introduction

The Estuary General (EG) Fishery is a diverse multi-species, multi-method fishery that may operate in 76 of NSW estuarine systems. It is the most diverse commercial fishery in NSW and comprises approximately 450 fishing businesses authorised to utilise 17 types of fishing gear. The EG Fishery includes all forms of commercial estuarine fishing (other than estuary prawn trawling) in addition to the gathering of Pipis and Beachworms from ocean beaches.

Generally, the ten species that make up over 80% of landings by weight are Sea mullet (*Mugil cephalus*) Luderick (*Girella tricuspidata*), Yellowfin bream (*Acanthopagrus australis*), Eastern school prawn (*Metapenaeus macleayi*), Blue swimmer crab (*Portunus pelagicus*), Dusky flathead (*Platycephalus fuscus*), Sand whiting (*Sillago ciliata*), Pipi (*Donax deltoides*), Mud crab (*Scylla serrata*) and Silver biddy (*Gerres subfasciatus*).

The EG Fishery is divided geographically into seven regions. Appendix 1 describes the waters within each region of the EG Fishery. A reference to an estuary in the table includes all creeks, rivers, lakes, lagoons and tributaries flowing into or from that estuary. The EG Fishery is subject to many spatial and temporal closures within these waters<sup>1</sup>.

Effort quota management commenced for the EG – Meshing and Hauling sectors in 2017/18. Total Allowable Commercial Catch (TACC) and Total Allowable Commercial Effort (TACE) determinations were made for some species and share classes in the Estuary General and Ocean Hauling fisheries for the transition period 6 October 2017 to 30 June 2024, and in the Ocean Trawl Fishery for the transition period 21 September 2018 to 30 June 2024, to assist these fisheries transition to quota management. Effort quota management commenced for EG Meshing, EG Category One Hauling and EG Category Two Hauling on 1 December 2017. Each of the seven management zones were allocated a TACE and these TACEs were maintained at the same level for each new fishing period up to and including the 2023/24 fishing period. For 2024/25, the Plan provides for the TAFC to set the TACEs.

The TAFC met face to face in Sydney with a number of shareholders in the Estuary General Fishery on 16 April 2024 to discuss fishery biology, catch and associated management issues. Written submissions by shareholders on the stock status for the fishery and other fishery management issues were provided to the Committee by DPI Fisheries. Current stock assessment reports on the major species (Sea mullet<sup>2</sup>,

<sup>&</sup>lt;sup>1</sup> McKinnon, F (2024). Estuary General Fishery Management Report. Total Allowable Effort Determinations 2024-25. Department of Regional NSW. 50 pp

<sup>&</sup>lt;sup>2</sup> Stewart, J. 2024. NSW Stock Status Summary 2023/24 – Sea Mullet (*Mugil cephalus*). NSW Department of Primary Industries. Fisheries. 12 pp

Yellowfin bream<sup>3</sup>, Dusky flathead<sup>4</sup>, Luderick<sup>5</sup>, Sand whiting<sup>6</sup> and Mulloway<sup>7</sup>) were also provided to the TAFC by DPI Fisheries.

# **Biological considerations**

## Overview

There is currently no fishery-level harvest strategy for the Estuary General Hauling fisheries. There are also no species-specific harvest strategies for the principal species taken in this fishery (although one is under development for Mulloway). Many of the species caught are important recreational target species, but there are no formal resource-sharing arrangements between the commercial and recreational fisheries. This has resulted in implementation of many other management measures to manage potential conflict between the sectors.

## Overall fishery catch and effort

Total annual reported landings in the Category 1 Hauling endorsement averaged 422 tonnes over the last five years (range: 195 – 700 tonnes), with Sea Mullet contributing ~56% of the catch over the last five years. This is followed by Sand Whiting and Silver biddy contributing ~8% each, and Yellowfin Bream, Luderick, Fantail Mullet, Sandy Sprat, Trumpeter Whiting and Yellowtail Scad contributing less than 1% each.

Total reported landings in the Category 2 Hauling endorsement averaged 6.6 t/year over the last five years, with River Garfish making up over 66% of the annual catch. Other commonly caught taxa are Yellowtail Scad, Sea Garfish and Snubnose Garfish contributing 13 %, 11.5 % and 3.4 % of the catch respectively.

A large proportion of the Estuary General Meshing catch is made up of only a few species, with 50% of the catch consisting of Sea Mullet and 40% of the catch consisting of Luderick, Yellowfin Bream, Dusky Flathead, Mulloway and Sand Whiting.

The Meshing, Category One Hauling and Category Two Hauling share classes were subject to effort quota unit management under an Interim Total Commercial Access Level (ITCAL) introduced in 2017. Separate interim Total Allowable Commercial Effort (TACE) allocations were set for the three endorsements in seven coastal regions, totalling 49,200 days.

<sup>&</sup>lt;sup>3</sup> Helidoniotis, F., and Schilling, H., 2024. NSW Stock assessment report 2023/24 – Yellowfin Bream (*Acanthopagrus australis*). NSW Department of Primary Industries - Fisheries: 36 pp.

<sup>&</sup>lt;sup>4</sup> Schilling, H. T., Helidoniotis F. 2024. NSW Stock assessment report 2023/24 – Dusky Flathead (*Platycephalus fuscus*). NSW Department of Primary Industries - Fisheries: 41 pp.

<sup>&</sup>lt;sup>5</sup> Schilling, H. T., Helidoniotis F. 2024. NSW Stock assessment report 2023/24 – Luderick (*Girella tricuspidata*). NSW Department of Primary Industries - Fisheries: 46 pp.

<sup>&</sup>lt;sup>6</sup> Helidoniotis, F., and Schilling, H., 2024. NSW Stock assessment report 2023/24 - Sand Whiting (*Sillago ciliata*). NSW Department of Primary Industries - Fisheries: 35 pp.

<sup>&</sup>lt;sup>7</sup> Hughes, J.M. 2023. Stock assessment report 2022/23 – Mulloway (Argyrosomus japonicus). NSW Department of Primary Industries - Fisheries: 30 pp.

Annual use of this effort quota differs between endorsements, but has been very low since the ITCAL was implemented. Use of the EG Meshing TACE has averaged ~42%, declining from ~45% in 2019/20. Effort TACE use in the Category 1 Hauling fishery has averaged ~17%, declining from ~21 % in 2019/20. Effort TACE use in the Category 2 Hauling fishery has averaged only ~12%.

The TACE has therefore not been restrictive on any of the sectors and has not functioned as a control on fishing mortality on the stocks. Instead, it is clear that a complex suite of additional management measures, including limitations on participation, gear restrictions, spatial closures, minimum size limits and trip limits (for some species) have been the primary limits on fishing intensity, some of which were implemented to manage conflict with recreational fishers.

## **Stock Status**

## Sea Mullet

This is the most important species in the EG Meshing and Hauling fisheries, with commercial catch being divided approximately evenly between the Ocean Hauling and the Estuary General Fisheries. Total reported landings peaked at ~5,508 tonnes in 1993/94 and then declined to fluctuate around 3,000 t/year over the past decade. There has been a further decline to ~1,900 tonnes during 2021/22 and 2,200 tonnes during 2022/23. Fishing effort has also declined steadily since 1997/98 to historically lowest levels in 2022/23.

The Sea Mullet population was assessed using a joint NSW and Queensland (QLD) assessment, using standardised catch rates (CPUE) and an integrated age and sex structured population model<sup>8</sup>. Standardised NSW and QLD CPUE indices have been stable or slowly increasing since at least 2002. Nominal catch rates have declined over the past few years in the ocean beach sector, but this is considered to be due to the negative impacts of a number of major flood events since 2021. Estimated biomass of the stock has fluctuated around 50% of unfished biomass ( $B_0$ ) target level since 1990 and is currently estimated to be at 37%  $B_0$  which is above the estimate of  $B_{MSY}$  of 33%  $B_0$ . The total estimated landed catch by QLD and NSW was below the estimate of MSY.

These assessment results indicate that the NSW component of the Sea Mullet stock is **Sustainable**.

## Mulloway

Commercial landings of Mulloway in NSW have steadily declined from a peak of almost 400 tonnes in the mid-1970s to a historic low of 37 tonnes in 2008/09 and have been less than 100 tonnes per year since the mid-1990s. In 2021/22, the total Statewide commercial catch was 79 tonnes. Since 1997/98, ~65% of the commercial catch of Mulloway has come from the EG Meshing fishery with Ocean Trap and Line catches making up ~10-20% of the overall catch.

<sup>&</sup>lt;sup>8</sup> Stewart, J. 2024. NSW Stock Status Summary 2023/24 – Sea Mullet (*Mugil cephalus*). NSW Department of Primary Industries. Fisheries. 12 pp

This species is an important recreational target species, with data from the 2021/22 survey in NSW estimating that ~12,830 fish individuals were harvested. In 2019/20, it was estimated that 6,431 fish weighing ~55 tonnes were retained (Murphy *et al.* 2022). Combining the NSW commercial and recreational harvest estimates indicate that the fishery increased rapidly during the early 1970s, peaking at 500-600 tonnes per year until the early 1990s. Recent catches have since declined to among the lowest estimated for the species.

Recent mesh netting effort for Mulloway in the EG fishery peaked at 8,800 days in 2014/15 and has since declined to 3,500 days in 2018-19, remaining fairly stable since then at ~3,250 days fished per year. In 2021-22, days fished mesh netting for Mulloway was 2,915 days.

The NSW component of the Mulloway stock was previously classified as **Overfished** from 2005/06 to 2014/15 under the *Status of Australian Fish Stocks* (SAFS) framework. However, standardised catch rates (sCPUE) for the mesh net fishery have shown a substantial increase, from 5kg/day in 1997/98 to ~20 kg/day over the past two years, and there has been a 70% increase in mesh net sCPUE between 2018/19 and 2021/22. Analysis of spawning potential ratio (SPR) estimates current SPR to be ~31%, above a 20% limit level. Production and integrated models indicate current biomass to be ~24 - 31% of unfished biomass, although with fairly high uncertainty<sup>9</sup>.

The mean size of Mulloway in catches has increased. The commercial Mulloway fishery was historically based largely on juveniles with around 80% of the catch being less than 70 cm in length, the approximate length at maturity for female Mulloway. Despite an increase to the MLL in 2013, the commercial fishery continued to be based on juveniles up until 2016/17, as a result of a bycatch allowance for retention of fish smaller than 70 cm taken by EG mesh nets. However, the average size of Mulloway in commercial landings has been ~90 cm since 2017/18, indicating the catch to now be largely adult fish. On the basis of the above evidence, the Mulloway stock in New South Wales is assessed to have likely rebuilt to above the limit reference point, and so is now classified as a **Recovering** stock. Maintaining the catch limits will assist in further recovery. Some stocking of Mulloway in selected waterways occurs, but is unlikely to have a measurable and meaningful impact on stock levels based on current stocking scenarios.

#### **Yellowfin Bream**

Total reported EG Meshing and Hauling catches of Yellowfin Bream have fluctuated between 200 - 350 tonnes over 1997/98 – 2019/20, although with a peak of 470 tonnes in 2006/07. Over the past four years, catches declined sharply from ~276 tonnes in 2019/20 to ~78 tonnes (probably not fully reported) in 2022/23. Fishing

<sup>&</sup>lt;sup>9</sup> Hughes, J.M. 2023. Stock assessment report 2022/23 – Mulloway (*Argyrosomus japonicus*). NSW Department of Primary Industries - Fisheries: 30 pp.

effort remained fairly stable around 11,000 days over 2009/10 - 2019/20 but has since declined steadily to ~4,400 days (probably not fully reported) in  $2022/23^{10}$ .

Standardised catch rates (sCPUE) were fairly stable in all fishery sectors over 2009/10 – 2019/20. Over the past three years, sCPUE has declined slowly in the EG Hauling and EG Meshing fisheries (although still being within the range of variation in sCPUE since 2009/10), but increased fairly substantially in the EG Trap fishery. Available length composition data show a high proportion of large size classes in the mesh gear in 2020 and the age composition data indicate larger age classes in mesh catches in recent years.

Based on relatively stable catch rates and the ongoing presence of large, older fish in the catch, The NSW Yellowfin Bream stock is classified as **Sustainable** at current levels of fishing effort.

# Sand Whiting

Total reported Estuary General Meshing and Hauling catches of Sand Whiting were stable, averaging ~145 tonnes, over 1997/98 – 2007/08. Catches then declined to 80 – 100 tonnes over 2011/12 – 21/20, before declining rapidly to ~30 tonnes (probably not fully reported) in 2022/23. Effort also declined slowly from ~6,500 days in 2010/11 to ~4,500 days in 2021/22<sup>11</sup>.

Standardised catch rates (sCPUE) were stable in the mesh and haul sectors over 2009/10 – 2020/21, declining over the past two years, although still within the range of variation in sCPUE since 2009/10. Available length composition data show a high proportion of large, older size classes in mesh catches in recent years.

Based on stable catch rates and the ongoing presence of large, older fish in the catch, the NSW Sand Whiting stock is classified as **Sustainable** at current levels of fishing effort.

## Luderick

Reported total commercial catches of Luderick in the Estuary General fishery have fluctuated substantially over time. From a historical low of ~300 tonnes in 1960, catches increased to a peak of ~620 tonnes in 1974, before decreasing again to less than 300 tonnes in 1979. Catches then increased again to over 700 tonnes in 1988 and have since declined steadily to ~200 tonnes over the past two years. Recreational catches are poorly estimated but are considered to have been of a similar magnitude to the commercial catch until the mid-2000s, declining to about a third of the commercial catch over the past few years. Commercial fishing effort for

<sup>&</sup>lt;sup>10</sup> Helidoniotis, F., and Schilling, H., 2024. NSW Stock assessment report 2023/24 – Yellowfin Bream (*Acanthopagrus australis*). NSW Department of Primary Industries - Fisheries: 36 pp.

<sup>&</sup>lt;sup>11</sup> Helidoniotis, F., and Schilling, H., 2024. NSW Stock assessment report 2023/24 - Sand Whiting (*Sillago ciliata*). NSW Department of Primary Industries - Fisheries: 35 pp.

Luderick has declined rapidly and substantially since 1988, by  $\sim$ 72% for EG Meshing and by  $\sim$ 90% for EG Hauling<sup>12</sup>.

The first formal assessment of Luderick was conducted in 2024, applying a weight of evidence approach using key indicators, particularly standardised catch rates (sCPUE) and size composition data. Mesh net sCPUE was stable over 2010 - 2018 and has since increased steadily to well above the average since 2010. Size and age-composition of catches and of fishery independent Reef Life surveys showed that right-hand side of the distribution appears to be relatively stable through time, with a larger cohort progressing through the population. The mean length of Luderick appears to be stable over time.

This length-composition stability is reflected in age-composition data, which showed an increasing proportion of fish seven years of age in recent years and a long tail of older fish up to at least 17 years of age in most years. Application of catch-curve analysis to this age-data estimates that fishing mortality rate (F) has declined substantially since 2007/08, particularly in 2018/19, to less than half of natural mortality (M).

Based on stable and increasing catch rates, persistent and increasing proportion of old fish in catches and a low estimated fishing mortality rate, the NSW Luderick stock is classified as **Sustainable** at current levels of fishing effort.

## **Dusky Flathead**

Total reported Dusky Flathead catches in the Estuary General fishery have been stable for much of the history of the fishery, fluctuating between ~150 - 250 tonnes between 1955 to 2005. Catches have been somewhat lower since 2000, fluctuating between ~100 - 150 tonnes and currently being slightly over 100 tonnes. Fishing effort for Dusky Flathead in the Estuary General Fishery has declined by ~76% between 1998 and 2023<sup>13</sup>.

Dusky Flathead are a key recreational target species, with recreational catch estimated to be substantially larger than commercial catches over much of the history of the fishery. Retained landings by recreational fishers' resident in NSW estimated from surveys have decreased from approximately 328,244 fish in 2013/14, to 310,650 in 2017/18, 182,489 in 2019/20 and 148,157 fish in 2021/22.

The Dusky Flathead stock in NSW is assessed using key indicators, particularly standardised catch rates (sCPUE) and size and age-composition data. sCPUE has been highly variable in Lake Illawara, but has generally increased in Wallis Lake and has increased substantially in Tuggerah Lakes.

 <sup>&</sup>lt;sup>12</sup> Schilling, H. T., Helidoniotis F. 2024. NSW Stock assessment report 2023/24 – Luderick (*Girella tricuspidata*).
NSW Department of Primary Industries - Fisheries: 46 pp.

<sup>&</sup>lt;sup>13</sup> Schilling, H. T., Helidoniotis F. 2024. NSW Stock assessment report 2023/24 – Dusky Flathead (*Platycephalus fuscus*). NSW Department of Primary Industries - Fisheries: 41 pp.

Dusky Flathead retained in Flathead Nets were slightly smaller than those retained in General Mesh Nets, but the right-hand side of the distribution appears to be relatively stable since 2007/08.

The most recent two years of length data (2020/21 and 2021/22) show a larger mean size and a larger cohort progressing through the population. with a healthy proportion of larger fish. Age-composition data are dominated by fish aged between 2 and 4, but with most years showing older fish up to 6 or 7 years, with the most recent year showing fish up to age 10.

Based on stable and increasing sCPUE and evidence of an increasing proportion of larger, older fish in catches, the NSW stock of Dusky Flathead is classified as **Sustainable** at current levels of fishing effort. Some stocking of Dusky Flathead in selected waterways occurs, but is unlikely to have a measurable and meaningful impact on stock levels based on current stocking scenarios.

#### Overall stock status conclusions

- The status of all stocks targeted in the EG Meshing and Hauling fisheries, other than Mulloway, is currently assessed to be **Sustainable**, with biomass estimates likely above a 20% *B*<sub>0</sub> limit level and for some stocks near a 40 50% target level.
- Mulloway is classified as **Recovering** in the 2024 assessment, but was assessed to be **Overfished** prior to that. Management measures need to be appropriately designed to contain fishing mortality for the continued rebuilding of this stock.
- A substantial amount of effort is put into data collection, assessment and stock status reporting for the finfish species caught in the EG Meshing and Hauling fisheries. However, these assessments are primarily designed to inform the setting of total allowable commercial catch (TACC) levels for the individual species and are not useful for informing the setting or revision of a TACE control measure.
- A TACE is not an appropriate control measure for this multi-species, multigear fishery, particularly for slower growing species with different life histories and stock status. Changes to a single TACE cannot effectively control fishing mortality rates at the different levels required for different species in multispecies fisheries. Any single TACE level, if tailored to appropriately manage fishing intensity on one stock, will likely result in over-fishing or under-fishing of other stocks.
- The current ITCAL level of 49,200 days has been substantially underfished since inception (2017/18) and is not functioning as an effective management control on fishing intensity. Instead, significant reductions in fishing effort and catch for most of the target species in these fisheries appears to have resulted from market constraints, or one or more of the complex suite of other management restrictions on these sectors (such as trip limits).

#### Recommendations

- Consideration should be given to transitioning the EG Meshing and Hauling fisheries away from TACE controls to use of TACCs for the main species, or those in need of rebuilding.
- Initial consideration should be given to implementing a TACC for Sea Mullet, which is the main species in these fisheries and for Mulloway (which is a recovering stock in need of further rebuilding).
- Implementation of species-specific TACCs to directly limit fishing mortality will allow for some of the other restrictive measures to be removed.

# **Economic considerations**

The overriding economic feature of these fisheries is a significant initial overallocation of effort unit shares and a cap on effort that is too high (see McKinnon 2024, Table 19). The high cap means that it does not function to limit fishing effort and provides an oversupply of effort unit shares relative to demand. Although not quantified, the latter has most likely meant that effort shares have depreciated in value for most fishing businesses and unless there is a significant structural change to the share arrangements, they will not recover, with further declines likely.

The value of effort unit shares is often viewed differently by the market and by agribusiness lenders compared to catch quota shares. This is because what they represent in terms of a unit value are less clear and more variable in terms of the capacity to generate income. By way of a hypothetical example, a business may own a quota unit that entitles them to 100 kg of catch with a market value of \$3 per kilo and the beach price for the catch is \$10. The capital value of that unit would be \$300 with an expected return when caught of \$1,000. In the case of an effort unit, and for simplicity assuming that the market also values a unit of effort (day) at \$300, what that unit can generate economically is highly variable. It may generate zero income; a substantial amount (e.g. greater than \$5,000), or anything in between. This is particularly the case in a mixed species fishery with substantial differences in unit price across the suite of species caught. Further, if a fisher goes fishing and catches no fish in a fishery managed by a catch quota, there is no impact on the total quota, but in an effort managed fishery there is. Thus, a unit of effort can be viewed as a "riskier" investment than a unit of catch, particularly in this multispecies fishery.

The TAFC considered reducing the overall TACE cap in this fishery. Although not able to be quantified, the TAFC considered that a modest cap reduction (e.g. 10%) would have little positive impact on the value of the effort shares overall and the current level of latent effort. However, it may lead to active fishing businesses that are currently fully utilising their full effort allocation needing to transfer in more to continue their fishing at the same effort level. Any reduction to the TACE cap to have a potentially positive impact on the value of effort unit shares would need to be significant. Such a potential benefit to the value of shares would need to be tempered by the likelihood that active fishing businesses would need to transfer in a substantial number of shares, which may result in their economic viability being compromised and thus a reduction in demand.

In the absence of a clear stock sustainability driver and the economic impacts and associated uncertainties of such impacts, the TAFC concluded that the TACE cap should remain unchanged. However, significant management changes to the fishery and its property right are still required to achieve future fishery management outcomes and enhance fishing business opportunities.

One positive approach that would return value to shareholders would be to implement a TACC for Sea mullet. This species is the most valuable target species in the fishery.

#### Recommendations

- DPI Fisheries needs to address the underlying economic issues in the fishery that has resulted in the effort unit quotas having very low market value. This was a direct result of initially setting the ITCAL so high in 2017/18 that the market for effort quota units reduced significantly.
- DPI Fisheries work with industry to review all aspects of the share management arrangements and fee structures for the meshing and hauling sectors and this review should include the design of a scheme to remove a significant proportion of unused fishing effort quota units.

## Fishery management considerations

The stock assessments for the major species in the meshing and hauling sectors demonstrate that the effort quota restrictions are not impacting on the sustainability of the fishery, nor constraining catch in most zones. Mulloway is also recognised as a recovering stock, mainly due to the trip limits, which should continue until the stock is assessed as sustainable. Therefore, there is no current biological imperative to reduce the TACEs. However, the ITCALs were set very high and this means there is potential for significant increases in effort in some zones in the future, but as discussed above in the economic section, an across-the-board reduction in effort days will significantly financially impact those fishers that are using their full effort quota, after already having to buyback additional effort units after the ITCALs in late 2017. This approach is effectively using the increasing debt of existing full-time shareholders to restructure the fishery. As sustainability is not being impacted at current effort levels and shareholders already have moderate to high debt levels, a reduction in the effort quota units is not recommended.

The TAFC does recommend that a TACC for Sea mullet be implemented, as this species is the main economic driver in the fishery. This approach will return some shareholder value and improve their financial position. In recommending a TACC, the Committee is cognisant that it represents an additional output control in the already complex management arrangement for this fishery sector. Consideration would need to be given as to whether the TACC was a competitive TACC, or whether it would be divisible into shares (catch quota). The interactions of either the competitive TACC or a new share class, within the effort quota system, would need detailed investigation and input from industry.

#### Recommendations

• DPI Fisheries implement a TACC for Sea mullet and Mulloway for the 2026/27 fishing period.

## Summary

The TACE is an ineffective management tool for this multispecies, multigear and complex spatial fishery. The current TACEs are not effective in restricting fishing effort. It is the input controls of limited entry, minimum size limits, trip limits, gear limits and spatial limits, which effectively control fishing effort.

All the major species, except Mulloway, are considered sustainable at current levels of fishing effort, so there is no management imperative to change the 21 TACE levels. However, should the significant amount of "latent"<sup>14</sup> effort be activated in future and this leads to erosion of stock status from sustainable to depleting or worse, then action will have to be taken to reduce the TACEs and this will have a significant impact on the economics of the fishery.

It is strongly recommended that Sea Mullet, being the most valuable fishery in this sector, is moved to a TACC. The design mechanism to implement this recommendation is for DPI Fisheries and existing shareholders to discuss.

<sup>&</sup>lt;sup>14</sup> Latent effort includes effort not being used and effort likely never to be used due to the high ITCAL issued in 2017.

# Determination

The Total Allowable Fishing Committee, pursuant to Part 2A of the *Fisheries Management Act 1994*, determines that the commercial effort in the Estuary General Fishery – Meshing and Hauling (Category 1 and 2) should be controlled and allocated through the following measure for the fishing periods 1 July 2024 to 30 June 2025 and 1 July 2025 to 30 June 2026:

Quota Effort	Region	TACE (days)
EC Maching	1	2 002
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Signed (for and on behalf of the TAFC)

William Zacharin Chair, TAFC

Andrew Penney – Deputy Scientific member

Daryl McPhee – Natural Resource Economic member

20 May 2024